OFFICE OF
INSPECTOR GENERAL
U.S. DEPARTMENT OF THE INTERIOR

Improvements Needed to the U.S. Department of the Interior's and Bureaus' Oversight of Radio Infrastructure

This is a revised version of the report prepared for public release.

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OFFICE OF
INSPECTOR GENERAL
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Memorandum

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Subject: Final Evaluation Report – *Improvements Needed to the U.S. Department of the Interior's and Bureaus' Oversight of Radio Infrastructure*
Report No. 2021–WR–020

This memorandum transmits our evaluation report addressing whether the U.S. Department of the Interior's bureaus inventoried, inspected, and maintained radio infrastructure as required by policy.

We will track open recommendations for implementation. We will notify Congress about our findings, and we will report semiannually, as required by law, on actions you have taken to implement the recommendations and on recommendations that have not been implemented. We will also post a public version of this report on our website.

If you have any questions about this report, please contact me at aie_reports@doioig.gov.

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Report Abbreviations

Abbreviation	Definition
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
CIO	Chief Information Officer
DFMC	Division of Facilities Management and Construction
DIFCOM	U.S. Department of the Interior Field Communications Modernization
DOI	U.S. Department of the Interior
ERM–IC	Enterprise Risk Management and Internal Control
FCIP–ELT	Field Communications Improvement Program Executive Leadership Team
FRPC	Federal Real Property Council
FWS	U.S. Fish and Wildlife Service
FY	Fiscal Year
IA–FMS	Indian Affairs – Facilities Management System
IRMD	Information Resources Management Directorate
IRTM	Information Resources and Technology Management
JCIIP	Joint Communications Infrastructure Improvement Project
LMR	Land Mobile Radio
NPS	National Park Service
NWRS	National Wildlife Refuge System
OCIO	Office of the Chief Information Officer
OIG	Office of Inspector General
PFMD	Park Facility Management Division
RSMB	Radio and Spectrum Management Branch

Results in Brief

What We Evaluated

U.S. Department of the Interior (DOI) bureaus rely on radio communications to conduct mission-critical operations such as law enforcement, wildland fire management, and search and rescue. Accordingly, effective and reliable radio communications are important to protect the public and DOI employees and to efficiently manage public lands. However, weaknesses with the DOI's radio infrastructure, which includes the towers, shelters, and fencing needed to operate and protect installed radio equipment, are longstanding. Most notably, in a 2007 audit report,[1] we identified the poor condition of the DOI's radio infrastructure. Our objective for this evaluation was to determine whether the Bureau of Indian Affairs (BIA), the Bureau of Land Management (BLM), the U.S. Fish and Wildlife Service (FWS), and the National Park Service (NPS) inventoried, inspected, and maintained radio infrastructure as required by policy and whether improvements had been made since our 2007 report.

What We Found

We found that the bureaus generally did not properly inventory or inspect radio infrastructure as required by the DOI Office of the Chief Information Officer's (OCIO's) directive regarding radio communications site standards. Specifically, the BIA, FWS, and NPS did not properly track or inventory their radio infrastructure and could not provide complete or accurate inventories from their facilities asset management systems. In contrast, the BLM was more effective at inventorying its radio infrastructure due to its implementation of more comprehensive policies and procedures. Further, none of the four bureaus sufficiently completed condition assessments. Without regular condition assessments, none of the four bureaus were able to ensure that their radio infrastructure was maintained in accordance with the directive. These deficiencies occurred primarily because the DOI's Office of the Chief Information Officer did not have a mechanism to enforce its own requirements and because the bureaus did not conduct sufficient oversight.

Why This Matters

Without proper inventory and periodic condition assessments, the bureaus do not know the condition of their radio infrastructure and what corrective actions may be needed. Despite the DOI's efforts in these areas over the last several years, we found little improvement in the oversight of its radio communications program; as a result, the potential for unreliable radio communication and unsafe radio infrastructure continues. For example, we identified two radio communication sites that are potentially dangerous: one site due to falling objects and another site with toxic fumes.

What We Recommend

We make 26 recommendations that, if implemented, will help the DOI and its bureaus ensure that all radio infrastructure is properly inventoried, inspected, and maintained in accordance with the directive.

[1] *U.S. Department of the Interior Radio Communications Program* (Report No. C–IN–MOA–0007–2005), issued January 2007.

Introduction

Objective

The objective of our evaluation was to determine whether the U.S. Department of the Interior's (DOI's) bureaus inventoried, inspected, and maintained radio infrastructure as required by policy. Radio infrastructure refers to the towers, shelters, and fencing needed to operate and protect installed radio equipment. We reviewed radio infrastructure for the Bureau of Indian Affairs (BIA), the Bureau of Land Management (BLM), the U.S. Fish and Wildlife Service (FWS), and the National Park Service (NPS).

For the scope and methodology of this evaluation, see Appendix 1.

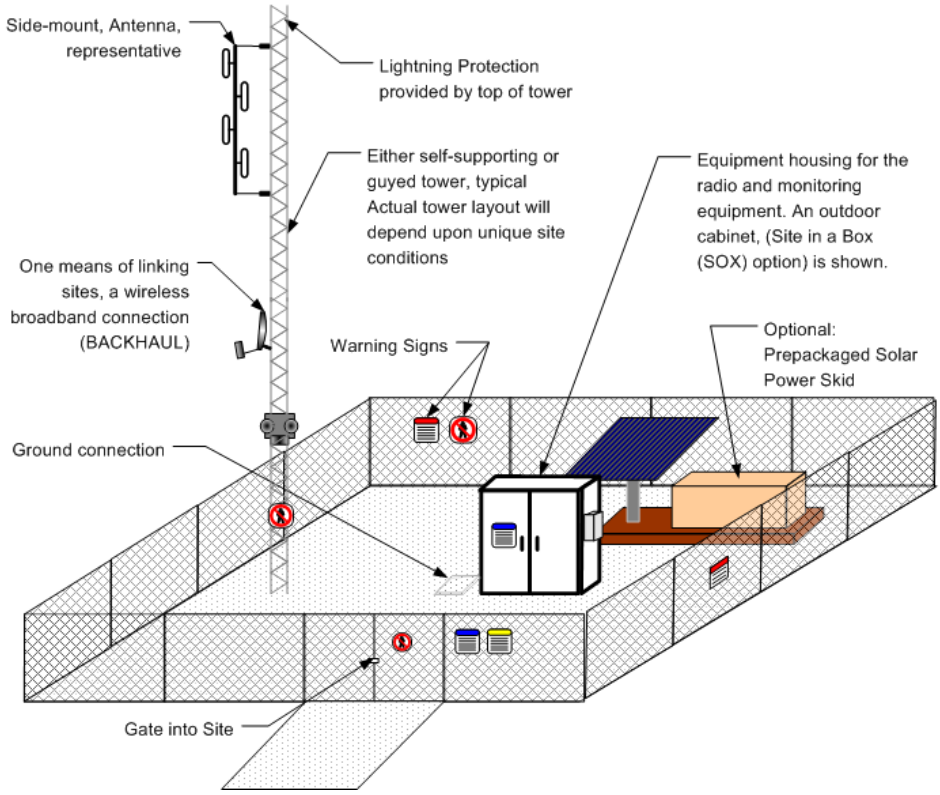
Background

Effective and reliable radio communications are important to protect the public and DOI employees and to efficiently manage public lands. The DOI and its bureaus use land mobile radio (LMR) systems to communicate and coordinate mission-critical field operations and emergency response efforts, including firefighting, law enforcement, and search and rescue. LMR systems consist of equipment and radio infrastructure (see Figure 1 for examples of equipment and infrastructure and Figure 2 for example of a radio communications site).

Figure 1: Examples of LMR Equipment and Infrastructure

LMR Equipment	LMR Infrastructure
Handheld Radios: Radios typically carried by the user.	Towers: Steel towers at radio sites that have communication equipment attached to them.
Mobile Radios: Radios typically installed in vehicles.	Shelters: Radio site structures suitable for temporary human occupancy.
Repeaters: Devices that receive a signal and retransmit it, allowing the signal to travel greater distances.	Fencing: Barriers to protect radio site.

Figure 2: Example of a Radio Communications Site*



* Diagram is not to scale, and the actual site layout varies depending upon the unique site needs.

Source: OCIO.

Prior Radio Program Reviews

In January 2007, we issued an audit report[2] that found DOI radio communications to be unreliable because of ineffective radio technology and a fragmented radio communications program and unsafe because of poorly maintained infrastructure. We made seven recommendations to address deficiencies in the radio communications program. In particular, we recommended that the DOI's Office of the Chief Information Officer (OCIO) be given the responsibility for the entire radio communications program, including management and funding of all radio equipment and infrastructure. We also recommended that the DOI's OCIO develop a comprehensive management plan for its radio communications program, including a DOI-wide plan and determination of the amount of funding needed to conduct site assessments and correct deficiencies.

In response to our report, the DOI provided in October 2007 a management framework and strategic and operational plan intended to improve management and coordination of the radio communications program. The framework and plan identified several key activities, including:

[2] *U.S. Department of the Interior Radio Communications Program* (Report No. C–IN–MOA–0007–2005), issued January 2007.

- Establishment of a DOI-wide integrated governance structure to improve coordination, efficiency, and effectiveness of the DOI's radio program activities.

- Establishment of a radio infrastructure management program to ensure well-maintained and safe infrastructure.

- Creation of a comprehensive budget and planning process to support the full scope of the radio communications program.

- Initiation of an internal control review to address bureau radio site conditions.

In 2017, we completed a verification review of the seven recommendations and—based on the supporting documentation provided—concluded that all recommendations were closed.

At that time, the DOI represented that it had implemented a DOI-wide approach to managing radio communications that made significant improvements in service and efficiency. It stated its approach was integrated across the bureaus through the formation of the Executive Radio Advisory Council and establishment of the DOI Radio Program Management Office, which in turn established the Radio Program Management Council. It also identified several projects aimed at addressing deficiencies in the radio program, including those discussed in this report. We acknowledged the DOI's draft strategic plan at the time and, based on that document, agreed to resolve the recommendations. In this evaluation, however, we determined that DOI and bureau actions were not adequate to resolve the issues identified or, in some cases, were not fully executed. As a result, we concluded that improvements to the DOI's radio communications program are still needed. Appendix 2 provides an update on the status of the 2007 audit recommendations.

Radio Communications Structure

DOI Radio Communications Program and Policy

The DOI Radio Program Management Office established under the OCIO manages the DOI's radio communications program.[3] OCIO officials told us the OCIO's governance or oversight role over radio communications primarily consists of providing policy and managing radio workgroups and projects. In December 2009, the OCIO issued Directive No. 2010–008 defining DOI radio communications site standards.[4] The OCIO Directive provides guidance to the bureaus to promote efficient use of radio infrastructure and adherence to standards for the

[3] We use the term "radio communications program" to refer to the DOI's National Field Communications and Spectrum Branch under the OCIO and the bureaus' radio programs.

[4] OCIO Directive No. 2010–008, *Department of the Interior Radio Communications Site Standards*, issued December 11, 2009. We refer to this document as the "OCIO Directive" throughout this report.

design, construction, operation and maintenance, inspection, and safety of radio infrastructure, and requires the bureaus to:

- Input and maintain information on each radio site in their facilities asset management system.
- Complete baseline condition assessments (via physical inspection) of radio sites by December 2014.
- Complete identified corrective actions to bring radio sites into compliance with standards by December 2016.
- Conduct annual condition assessments or inspections of existing radio sites by qualified radio technicians.

An OCIO official told us the OCIO has three employees dedicated to overseeing the radio communications program—the radio program manager,[5] a deputy radio program manager, and a senior project manager.

Bureau Radio Communications Programs and Policies

Four DOI bureaus—the BIA, BLM, FWS, and NPS—are the principal users of LMRs for mission-critical operations such as law enforcement and wildland fire management. LMR systems are also used for road maintenance at the BIA, natural resource management[6] at the BLM, wildlife telemetry[7] at the FWS, and search and rescue at the NPS. According to DOI and bureau radio program officials, bureau radio programs are managed independently because of the bureaus' diverse, mission-related activities. Accordingly, each bureau has its own policies and procedures and radio program manager (see Figure 3). Only one bureau—the BLM—has policies and procedures that align with the OCIO Directive in that they address inventory, inspection, and maintenance of radio infrastructure. We also noted that, for each bureau, routine activities are funded through operational or program budgets, as there is no line-item funding for these programs.

[5] This position is also referred to as a field communications chief or radio and spectrum chief. We use the title "radio program manager" throughout this report for consistency.

[6] According to the DOI's website (https://www.doi.gov/restoration/primer/resources), natural resources management is the management of land, fish, wildlife, air, and water.

[7] According to the FWS' policy manual (*FWS Service Manual* (*FW*), 272 *FW* 2, "Radio Management," 2014), wildlife telemetry is the use of radio equipment to track wildlife.

Figure 3: Bureau LMR Use and Radio Program Details

Bureau LMR Use	Program Details
BIA • Law enforcement • Wildland fire • Road maintenance	• The BIA's Office of Justice Services manages the program. • The program consists of a radio program manager (in this case, the LMR Division Chief) and radio technicians stationed in Arizona, Colorado, New Mexico, Oklahoma, South Dakota, and Wyoming. • The radio program manager is responsible for determining which radio infrastructure or sites need maintenance or repair and requesting the facilities office enter these sites in the BIA's Indian Affairs – Facilities Management System to request funding. • The BIA's radio communications policies include the *Bureau of Indian Affairs Manual (BIAM),* 46 *BIAM* Supplement 2, "Office of Facilities Management" (1985); and the *BIA's Office of Justice Services Law Enforcement Handbook*, 3rd edition (2015).
BLM • Law enforcement • Wildland fire • Aviation support for programs • Natural resources	• The BLM's Assistant Director, Fire and Aviation, manages the program. • The program consists of a radio program manager (in this case, the National Radio Operations Branch Chief), and, at individual States, radio program leads, telecommunications specialists or radio technicians, and engineers. • The radio program manager is responsible for national level oversight of the LMR program. • State program leads are responsible for program management and identification of infrastructure or sites needing maintenance or repair. • State telecommunication specialists or radio technicians are responsible for the preventative maintenance of radio equipment and systems. • State engineers are responsible for entering infrastructure or sites in the BLM's asset management system to request funding for maintenance or repair. • The BLM also manages the Radio Infrastructure Compliance Assessment Safety, Health, and the Environment database, which is an inventory of its radio sites and is primarily used for internal audit findings related to its radio infrastructure. • The BLM's radio communications policies include the BLM MS–1291, *Radio Frequency Authorization Manual* (2014); BLM MS–1292, *Radio Communications Manual* (2013); and BLM *Handbook 1292–3 Radio Site Facilities Standards* (2013). Collectively, these three policies address the inventory, inspection, and maintenance of radio infrastructure.

Bureau LMR Use	Program Details
FWS • Law enforcement • Wildland fire • Wildlife telemetry	• The FWS' Information Resources and Technology Management (IRTM) office manages the program. • The program consists of the IRTM Assistant Director or Chief Information Officer (CIO), the radio program manager or lead, and telecommunication specialists or radio engineers. • The IRTM Assistant Director or CIO is responsible for the program. • The radio program manager or lead has broad responsibility for radio system management. • Telecommunication specialists or radio engineers are responsible for routine radio maintenance. • Staff in the field are responsible for entering infrastructure or sites in the FWS' Service Asset and Maintenance Management System. • The FWS' radio communications policies include the FWS' *Service Manual* (*FW*), 272 *FW* 2, "Radio Management" (2014); and the FWS' *Radio Handbook* (2016).
NPS • Law enforcement • Search and rescue • Maintenance staff • Interpretive park rangers • Biologists	• The NPS' Radio and Spectrum Management Division manages the program. • The program consists of a radio program manager (in this case, the Radio and Spectrum Management Division Chief), regional radio program managers, and field or park radio coordinators. • The radio program manager is responsible for the national level oversight of the program. • Regional radio program managers are responsible for radio operations within the field offices or park units. • Field or park radio coordinators are responsible as a collateral duty for assisting the bureau radio program manager and their respective offices or park units in managing radio systems. • The Park Facility Management Division is responsible for managing all NPS facilities or assets, including radio infrastructure, and field staff are responsible for entering radio infrastructure in the NPS Facility Management Software System. • The NPS' radio communications policies include NPS Director's Order 15, *NPS Frequency Management Guidance for Radio Communications, Electronics, and Wireless System*, (2015) and *NPS Wireless Technologies Reference Handbook 15* (2003).

Radio Communications Workgroups and Projects

As previously described, the DOI established workgroups and projects as key activities to address deficiencies identified in our 2007 audit report. In particular, the DOI established various workgroups as a significant part of its effort to provide oversight for specific bureaus. Over the last 17 years, the DOI established four principal radio workgroups and six radio projects. We provide additional detail on the current workgroups and projects because they are the governing bodies within the DOI relating to radio programs or because projects directly affect the DOI's approach to funding radio programs within individual bureaus.

According to the various workgroup charters, a radio workgroup is an organized group of DOI and bureau officials with a stake in radio communications that is generally overseen by a chairperson and vice chairperson and meets periodically to discuss issues and recommend solutions to support user needs through consensus decision making. As of August 2023, there were two active work groups:

- The Field Communications Improvement Program Executive Leadership Team (FCIP–ELT) was chartered in December 2021 and, according to that charter, the workgroup consists of DOI executives and bureau senior accountable officials and is chaired by the program manager for interagency borderlands coordination and field communications.[8] According to its charter, the FCIP–ELT aids the bureaus through "consensus decision making" with a focus on modernizing field communication technologies. In May 2022, the FCIP–ELT issued a 5-year DOI field communications strategic plan that includes goals to responsibly manage field communication portfolios, define mission-centric-field communication capabilities, and ensure integration of security and mobile data management principles.

- The Radio Program Management Council was chartered in 2014 and consists of DOI and bureau representatives and is chaired by the OCIO radio program manager. Its purpose is to foster information exchange and collaboration among DOI and bureau radio users and to address radio communication issues and recommend solutions to support safe, efficient, and effective communication systems.

Appendix 3 contains more information on the workgroups that the DOI has formed since 2007.

To address specific issues and recommend solutions, a workgroup often oversees projects that include activities or initiatives undertaken to improve radio communications. According to group charters and project planning or status documents (i.e., progress reports), the DOI established these workgroups and projects to improve management of its radio communications program,

[8] This position, which reports to the Deputy Assistant Secretary for Public Safety, Resource Protection and Emergency Services, was established to protect natural and cultural resources on the border and to avoid, minimize, and mitigate possible impacts on DOI-managed lands through timely and effective coordination between the DOI, its bureaus, and the U.S. Department of Homeland Security. In addition, this position leads efforts to collectively improve field communications within the DOI.

improve coordination and communications among radio users, and consolidate and improve radio infrastructure. There are currently two projects:

- The Joint Communications Infrastructure Improvement Project (JCIIP) was originally intended to address deferred maintenance for radio infrastructure. In fiscal year (FY) 2021, this project shifted its focus to modernizing current DOI field communication systems. The JCIIP provided funding to the BLM, FWS, and NPS for radio equipment upgrades[9] and radio site improvements[10] in several States[11] from FY 2017 through FY 2022.[12] It was funded only through FY 2022.

- Once the JCIIP concludes, the DOI Field Communications Modernization Project (DIFCOM) will be the only active DOI radio project. The DIFCOM project is an 8-year project with a regional approach that seeks to include all bureaus and to reduce infrastructure to save costs.[13] It is considered an extension of the JCIIP, and its general purpose is to provide end users with broadband capabilities to improve field operations, public safety, and emergency response efforts. The project replaces some of the JCIIP's efforts with a focus on modernizing and reducing infrastructure.

Appendix 4 contains additional information about the six projects that the DOI has established since 2007.[14]

As noted previously, the JCIIP played a central role in distributing funding to individual bureaus for their own radio programs from 2017 through 2022, which we summarize in Figure 4. We summarize the current distribution of DIFCOM funds in Figure 5.

[9] These upgrades include projects that upgrade or replace communication site equipment such as repeaters, base stations, LMR systems, satellite radios, personnel GPS trackers, and cellular devices.

[10] These improvements include deferred maintenance activities such as road repair, shelter replacement, grounding remediation, perimeter fencing, and tower repair.

[11] JCIIP boundaries included Arizona and New Mexico in FYs 2017 and 2018; were expanded to include Southern California, Nevada, and Texas in FYs 2019 and 2020; and were further expanded to include the rest of California, Colorado, Oklahoma, and Utah for FYs 2021 and 2022.

[12] The JCIIP provided $1.8 million annually for FYs 2017 through 2020 and $3.6 million annually for FYs 2021 and 2022.

[13] The project plan is for a total of $271.2 million in funding over 7 years (with project completion in 8 years); bureaus will request funding for years during which they have a presence in the included region(s).

[14] Four of the six radio projects were canceled, phased out, or moved to a new project. For more details about these projects (including the purpose and outcome), see Appendix 4.

Figure 4: Expenditure of JCIIP Funds as of May 2023*

FY	BLM ($)	FWS ($)	NPS ($)	Total ($)
2017	312,337	348,387	558,013	1,218,737
2018	712,098	60,336	591,770	1,364,204
2019	1,097,571	–	542,800	1,640,371
2020	1,066,912	–	1,011,552	2,078,464
2021	1,422,669	763,416	494,451	2,680,536
2022	1,223,932	466,552	634,211	2,324,695
Total	**$5,835,518**	**$1,638,691**	**$3,832,798**	**$11,307,007**

* The FWS did not participate in FYs 2019 and 2020 because it was behind in completing prior year projects. The U.S. Forest Service participated the first year of the project, but its funding is not included here because the DOI does not have oversight of its funds. The OCIO's former Radio Program Manager told us the BIA chose not to participate.

Source: Data provided by the OCIO.

Figure 5: FY 2023 DIFCOM Project Funds

Bureau/Office	Requested* ($)	Received† ($)
BIA	10,300,000	1,000,000
FWS	5,400,000	0
OCIO	600,000	300,000
NPS	12,100,000	8,000,000

* Source: *The Interior Budget in Brief*, Fiscal Year 2023, issued April 2022

† Information provided by the OCIO Senior Radio Project Manager and confirmed by a DOI budget analyst.

Results of Evaluation

The OCIO Directive on radio communication sites standards requires the bureaus to maintain an inventory of their sites, complete baseline condition assessments of their sites, correct problems identified to bring sites into compliance, and conduct annual condition assessments of their sites. We found that the bureaus generally did not inventory, inspect, or maintain radio infrastructure as required. Specifically, the BIA, BLM, FWS, and NPS did not comply with the OCIO Directive as follows:

- The BIA, FWS, and NPS did not properly inventory radio infrastructure.
- The BIA, BLM, FWS, and NPS generally did not complete inspections consisting of baseline condition assessments and/or annual condition assessments.
- The BIA, BLM, FWS, and NPS did not ensure that infrastructure was maintained.

These issues primarily occurred because the OCIO did not have a mechanism to enforce its own requirements and because bureaus did not conduct sufficient bureau oversight.

We note that these findings are similar to those identified in our 2007 audit, which reported that a fragmented radio program and poorly maintained radio infrastructure contributed to unreliable and unsafe radio communications. The DOI responded by developing an integrated framework and strategic plan that included establishment of a Radio Program Management Office and radio workgroups and projects (described in the preceding section). Despite the DOI's reported efforts over the last 17 years, we found these efforts did not adequately address previously identified deficiencies and that oversight issues continue. Regular inventories, inspections, and maintenance are necessary to reduce the risk of unreliable and unsafe infrastructure conditions.

Bureaus Did Not Inventory, Inspect, or Maintain Radio Infrastructure as Required

We found that the BIA, FWS, and NPS did not have complete and accurate inventories of their radio infrastructure as required by the OCIO Directive. We also found that these three bureaus generally did not complete baseline condition assessments and that none of the four bureaus conducted annual condition assessments. Therefore, the bureaus were unable to ensure that their radio infrastructure was maintained in accordance with the OCIO Directive. We determined that these issues occurred primarily because the OCIO did not have a mechanism to enforce its own requirements and because the bureaus themselves did not conduct sufficient oversight. Without proper accountability for their radio infrastructure and awareness of its condition, the bureaus do not have current information and the ability to make sound management and funding decisions. Therefore, the bureaus face the risk of unreliable and unsafe radio infrastructure.

Bureaus Did Not Have Complete or Accurate Inventories

The OCIO Directive requires the bureaus to maintain information about radio infrastructure. Specifically, bureaus are required to input and maintain information for each site in their facilities asset management systems and the Federal Real Property Profile, including data elements required by the Federal Real Property Council (FRPC).[15] In addition, the DOI's *Real Property and Financial Management Guide* states that bureaus and offices should account for all real property to ensure that accounting records, including property inventory, are accurate and complete; conduct physical inventory or testing of property throughout the year to ensure the existence, completeness, and accuracy of their inventories; and perform a physical inventory of all real property assets over a 5-year period.

The DOI's financial management policy[16] requires bureaus to have a system of management controls for effective and efficient program management using the principles set forth in the *U.S. Government Accountability Office Standards for Internal Control in the Federal Government* (the "Green Book"). The Green Book provides the framework for establishing and maintaining an effective internal control system for Federal agencies. Maintaining accurate inventories is a key management control to ensure quality information is appropriate, current, complete, accurate, accessible, and timely.

We found information suggesting that, notwithstanding these policies, the BIA, FWS, and NPS did not have complete and accurate inventories of their radio infrastructure. We did not find significant issues with the BLM's inventories. Our results by bureau are listed below.

Bureau of Indian Affairs

In July 2022, the BIA provided us with an inventory of radio infrastructure from its Indian Affairs – Facilities Management System (IA–FMS), which listed 317 radio sites.[17] We selected seven BIA radio sites to physically visit and were able to confirm three unique sites. We were, however, unable to verify the existence of four radio tower sites in Riverside, California. In addition, these four sites listed on the inventory appeared to be duplicate entries because the tower age, replacement costs, and inspection dates were identical to each other. BIA facilities officials told us the IA–FMS contained some legacy data carried over from a prior system migration (which occurred in 2011 and 2012) and that they were working on cleaning data in the system.

Further, upon reviewing a facility condition assessment report provided to us, we learned that a BIA contractor could not find four tower sites during a site visit at the Northern Cheyenne Agency in Lame Deer, Montana, on September 28, 2021. (The contractor described these findings in its report.) The inventory the BIA provided to us continued to list the four sites that

[15] The FRPC's *2023 Guidance for Real Property Inventory Reporting*, Version 2, is a policy document that lists 44 data elements such as property type, property use, status, replacement value, repair needs, condition index, annual operating costs, annual maintenance costs, and main location.

[16] The DOI's *Departmental Manual* (*DM*), 340 *DM* 1.

[17] The original inventory list included 533 sites. However, 216 of these were communications equipment rooms and therefore may not have towers or radio infrastructure to inspect. For purposes of this project, we defined a radio site as those with a tower structure.

the contractor reportedly could not find but did not provide any explanation of how—or whether—the BIA had reconciled the discrepancy or sought to obtain further information. This suggested that the BIA's inventory may not be accurate or complete.

U.S. Fish and Wildlife Service

The FWS could not provide us with an inventory of radio infrastructure from its Service Asset and Maintenance Management System. In June 2022, the FWS instead gave us a list of 86 radio sites but acknowledged it was not a complete inventory. FWS officials told us this list was prepared by a contractor that it hired in 2019 to perform site inspections. We noted that 4 of the 11 radio sites (at 7 FWS National Wildlife Refuges) we visited were not on the inventory list provided to us. (We obtained these site locations from interviews with FWS officials.)

National Park Service

In July 2022, the NPS provided us an inventory of radio infrastructure from its Facility Management Software System, which listed 348 radio assets. However, the NPS' method for classifying its radio infrastructure differed from other bureaus, and we observed a lack of consistency in the recording of radio infrastructure even within the NPS. This issue is compounded by inconsistent terminology as compared to other bureaus and the OCIO. In particular, the NPS refers to radio "assets" rather than radio "sites." According to NPS policy,[18] radio assets are radio systems or infrastructure that support or allow for the transmitting and receiving of radio transmissions and include components such as radio towers. NPS officials told us they inventory radio infrastructure by asset and location—not by site—and that components (e.g., radio towers) are a subsidiary of the radio asset. Because of the method that the NPS used to record its radio infrastructure, which was different than the method used by the other bureaus, we could not discern from its inventory list how many individual radio sites existed at a given park unit.

Moreover, we found that individual parks interpret the term "assets" differently. When we reviewed the NPS' inventory, we also found that entries varied from one radio "asset" per park to multiple radio "assets" per park, and it was only during contact or discussions with individual parks that we obtained more detailed information about the specific number and location of radio tower sites within each park unit. Six of the nine parks we visited listed one radio "asset" (i.e., system) on the inventory, and, in these cases, we found that they seemed to be referring to the park as a whole. For example, Glacier National Park is listed on the inventory as one radio asset; according to the map provided by the park's Radio Program Manager, the park has 13 radio tower sites. The other three parks visited, however, listed between seven to nine radio "assets" on the inventory.[19] For example, the inventory for Golden Gate National Recreation Area lists seven radio "assets" consisting of two radio systems and five radio sites. This suggests that parks are recording inventory differently, in part, because NPS policy as written lacks clarity or precise guidance. Further, grouping all radio tower sites within a park as a single "asset" is not

[18] *Communication Systems (5500) Asset Business Practice,* Park Facility Management Division (revised May 9, 2013).

[19] We considered each entry a separate asset whether it be a communication, radio, or repeater system; or a communication or radio site.

consistent with the FRPC's guidance for real property inventory reporting, which requires that data be reported at the "constructed asset level."

Bureau of Land Management

We did not find any substantial deficiencies in the BLM's inventory list. The BLM provided us an inventory of 796 radio sites from its Radio Infrastructure Compliance Assessment Safety, Health, and the Environment database. Our site visits confirmed the existence of the six radio sites selected for review.

Bureaus Did Not Conduct Condition Assessments and Take Necessary Corrective Action

The DOI requires the bureaus to complete condition assessments and correct problems identified in accordance with standards. Specifically, the OCIO Directive required the bureaus to (1) complete baseline condition assessments of their radio sites by December 2014, (2) take necessary corrective actions to bring their sites into compliance by December 2016, and (3) begin a schedule of annual condition assessments of existing radio communication sites. The OCIO Directive describes condition assessments as inspections of radio communication sites done in accordance with standards defined by various governmental and nongovernmental organizations. To perform condition assessments, bureaus are required to use a checklist containing nine sections addressing general site information, site design and development, site building, external grounding, internal grounding, power, surge protective devices, interference, and equipment installation (see Figure 2 for an illustration of a radio communications site).

We found the bureaus generally did not comply with the OCIO Directive requirements. Specifically, the bureaus could not consistently provide documentation showing that baseline and annual condition assessments were performed for radio sites. We selected 45 radio sites to review and found that 39 were missing baseline condition assessments and that all 45 were missing annual condition assessments. As a result of these deficiencies, we concluded that the DOI has no assurance that radio infrastructure was maintained as required. We further detail the weaknesses we found below.

Bureau of Indian Affairs

We requested baseline and annual condition assessment reports for the seven BIA radio sites that we selected. The BIA's Radio Program Manager provided us with reports for three of the sites, but the reports were not fully consistent with the condition assessments that the OCIO Directive requires. Moreover, the BIA's Radio Program Manager told us that the BIA completed baseline condition assessments but did not complete annual condition assessments. According to the reports that we received, the engineering team inspected site components similar to those the OCIO Directive requires, but did not include a risk assessment, and the site inspections predated the OCIO Directive and our earlier audit report. Because the few reports the BIA provided did not satisfy the OCIO Directive's schedule and content requirements, we concluded that the BIA did not complete baseline condition assessments for the seven sites we selected. In addition, the BIA's Facilities Manager provided us one facility condition assessment report from 2022 for the Northern Cheyenne Agency (as previously described), but it did not include the radio tower site we visited, and it also was not consistent with the condition assessment the OCIO Directive requires.

The BIA's Radio Program Manager told us that, instead of conducting condition assessments of radio sites annually, it performs maintenance checks when officials learn of a problem or when a team goes to the site for a separate reason. In addition, BIA facilities officials told us that they have a contractor that conducts general facility condition assessments (as described above) at every site once every 3 years. Further, BIA facilities officials told us the contractor is only required to assess radio sites that are "readily apparent" and is not required to locate radio sites that are not easily accessible, such as those in remote locations. The BIA provided us radio infrastructure data that identified 140 of 317 radio sites (44 percent) as missing dates for these general condition assessments.[20] Of radio sites with a general condition assessment date listed, only 68 (21 percent) were marked as inspected within the past 3 years.[21]

Because maintenance checks are performed when officials learn of a problem or when a team is at the site for another reason, corrective actions taken to maintain the BIA's radio infrastructure are entirely reactive. That is, the BIA addresses problems once they are identified rather than conducting maintenance checks to prevent problems from occurring in the first place.

Bureau of Land Management

BLM officials provided us the six baseline condition assessment reports that we requested. However, BLM officials told us they did not complete annual condition assessments and could not provide any condition assessment reports for the six radio sites we selected. Instead, BLM officials told us that they require State offices to conduct annual site inspections and described those inspections in terms suggesting that they were both quick and basic. However, the inventory list provided identified only 220 of 796 radio infrastructure sites (28 percent) as inspected within the past 3 years. BLM officials told us that safety issues are identified and rated on a priority scale and that BLM State officials are directed to address the most crucial issues. We concluded that, due to the lack of annual condition assessments, the BLM could not ensure that all of its radio infrastructure was maintained in accordance with the OCIO Directive.

Despite the lack of annual condition assessments, we acknowledge the BLM's internal review process for its radio infrastructure as a best practice for other bureaus to consider.

Best Practice: BLM officials told us they conduct internal radio program audits or reviews of three States per year on a periodic, rotational basis and that they began reviews specific to the radio program in 2021. Previously (between 2013 and 2019),[22] the BLM completed reviews of the radio program as part of its fire preparedness reviews with the goal to assess selected radio sites in a State every 4 years and follow up on previously identified findings and corrective actions. The status of the BLM's internal audit findings related to its radio infrastructure is recorded in its inventory list.

[20] The BIA's radio infrastructure data refers to these condition assessments as "CA Site Inspection."

[21] Because a condition assessment with a span of nearly 2 years in between assessments would comply with OCIO requirements (e.g., completed at the beginning of one year and then again at the end of the following year), we used a 3-year period when reporting the number of bureau inspections to ensure we captured all compliant assessments.

[22] A BLM official told us the BLM did not conduct reviews in 2020 due to the COVID–19 pandemic.

U.S. Fish and Wildlife Service

FWS officials told us they did not complete baseline or annual condition assessments. However, FWS officials told us they hired a contractor in 2019 (as previously described) to perform some site inspections. FWS officials also told us that some inspections were done by a contracted company. The FWS provided inspection reports for 8 of the 11 radio sites we visited, which generally included sections similar to condition assessments; however, the inspections were not completed on an annual basis or were completed only by examining photos the field staff provided. Although the inventory list of 86 sites the FWS provided identified all sites as inspected within the past 3 years, the inventory list itself was incomplete. As previously described, we visited four unlisted sites and found one—the radio site in Eulonia, Georgia—to be in poor condition. An external contractor last inspected this site in September 2019 and identified several deficiencies needing repair, including some considered to be an emergency or requiring immediate attention. During our site visit in November 2022, we found deficiencies similar to those identified in the report, including rust and corrosion of the tower. These conditions are shown in the photograph in Figure 6.

National Park Service

NPS officials told us they did not complete baseline or annual condition assessments. The NPS did, however, provide a baseline condition assessment report for 1 of the 21 radio sites we visited, which was dated December 2021. In addition, the NPS provided various inspection documents, including preventative maintenance sheets, trip logs, checklists, and structural analysis reports, but none of these documents constituted a condition assessment. NPS officials told us the frequency of inspections, including general asset condition assessments and preventative maintenance inspections,[23] varies by region or park. The NPS provided us radio infrastructure inventory data that showed only 158 of the 348 listed assets had a last inspection date. Of those 158, only 36 (10 percent of the total assets) were identified as inspected within the past 3 years. Six of the nine parks we visited had no last inspection date.[24] For example, the "last inspection date" field for Mesa Verde National Park was blank, and the NPS could not provide condition assessment reports but rather provided maintenance notes from March 30, 2021, and March 22, 2022. These notes were brief and related to checking parameters or testing repeaters and did not rise to the level of a condition assessment.

[23] This was described by an NPS Regional Radio Program Manager as functional testing of radio components, grounding, infrastructure, batteries, solar panels, and other equipment.

[24] Sites we visited with no last inspection date were Glacier National Park, Glen Canyon National Recreation Area, Golden Gate National Recreation Area, Lassen Volcanic Park, Mesa Verde National Park, and Point Reyes National Seashore.

The OCIO Did Not Have a Mechanism to Enforce Its Directive and Bureaus Did Not Conduct Sufficient Oversight

We concluded that the bureaus generally did not have complete or accurate inventories of radio infrastructure and did not inspect or maintain infrastructure as required under the OCIO Directive due to lack of OCIO enforcement of its own requirements and insufficient bureau oversight.

Lack of OCIO Enforcement

Notwithstanding the directive requirements, the OCIO had no mechanism to enforce its directive to ensure the bureaus inventoried and completed condition assessments of their radio infrastructure. In addition, the OCIO Directive does not ensure consistency because it does not include specific guidance for bureaus regarding how they should track radio infrastructure inventories.

We determined the OCIO did not enforce its radio site or infrastructure requirements because of ineffective oversight and governance structure. OCIO radio officials described the DOI radio communications program as decentralized and collaborative and explained that the OCIO's main function was to provide policy and manage radio workgroups and projects. For example, the former DOI Radio Program Manager described the radio communications program as decentralized and that implementation of OCIO policies occurred inconsistently at the bureau level. In addition, the OCIO Senior Radio Project Manager told us the DOI Radio Program Office could only influence the bureaus to take certain actions on radio projects.

These descriptions are consistent with our assessment of the workgroups and projects as described previously; the radio-related workgroups, composed of DOI executives and bureau senior accountable officials, relied on consensus decision making, and there was no single decision maker with the authority to enforce adherence to policy. For example, the FCIP–ELT charter, which focuses on modernizing field communication technologies, states that its purpose is "to establish a forum and process for consensus decision making for all DOI and bureau field communications, and connectivity issues and solutions." We also found no evidence that the OCIO could, in practice, use the current workgroup or project structures to ensure that the bureaus provided information; and we saw no indication that the OCIO could, in practice, direct how the bureaus managed their radio programs.

Although the existing workgroups are formulated to promote consensus-based decision making, we concluded that the OCIO does in fact have the delegated authority to oversee and manage the radio communications program. The DOI's delegation policy states that "authority is delegated to the [OCIO] to carry out the functions of the position as required by all applicable laws, regulations, and policies." It also states that the OCIO has the authority for providing oversight and management of information management and technology resources and services, including "all IT infrastructure, telecommunications and radio assets." In addition, the policy states that the OCIO has the authority to issue DOI-wide policy and guidance affecting IT management programs and issuing and supporting implementation of policy and guidance for managing

information in collaboration with mission stakeholders.[25] Finally, we note that in 2016, the DOI issued Secretarial Order No. 3340[26] to implement the Federal Information Technology Acquisition Reform Act, which strengthens the role of the OCIO and consolidates bureau authority for information management and technology under a single position that directly reports to the OCIO. In short, we believe that the OCIO does have the authority to impose stronger and more consistent requirements to ensure bureau compliance with relevant guidance.

Insufficient Bureau Oversight

We found that, depending on the bureau, policies did not exist, were incomplete, or were unenforced at the bureau level. We also found that, in some bureaus, responsibilities for the programs were split between multiple people or offices. Based on this information, we concluded that bureau oversight of radio programs was insufficient.

First, we found that policies for radio infrastructure inventories, inspections, and maintenance either did not exist or were not implemented and overseen at the bureau level. For example, BIA policies for its radio communications program[27] do not address the inventory, inspection, or maintenance of its radio infrastructure. In addition, one of the policies the BIA provided was from its historic *Bureau of Indian Affairs Manual* (*BIAM*), even though the BIA's website states that the *BIAM* was superseded by the *Indian Affairs Manual* (*IAM*) and a 2016 memorandum from the Acting Assistant Secretary – Indian Affairs stated that BIA programs should no longer rely on the *BIAM*. The *BIAM* policy provided to us has not been updated or replaced. In addition, the FWS and NPS policies for their radio communications programs[28] do not address the inventory, inspection, or maintenance of its radio infrastructure. FWS officials told us implementation of policies was delegated to the wildlife refuges due to a low level of radio-specific staff, and NPS officials told us implementation of policies was delegated to the park units and regional offices.

According to BIA, BLM, and NPS officials or policies, radio communications programs were managed by more than one person or office because oversight of bureau radio programs was divided by infrastructure and equipment. More specifically, the BIA, BLM, and NPS stated that radio infrastructure was the responsibility of facilities or engineering while radio equipment and other radio-related items were the responsibility of the radio communications program itself. This meant that oversight actions regarding inventory, inspections, and maintenance were

[25] 212 *DM* 24, Sections 24.2 B.(1), (2), (13).

[26] Secretarial Order No. 3340, *Strengthening and Securing Information Management and Technology at the Department of the Interior* (2016), https://www.doi.gov/sites/doi.gov/files/uploads/so-3340.pdf.

[27] 46 *BIAM* Supplement 2, "Office of Facilities Management" (1985); and *BIA's Office of Justice Services Law Enforcement Handbook,* 3rd edition (2015).

[28] *FWS Service Manual (FW), 272 FW 2, "Radio Management" (2014)*; *FWS Radio Handbook* (2016); NPS *Director's Order 15: NPS Frequency Management Guidance for Radio Communications, Electronics, and Wireless Systems* (2015); and *NPS Wireless Technologies Reference Handbook 15* (2003).

potentially the responsibility of multiple people or offices but that no single entity or person was explicitly assigned with these obligations.

We observed additional challenges at the NPS, where officials told us that responsibility for radio infrastructure inventory was delegated to the park units; NPS asset management officials told us radio infrastructure was tracked by asset and location, not site, and that it was up to the parks to decide how they wanted to group assets because there was no set business practice. However, the NPS' policy[29] on the capture and management of data in the Facility Management Software System states that there should be a separate location record for each radio asset in a park. Each asset should be split into separate records only if the distribution or connections are separate (e.g., multiple dispatch centers).[30] As to the inspection dates in the inventory, NPS asset management officials told us the "last inspection date" field was not required for system entry and that it was up to the radio program to decide whether to include it. NPS policies on the Facility Management Software System do not, in fact, specify that this data field should be completed.[31]

In other examples regarding inspections and corrective actions on sites, bureau officials told us that responsibility was decentralized and could vary depending on the owner or location of the site. Again, we concluded that this lack of consistency may cause confusion and delays due to overlapping oversight and differing budgets and needs between site owners and certain site lessees. For example, a BIA official stated that its own radio program personnel, Tribes, and the BIA facilities division lacked effective coordination when completing maintenance work. In another example, the BLM stated that some equipment was located at radio sites that were owned by other entities, such as the U.S. Forest Service. Therefore, it could be difficult to enforce corrective actions when the BLM does not own the radio site.

Collectively, the OCIO's lack of enforcement of its directive and split oversight of bureau radio communications programs—as well as lack of specific policies and procedures for the bureaus—make it difficult to create and sustain appropriate inventories of radio infrastructure and to regularly inspect and maintain radio infrastructure. Without a complete and accurate inventory of radio infrastructure, bureaus do not have proper accountability and control over their assets or property. In addition, without proper inventories, the bureaus are unable to inspect and maintain radio infrastructure timely, if at all. Further, the lack of baseline and annual condition assessments on radio communication sites means the condition of radio infrastructure and the corrective actions needed to address potentially dangerous conditions are unknown. Therefore, bureaus are unable to make informed decisions concerning the condition of radio infrastructure and potential corrective actions, creating the risk of unreliable and unsafe infrastructure conditions. Below are two examples of radio communication sites we identified with significant, and potentially dangerous, infrastructure problems (see Figures 6 and 7).[32]

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[29] Park Facility Management Division, *Communication Systems (5500) Asset Business Practice,* "Lumping vs. Splitting Location Records," (revised May 9, 2013).

[30] We concluded that the lack of clarity in this business practice could have contributed to inconsistencies in the NPS' radio infrastructure inventory as described on page 14.

[31] *Communication Systems (5500) Asset Business Practice* (revised May 2013), *Communication Systems (5500) Asset Best Management Practice* (revised August 2013), and *Inspection Guidance: 5500 Communication Systems* (undated).

[32] A list of radio sites visited can be found in Appendix 5.

Figure 6: Photo of a Corroded Pipe Found at the Eulonia, Georgia, Site

The FWS' radio tower located at the Eulonia site in Georgia was very corroded. Multiple sections of the tower were significantly rusted because paint had peeled off. We found one metal pipe that had fallen off the tower from an unknown height as a result of the corrosion. The condition of the tower creates a risk of falling objects.

Figure 7: Photo of Damaged Wolf Mountain Radio Site Shelter

The BIA's Wolf Mountain radio site shelter in Montana, which houses the site's radio equipment, was burned in a wildfire. According to the BIA Radio Manager, damaged material inside the shelter creates a toxic gas that is not safe to breathe and creates the potential for people to be exposed to harmful gases. When radio and repair workers need to access the site, they must first open the door and air out the shelter for an extended period to mitigate the issue.

Other Matters

Bureau radio officials stated that there was no line-item funding for their radio communications program; they stated that funding instead came from bureau operational or program budgets and that this made it a challenge to secure needed resources. The DOI's former radio program manager referred to bureau radio funding as a "tin cup" approach where the bureau radio programs "beg for money" at the end of the fiscal year. While special projects, including the JCIIP and DIFCOM project, provided some funding for radio communications, use of the funding was limited to certain purposes and geographical areas and was not for routine radio activities. Bureau radio programs were generally managed under information technology or user activity (e.g., law enforcement and fire) and funded through user operations, deferred maintenance, capital improvement, or construction accounts.

Bureau officials also reported that radio program staffing was a challenge. A BLM official told us some sites could not be fixed because of a shortage of radio technicians. FWS officials told us that the FWS had only two radio technicians covering the contiguous United States.

Conclusion and Recommendations

Conclusion

DOI law enforcement officers, firefighters, and emergency responders rely on radio communications to conduct mission-critical operations and quickly respond to emergency situations. Therefore, effective and reliable radio communications are important to protect the public and DOI employees and to efficiently manage public lands.

We found the bureaus generally did not inventory, inspect, and maintain all radio infrastructure as required by the OCIO Directive on radio communications site standards. As a result, the bureaus face the risk of unreliable and unsafe radio infrastructure. These deficiencies occurred primarily because the OCIO did not have a mechanism to enforce its own requirements and the bureaus did not conduct sufficient oversight.

The DOI has sought to address issues with its radios program for at least the last 17 years. Our office's 2007 audit found that a fragmented radio program and poorly maintained radio infrastructure contributed to unreliable and unsafe radio communications. The DOI responded by developing an integrated framework and strategic plan that included establishment of a Radio Program Management Office and radio workgroups and projects. Although ultimate responsibility for the DOI's radio program formally resides in the OCIO, in practice, the program remains largely decentralized. There does not appear to be any single person or office effectively overseeing the bureaus' actions in this area or taking steps to ensure uniformity across the Department. As a result, bureaus do not comply with the OCIO Directive, and the problems in the program remain, leaving unsafe and unreliable infrastructure in place.

We make 26 recommendations to help the DOI and its bureaus ensure that all radio infrastructure is properly inventoried, inspected, and maintained in accordance with OCIO radio infrastructure standards.

Recommendations Summary

We provided a draft of this report to the DOI's OCIO and the BIA,[33] BLM, FWS, and NPS for review. The OCIO and the four bureaus concurred with all 26 recommendations. We consider all recommendations resolved. We determined that Recommendations 1 and 2 are significant and will be reported as such in our semiannual report to Congress in accordance with the Inspector General Act.[34] Below we summarize the OCIO's and the bureaus' responses to our recommendations, as well as our comments on their responses. See Appendix 6 for the full text of the OCIO's and bureaus' responses; Appendix 7 lists the status of each recommendation.

[33] The BIA is a subcomponent of the DOI's Indian Affairs (IA). While we refer to the BIA throughout our report, we addressed our report to the Assistant Secretary - Indian Affairs at IA's request. The BIA and IA provided a joint response to our report.

[34] The Inspector General Act of 1978, 5 U.S.C. § 405(b), requires inspectors general to prepare semiannual reports summarizing Office of Inspector General activities during the immediately preceding 6-month periods ending March 31 and September 30. It also states that these semiannual reports should include an identification of each "significant recommendation" described in previous semiannual reports on which corrective action has not been completed.

We recommend that the DOI OCIO:

1. Update the OCIO Directive on radio communications site standards (OCIO Directive No. 2010–008) to improve consistency by including specific guidance regarding how bureaus should track radio infrastructure inventories and manage their radio programs.

   OCIO Response: The OCIO concurred with our recommendation and stated that it "will complete the initial update edits of the OCIO Directive No. 2010–008," which will then be brought before the Radio Program Management Council for DOI, bureau, and office representatives to collaboratively update, review, and edit. The OCIO identified the Deputy Chief Information Officer for the Enterprise Services Division as the official responsible for recommendation implementation. The target date for implementation is November 30, 2024.

   OIG Comment: Based on the OCIO response and proposed actions, we consider this recommendation resolved. It will be implemented when the OCIO provides us with the updated directive that includes specific procedures for tracking bureau inventories of radio infrastructure and managing bureau radio programs.

2. Develop a mechanism to enforce all radio communications site requirements (OCIO Directive No. 2010–008), including the requirement for bureaus to inventory their radio infrastructure and the requirements for bureaus to complete baseline condition assessments, annual condition assessments, and corrective actions of their radio infrastructure.

   OCIO Response: The OCIO concurred with our recommendation and stated that it "will develop a process to enforce all radio communications site requirements contained within the updated OCIO Directive No. 2010–008 and other directives as required." It further stated that the process will include identifying bureau and office associate chief information officers as the senior accountable officials for radio communications, updating senior executive position descriptions and performance evaluation criteria, and requiring bureaus and offices to manage radio assets as Capital Planning and Investment Control investments. In addition, the OCIO stated, "The governance…oversight will be through the quarterly [FCIP–ELT] meetings. Bureaus and offices will be asked to provide updates on progress, successes, and challenges, and to exchange ideas on meeting [our] recommendations." The OCIO added that it will leverage existing tools or applications to develop and enforce an interim reporting process and solution for bureaus and offices to consistently collect data and inventory radio assets until a fully functioning enterprise capability is implemented.

   The OCIO stated that implementing an enterprise data collection capability may require additional or new funding sources; therefore, "fiscal year funding cycles will have to be leveraged and schedules established accordingly." The OCIO identified the Deputy Chief Information Officer for the Enterprise Services Division as the official responsible for

recommendation implementation. The target date for implementation of the enterprise system is December 30, 2026.

Because the target implementation date for the proposed enterprise system is more than 1 year from the issuance of this evaluation report, the OCIO provided us with interim actions they will take, including exploring options for an enterprise system for radio assets inventory and condition collection through an existing system (e.g., the Bison Support System) and collecting the data using a standardized spreadsheet. The OCIO, in coordination with the Deputy Assistant Secretary for Public Safety, Resource Protection, and Emergency Services, "will integrate recommendation progress into the FCIP–ELT meetings following bureau and office submissions of timelines and milestones related to their individual recommendations."

OIG Comment: Based on the OCIO response and proposed actions, we consider this recommendation resolved. It will be implemented when the OCIO provides us documentation of the actions it stated it will take to enforce all radio communications site requirements contained in the updated directive and other required directives, as well as documentation demonstrating the implementation of an enterprise data collection and inventory system for radio assets. In addition, we acknowledge that the OCIO will establish mitigating measures it plans to take (as described in the OCIO's proposed interim actions) until the recommendation is fully implemented.

We recommend that the BIA:

3. Develop and implement an action plan to ensure its radio infrastructure inventory is complete and accurate. This plan should include—at a minimum—steps to be taken, resources needed, and milestones.

   BIA Response: The BIA concurred with our recommendation and stated that it plans to increase its oversight by developing and implementing an action plan to ensure the BIA's radio infrastructure inventory is complete and accurate. The BIA stated that it "will first identify the resources needed to verify the completeness and accuracy of [its] radio infrastructure inventory" and then will develop an action plan (including milestones) by July 1, 2025, in accordance with relevant DOI directives and BIA policies. The BIA further stated that it will implement the plan by verifying the existence of the radio infrastructure included in its inventory, removing any duplicate or nonexistent infrastructure, and adding omitted infrastructure (if any is identified). The BIA added, "Many of the sites are in remote locations and due to weather and road conditions access is limited." Therefore, a "radio infrastructure inventory will take an extended period of time." The BIA identified the Division of Facilities Management and Construction (DFMC) and LMR Program Office as the parties responsible for recommendation implementation. The target date for implementation is October 31, 2026.

OIG Comment: Based on the BIA response and proposed actions, we consider this recommendation resolved. It will be implemented when the BIA provides its action plan with the necessary components to ensure a complete and accurate inventory of its radio infrastructure and provides its complete radio infrastructure inventory. Given the level of effort and resources involved in completing a full inventory of radio sites, we acknowledge that implementation of this recommendation may exceed 1 year. The BIA should establish mitigating measures until this recommendation is fully implemented.

4. Complete baseline condition assessments for all radio communication sites in accordance with the updated OCIO Directive.

   BIA Response: The BIA concurred with our recommendation and stated that, per the actions planned in response to Recommendation 3, it "will complete an initial baseline condition assessment for all [of its] radio communication sites" in accordance with the updated OCIO Directive, which is scheduled to be updated in November 2024. The BIA stated it will develop its action plan by July 1, 2025, and implement it by October 31, 2026. The BIA reiterated, "Many of the sites are in remote locations and, due to weather and road conditions, access is limited. Therefore, completion of the baseline assessments . . . will take an extended period of time." The BIA identified the DFMC and the LMR Program Office as the parties responsible for recommendation implementation. The target date for implementation is October 31, 2026.

   OIG Comment: Based on the BIA response and proposed actions, we consider this recommendation resolved. It will be implemented when the BIA provides documentation showing that it has completed baseline condition assessments for all of its radio communication sites in accordance with the updated OCIO Directive. We note that the target implementation date for this recommendation is more than 1 year from this report's issuance date. We acknowledge the BIA's response that completion of initial baseline condition assessments for all radio communication sites in accordance with the updated OCIO Directive is part of the action plan identified in its response to Recommendation 3, and that completion of these assessments will take an extended period of time, especially for those sites in remote locations. However, the BIA should establish mitigating measures until the recommendation is fully implemented.

5. Develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.

   BIA Response: The BIA concurred with our recommendation and stated that it "will develop and implement a comprehensive plan to ensure that annual condition assessments of [BIA] LMR infrastructure [are] completed and corrective actions are promptly taken, in compliance with the updated OCIO Directive," which is scheduled to be updated in November 2024. The BIA also stated that its target dates to develop and implement its action plan are July 1, 2025, and October 31, 2026, respectively, and the target date to complete its baseline assessments is October 31, 2026. Further, the BIA stated that "an annual condition assessment will be conducted a year after the baseline

condition assessment is completed for selected radio infrastructure sites. Therefore, some sites will need another year to ensure the annual assessments are completed . . . The [BIA] plans to take necessary corrective actions promptly to address any deficiencies identified during the annual assessments." The BIA identified the DFMC and the LMR Program Office as the parties responsible for recommendation implementation. The target date for implementation is October 31, 2027.

OIG Comment: Based on the BIA response and proposed actions, we consider this recommendation resolved. It will be implemented when the BIA provides documentation showing that it has completed annual condition assessments for all of its radio communication sites in accordance with the updated OCIO Directive and identified deficiencies deemed critical have been corrected. We note that the target implementation date for this recommendation is more than 1 year from this report's issuance. We acknowledge the BIA's response that annual condition assessments will be conducted 1 to 2 years after the baseline condition assessments are completed (which are targeted for completion by October 31, 2026, due to access limitations). We also acknowledge the BIA's response that it plans to promptly take corrective actions to address deficiencies identified during annual condition assessments. However, the BIA should establish mitigating measures until this recommendation is fully implemented.

6. Develop and implement a plan to bring the Wolf Mountain radio site into compliance with DOI radio communication standards.

BIA Response: The BIA concurred with our recommendation and stated that it "has assessed the condition of the radio equipment and infrastructure at the Wolf Mountain radio site and has developed a plan to bring the site into compliance with DOI radio communication standards, including obtaining and installing a new shelter and fencing." The BIA reported it is in the process of obtaining quotes for the materials and labor required to implement the plan to bring the site into compliance and that work orders will be entered in the BIA's facilities management system for funding; once funded, a contract will be awarded to complete the work. The BIA identified the DFMC and the LMR Program Office as the parties responsible for recommendation implementation. The target date for implementation is April 15, 2025.

OIG Comment: Based on the BIA response and proposed actions, we consider this recommendation resolved. It will be implemented when the BIA provides evidence the Wolf Mountain radio site complies with the updated OCIO Directive.

7. After the issuance of the updated OCIO Directive, develop and implement a policy that includes comprehensive procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions to ensure bureauwide and Departmentwide consistency and compliance with OCIO Directives.

   BIA Response: The BIA concurred with our recommendation and stated that it "will develop a policy via a National Policy Memorandum that is consistent with the requirements of the updated OCIO Directive. This [BIA] National Policy Memorandum will include comprehensive procedures for ensuring that the LMR infrastructure inventory is complete and accurate, conducting initial baseline condition assessments and follow on assessments, and promptly addressing identified corrective actions." The BIA stated that, based on the updated OCIO Directive scheduled to be published in November 2024, the National Policy Memorandum will be drafted by April 2025 and published by June 2025. The BIA identified the DFMC and the LMR Program Office as the parties responsible for recommendation implementation. The target date for implementation is June 30, 2025.

   OIG Comment: Based on the BIA response and proposed actions, we consider this recommendation resolved. It will be implemented when the BIA provides the policy and procedures described in its response, as well as evidence the policy and procedures have been shared with radio staff.

8. Conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.

   BIA Response: The BIA concurred with our recommendation. It stated that the BIA will assess its LMR program to determine whether it has the internal controls and appropriate senior responsible officials, staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications. The BIA also stated the "assessment will be performed after the issuance of the updated OCIO Directive in November 2024, so the directive's impact on [the LMR program's] internal controls, staffing, funding, technology, systems, and other resources can be taken into account." The BIA identified the LMR Program Office as the party responsible for recommendation implementation. The target date for implementation is April 30, 2025.

   OIG Comment: Based on the BIA response and proposed actions, we consider this recommendation resolved. It will be implemented when the BIA provides the results of the assessment described in its response.

9. Develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.

   BIA Response: The BIA concurred with our recommendation and stated that it "will develop [and implement] an action plan with measurable goals and milestones to address gaps identified by [the] comprehensive assessment performed to address Recommendation 8." The BIA identified the LMR Program Office as the party responsible for recommendation implementation. The target date for implementation is April 30, 2026.

   OIG Comment: Based on the BIA response and proposed actions, we consider this recommendation resolved. It will be implemented when the BIA provides documentation showing it has addressed the gaps identified by its radio communication program assessment. Given the comprehensive assessment will need to be completed first and the level of effort and resources involved in addressing the gaps, we acknowledge that implementation of this recommendation may exceed 1 year. The BIA should establish mitigating measures for identified internal control gaps until this recommendation is fully implemented.

We recommend that the BLM:

10. Complete baseline condition assessments for any radio communication sites that have not been assessed, in accordance with the updated OCIO Directive.

    BLM Response: The BLM concurred with our recommendation and stated it completed 796 baseline condition assessments by the OCIO December 2014 deadline. The BLM also stated that it has completed baseline condition assessments on all but one radio site in its current inventory. The BLM added that it "will work with the [State] programs to complete baseline condition assessments on those radio communication sites that have not been [completed]." The BLM identified the Fire and Aviation Assistant Director and the National Operations Center Director as the officials responsible for recommendation implementation. The target date for implementation is September 30, 2025.

    OIG Comment: Based on the BLM response and proposed actions, we consider this recommendation resolved. It will be implemented when the BLM provides documentation showing that it has completed baseline condition assessments for all of its radio communication sites in accordance with the updated OCIO Directive.

11. Develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.

    BLM Response: The BLM concurred with our recommendation and stated that it will provide subject matter expert(s) to assist with updating OCIO Directive No. 2010–008 and to ensure collaboration with the Radio Program Management Council. The BLM also stated that it will initiate developing a comprehensive plan within 90 days of the

published updated OCIO Directive. The BLM identified the Assistant Director for Fire and Aviation and the Director of the National Operations Center as the officials responsible for recommendation implementation. The target dates for the BLM to develop and implement its comprehensive plan are September 30, 2025, and March 30, 2026, respectively.

OIG Comment: Based on the BLM response and proposed actions, we consider this recommendation resolved. It will be implemented when the BLM provides documentation showing that it has completed annual condition assessments for all of its radio communication sites in accordance with the updated OCIO Directive and identified deficiencies deemed critical have been corrected. We note that the BLM's target date to implement the comprehensive plan is more than 1 year from this report's issuance date. We acknowledge that before annual condition assessments can be done, baseline condition assessments must be completed (which are targeted for completion by September 30, 2025, as identified in the BLM's response for Recommendation 10). However, the BLM should establish mitigating measures until the recommendation is fully implemented.

12. Conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.

    BLM Response: The BLM concurred with our recommendation. It stated, "The BLM, in conjunction with guidance from the OCIO, will develop a plan to conduct a comprehensive assessment of [its] radio communication program to ensure its internal controls are consistent with [the] DOI OCIO guidance," which will address all components as listed in the recommendation. The BLM identified the Assistant Director for Fire and Aviation, the Director of the National Operations Center, and the Assistant Director for Information Management and Technology as the officials responsible for recommendation implementation. The target dates for the BLM to develop and implement the comprehensive assessment of its radio program are September 30, 2025, and October 30, 2026, respectively.

    OIG Comment: Based on the BLM response and proposed actions, we consider this recommendation resolved. It will be implemented when the BLM provides documentation showing the results of its comprehensive assessment. Given the level of effort and resources involved in completing a comprehensive assessment of its radio program, we acknowledge that implementation of this recommendation may exceed 1 year. The BLM should establish mitigating measures until this recommendation is fully implemented.

13. Develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.

    BLM Response: The BLM concurred with our recommendation and stated that it "will develop and implement an action plan as stated in the recommendation," and "the action plan will be included as an addendum to the comprehensive plan as required in Recommendation 11." The BLM identified the Assistant Director for Fire and Aviation, the Director of the National Operations Center, and the Assistant Director for Information Management and Technology as the officials responsible for recommendation implementation. The target dates for the BLM to develop and to implement the action plan are September 30, 2025, and November 30, 2026, respectively.

    OIG Comment: Based on the BLM response and proposed actions, we consider this recommendation resolved. It will be implemented when the BLM provides documentation showing it has addressed the gaps identified by its radio communication program assessment. Given the comprehensive assessment will need to be completed first and the level of effort and resources involved in addressing the gaps, we acknowledge that implementation of this recommendation may exceed 1 year. The BLM should establish mitigating measures until this recommendation is fully implemented.

We recommend that the FWS:

14. Develop and implement an action plan to ensure its radio infrastructure inventory is complete and accurate. This plan should include—at a minimum—steps to be taken, resources needed, and milestones.

    FWS Response: The FWS concurred with our recommendation. It stated that its infrastructure inventories are governed by the FWS' *Service Manual* (*FW*) Part 372, "Management of Constructed Real Property Assets" (2016) and the FWS' *Constructed Real Property Management Handbook*, Chapter 3, "Maintaining a Complete and Accurate Inventory of Assets" (2016). The FWS also stated that 272 *FW* 2, "Radio Management" (2014) "will be amended to provide reference and links to those policy documents." In addition, the FWS stated that it "will explore the internal development of a singular tool to manage both radio infrastructure and radio equipment inventories, that will also interface with the appropriate systems of record for those assets to keep inventories updated." The FWS identified its Associate Chief Information Officer and National Wildlife Refuge System (NWRS) Chief as the officials responsible for recommendation implementation. The target date for implementation is December 31, 2024.

    OIG Comment: Based on the FWS response, we consider this recommendation resolved. We note that the FWS did not specifically mention developing and implementing an action plan to ensure its radio infrastructure inventory is complete and accurate, however, they did describe corrective actions that could be included in the action plan. This recommendation will be implemented when the FWS provides the recommended action plan, documentation showing it has updated FWS policies as described in its response, and its complete radio infrastructure inventory.

15. Complete baseline condition assessments for all radio communication sites, in accordance with the updated OCIO Directive.

    FWS Response: The FWS concurred with our recommendation and stated that "assuming the updated OCIO Directive will be similar to the previous version, FWS will take the following steps to further bring the Radio Program in alignment with the OCIO Directive":

    - Update the FWS' *Radio Handbook* with references and links to *FW* Part 372, "Management of Constructed Real Property Assets" (2016); the FWS' *Constructed Real Property Management Handbook* (2016); and FM-01, *Condition Assessment User Guide*. If specific guidance does not exist on comprehensive inspection criteria for towers, shelters, or any other radio communication site assets, such information will be added to the FWS' *Radio Handbook* updates.

    - Use a combination of FWS employee and contract personnel to perform baseline assessments for radio communication sites.

    - Determine an appropriate contract vehicle to perform condition assessments.

    - Evolve the current tower inspector contract and initiative to a contracted site inspector position and renew the requirement to travel at least monthly to conduct the follow on 5-year inspections. Given the continuous requirement for inspections, this position will optimally be a full-time equivalent moving forward.

    The FWS identified its Associate Chief Information Officer, NWRS Chief, and the Management and Administration Assistant Director as the officials responsible for recommendation implementation. The target date for implementation is December 31, 2025; the FWS noted this date is heavily dependent on necessary funding and resources.

    OIG Comment: Based on the FWS response and proposed actions, we consider this recommendation resolved. It will be implemented when the FWS provides documentation showing that it has completed baseline condition assessments for all of its radio communication sites in accordance with the updated OCIO Directive. Given the level of effort and resources involved in completing baseline condition assessments for all radio communication sites, we acknowledge that implementation of this recommendation may exceed 1 year. The FWS should establish mitigating measures until this recommendation is fully implemented.

16. Develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.

FWS Response: The FWS concurred with our recommendation, and stated that "assuming the updated OCIO Directive will be similar to the previous version, FWS will take the following steps to bring the Radio Program in alignment with the OCIO Directive":

- Update the FWS' *Radio Handbook* with references and links to *FW* Part 372, "Management of Constructed Real Property Assets" (2016); the FWS' *Constructed Real Property Management Handbook* (2016); and FM–01, *Condition Assessment User Guide*. If specific guidance does not exist on comprehensive inspection criteria for towers, shelters, or any other radio communication site assets, such information will be added to the FWS' *Radio Handbook* updates.

- Collaborate internally to determine how to increase staffing within the radio program to meet the OCIO Directive No. 2010–008 requirement for radio communication sites to be inspected annually by qualified radio technicians.

- Evaluate the condition assessments then prioritize and initiate mitigation projects as funding permits.

- Evaluate whether a separate, Information Resources and Technology Management (IRTM) managed system is necessary to capture and record the annual condition assessments.

The FWS identified its Associate Chief Information Officer and the NWRS Chief as the officials responsible for recommendation implementation. The target date for implementation is December 31, 2026; the FWS noted this date is dependent on necessary funding and resources.

OIG Comment: Based on the FWS response and proposed actions, we consider this recommendation resolved. It will be implemented when the FWS provides documentation showing that it has completed annual condition assessments for all of its radio communication sites in accordance with the updated OCIO Directive and identified deficiencies deemed critical have been corrected. We note that the FWS' target implementation date for this recommendation is more than 1 year from this report's issuance date. We acknowledge the FWS' response that it will evaluate (1) how to increase radio program staff so qualified technicians can inspect radio communication sites annually, (2) the results of annual condition assessments and initiate mitigation projects as funding permits, and (3) the need for an IRTM-managed system to record results of annual condition assessments. We also recognize that before annual condition assessments can be done, baseline condition assessments must be completed (which are targeted for completion by December 31, 2025, as identified in the FWS' response for

Recommendation 15, and are dependent on resource availability). However, the FWS should establish mitigating measures until this recommendation is fully implemented.

17. Develop and implement a plan to bring the Eulonia radio site into compliance with DOI radio communication standards.

    FWS Response: The FWS concurred with our recommendation and stated that the damage resulting from severe rust at the Eulonia tower was such that the plan is to demolish the current tower and construct a new tower in its place. The FWS added that, in 2024, it was provided a cost estimate of $485,000 to demolish and replace the tower. The FWS stated that infrastructure facilities funds are not currently available to replace the tower, so specific funding for this action is required. The FWS identified its Associate Chief Information Officer, NWRS Chief, and Management and Administration Assistant Director as the officials responsible for recommendation implementation. The target date for implementation is December 31, 2025; the FWS noted this date is heavily dependent on necessary funding.

    OIG Comment: Based on the FWS response and proposed actions, we consider this recommendation resolved. This recommendation will be implemented when the FWS provides evidence the Eulonia radio site complies with the updated OCIO Directive. We note the FWS' target date to replace the radio tower is more than 1 year from this report's issuance date and is dependent on availability of funding. Accordingly, and in particular given the health and safety risk associated with the radio site's current condition, the FWS should provide a revised target implementation date or establish mitigating measures until this recommendation is fully implemented.

18. After the issuance of the updated OCIO Directive, develop and implement a policy that includes detailed procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions to ensure bureauwide and Departmentwide consistency and compliance with OCIO Directives.

    FWS Response: The FWS concurred with our recommendation and stated that "assuming the updated OCIO Directive is like the previous version, FWS will take the following steps to bring the Radio Program in alignment with the OCIO Directive":

    - Develop and implement a radio-specific inventory that will capture radio infrastructure inventories and inspections, as well as LMR equipment inventories and maintenance histories. The FWS stated that radio infrastructure is real property governed by *FW* Part 372, "Management of Constructed Real Property Assets" (2016); the FWS' *Constructed Real Property Management Handbook* (2016); and FM–01, *Condition Assessment User Guide*. In accordance with these policy documents, it stated that radio infrastructure inventories are recorded in the Service Asset and Maintenance Management System.

- Add specificity in the FWS' *Radio Handbook* for the specialized nature of radio sites when conducting condition assessments. Instructions on how to conduct condition assessments are contained in *FW* Part 372, "Management of Constructed Real Property Assets" (2016); the FWS' *Constructed Real Property Management Handbook* (2016); and FM-01, *Condition Assessment User Guide*.

The FWS identified its Associate Chief Information Officer and NWRS Chief as the officials responsible for recommendation implementation. The target date for implementation is May 31, 2025.

OIG Comment: Based on the FWS response and proposed actions, we consider this recommendation resolved. However, we note that it did not specifically mention developing and implementing a policy to include detailed procedures for recording radio infrastructure inventories and addressing corrective actions for deficiencies identified in condition assessments. Rather, it referenced other policies that govern real property. If specific guidance on recording radio infrastructure inventory and addressing corrective actions does not exist in these other referenced policies, the FWS should ensure such information is added to the FWS' *Radio Handbook* or other internal policy document. This recommendation will be implemented when the FWS provides the policy and procedures for recording radio infrastructure inventory, condition assessments, and corrective actions; and evidence the policy and procedures have been shared with appropriate staff.

19. Conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.

FWS Response: The FWS concurred with our recommendation and stated that, because any decisions on changes or improvements made to its radio program could have effects throughout the FWS, it "will identify the [p]rogram stakeholders and conduct a comprehensive and collaborative assessment of the [program] to evaluate its effectiveness and identify areas that may be improved." The FWS identified its Associate Chief Information Officer and the Deputy Director for Programs as the officials responsible for recommendation implementation. The target date for implementation is December 31, 2024.

OIG Comment: Based on the FWS response and proposed actions, we consider this recommendation resolved. It will be implemented when the FWS provides results of the comprehensive assessment described in our recommendation.

20. Develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.

    FWS Response: The FWS concurred with our recommendation and provided possible solutions to gaps it will potentially identify in the assessment from Recommendation 19, including:

    - Setting a minimum of one field radio engineer with basic tools and test equipment per region. This would meet the OCIO Directive requirements for annual inspections of radio communication sites by qualified radio technicians.

    - Establishing a personal property account specific to LMR equipment and move personal property asset records for all fixed station backbone radio equipment (base stations, repeaters, etc.) to the radio program for accountability and lifecycle maintenance.

    - Keeping the responsibility for maintenance and replacement of their mobile and portable radios at the field station level.

    The FWS stated that once the assessment from Recommendation 19 is complete, it will reassess its list of possible solutions and tailor it as needed to correct any gaps identified from the assessment. The FWS identified its Associate Chief Information Officer, Management and Administration Assistant Director, and NWRS Chief as the officials responsible for recommendation implementation. The target date for implementation is December 31, 2025.

    OIG Comment: Based on the FWS response, we consider this recommendation resolved. However, we note that the FWS did not specifically mention developing and implementing an action plan with measurable goals and milestones for its list of possible solutions to gaps it will potentially identify in the assessment from Recommendation 19. This recommendation will be implemented when the FWS provides documentation showing it has addressed the gaps identified by its radio communication program assessment. We also note that the FWS' target date to implement this recommendation is more than 1 year from this report's issuance date. Accordingly, the FWS should provide a revised target implementation date or establish mitigating measures until the recommendation is fully implemented.

We recommend that the NPS:

21. Develop and implement an action plan to ensure its radio infrastructure inventory is complete and accurate. This plan should include—at a minimum—steps to be taken, resources needed, and milestones.

    NPS Response: The NPS concurred with our recommendation and stated that the Radio and Spectrum Management Branch (RSMB) and the Park Facility Management Division (PFMD) will collectively develop a project plan to ensure the radio inventory is complete

and accurate in the NPS' Facility Management Software System. The NPS added that the plan will include the steps to be taken, resources needed, and milestones. The NPS identified the Deputy Associate Chief Information Officer for the Information Resources Management Directorate (IRMD) – National Information Technology Center and the Acting PFMD Manager as the officials responsible for recommendation implementation. The target date for plan implementation is March 7, 2025.[35]

OIG Comment: Based on the NPS response and proposed actions, we consider this recommendation resolved. It will be implemented when the NPS provides its project plan and its complete radio infrastructure inventory.

22. Complete baseline condition assessments for all radio communication sites, in accordance with the updated OCIO Directive.

    NPS Response: The NPS concurred with our recommendation and stated that the RSMB and the PFMD "will collectively develop communications to the field to provide guidance on completing baseline condition assessments for radio communications sites in accordance with the updated OCIO Directive." The NPS identified the Deputy Associate Chief Information Officer for the IRMD – National Information Technology Center and the Acting PFMD Manager as the officials responsible for recommendation implementation. The target date for implementation is November 6, 2025, which is "dependent on completion of [the] updated OCIO Directive and availability of funding." The NPS stated that it "submitted a budget request for [FY 2025] to establish a Radio Facilities Infrastructure (Sites) Safety Program, but this request did not make it into the President's budget," and it is resubmitting the budget request for FY 2026.

    OIG Comment: Based on the NPS response and proposed actions, we consider this recommendation resolved. It will be implemented when the NPS provides documentation showing that it has completed baseline condition assessments for all of its radio communication sites in accordance with the updated OCIO Directive. Given the level of effort and resources involved in completing baseline condition assessments for all radio communication sites, we acknowledge that implementation of this recommendation may exceed 1 year. The NPS should establish mitigating measures until this recommendation is fully implemented.

23. Develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.

    NPS Response: The NPS concurred with our recommendation and stated that the RSMB and the PFMD will collectively develop a comprehensive plan that ensures compliance with the updated OCIO Directive, completion of periodic condition assessments of all radio infrastructures, and prompt completion of corrective actions. The NPS added that

[35] The NPS did not initially include the target dates for Recommendations 21 through 24 in its draft report response; as such, we requested the target dates, which the NPS subsequently provided via email.

"the frequency of condition assessments will depend on funding." The NPS identified the Deputy Associate Chief Information Officer for the IRMD – National Information Technology Center and the Acting PFMD Manager as the officials responsible for recommendation implementation. The target date for implementation is November 6, 2025, which is dependent on the planned completion of the updated OCIO Directive in November 2024 and availability of funding. The NPS stated that it submitted a budget request to establish a Radio Facilities Infrastructure (Sites) Safety Program, but this request did not make it into the President's budget for FY 2025, and it is resubmitting the budget request for FY 2026.

OIG Comment: Based on the NPS response and proposed actions, we consider this recommendation resolved. It will be implemented when the NPS provides documentation showing that it has completed annual condition assessments for all of its radio communication sites in accordance with the updated OCIO Directive and identified deficiencies deemed critical have been corrected. We note that the NPS' target implementation date for this recommendation is more than 1 year from this report's issuance date. We acknowledge that before annual condition assessments can be done, baseline condition assessments must be completed (which are targeted for completion by November 6, 2025, as identified in the NPS' response for Recommendation 22). Accordingly, the NPS should establish mitigating measures until the recommendation is fully implemented.

24. After the issuance of the updated OCIO Directive, develop and implement a policy that includes detailed procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions to ensure bureauwide and Departmentwide consistency and compliance with OCIO Directives.

    NPS Response: The NPS concurred with our recommendation. It stated that the RSMB and the PFMD "will collectively develop and implement a policy that includes detailed procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions" to ensure NPS- and DOI-wide consistency and compliance with OCIO directives. The NPS identified the Deputy Associate Chief Information Officer for the IRMD – National Information Technology Center and the Acting PFMD Manager as the officials responsible for recommendation implementation. The target date for implementation is November 6, 2025, which is dependent on the planned completion of the updated OCIO Directive in November 2024 and availability of funding.

    OIG Comment: Based on the NPS response and proposed actions, we consider this recommendation resolved. It will be implemented when the NPS provides the policy and procedures for recording radio infrastructure inventories, conducting condition assessments, and addressing corrective actions; and evidence the policy and procedures have been shared with radio staff. We note that the NPS' target implementation date for this recommendation is more than 1 year from this report's issuance date. Accordingly,

the NPS should provide a revised target implementation date or establish mitigating measures until the recommendation is fully implemented.

25. Conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.

    NPS Response: The NPS concurred with our recommendation and stated that the RSMB "will work with the NPS Enterprise Risk Management and Internal Control (ERM–IC) Program to review and update its Programmatic Risk and Control Register." The NPS stated that the ERM–IC Program is performing an internal control review and root cause analysis in FY 2024, and the findings and recommendations from the assessment will be incorporated into a corrective action plan. The NPS identified the Deputy Associate Chief Information Officer for the IRMD – National Information Technology Center and the Chief of the Business Management Group as the officials responsible for recommendation implementation. The target date for implementation is December 31, 2024.

    OIG Comment: Based on the NPS response and proposed actions, we consider this recommendation resolved. It will be implemented when the NPS provides the results of the comprehensive assessment described in our recommendation.

26. Develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.

    NPS Response: The NPS concurred with our recommendation. It stated that, upon completion of the response actions to Recommendation 25, "the RSMB will work with the NPS Accountability Office's ERM–IC Program to develop a sustainable [corrective action plan] with target remediation dates and assignments distributed among associated stakeholder directorates and programs, NPS RSMB, Regional Directorates, and park/field units." The NPS stated that the corrective action plan will incorporate failure ratios and indicate where greater internal control measure implementation is needed and will be used to monitor progress and for reporting to NPS senior leadership to ensure operational effectiveness through a strong internal control environment. The NPS identified the Deputy Associate Chief Information Officer for the IRMD – National Information Technology Center and the Chief of the Business Management Group as the officials responsible for recommendation implementation. The target date for implementation is December 31, 2024.

    OIG Comment: Based on the NPS response and proposed actions, we consider this recommendation resolved. It will be implemented when the NPS provides documentation showing it has addressed the gaps identified by its radio communication program assessment.

Appendix 1: Scope and Methodology

Scope

We evaluated the U.S. Department of the Interior's (DOI's) radio communications program to determine whether the bureaus inventoried, inspected, and maintained radio infrastructure as required by policy.

We reviewed the radio infrastructure for the Bureau of Indian Affairs (BIA), the Bureau of Land Management (BLM), the U.S. Fish and Wildlife Service (FWS), and the National Park Service (NPS). These are the four DOI bureaus that primarily use land mobile radio systems to communicate and coordinate mission-critical operations, including firefighting, law enforcement, and search and rescue. Our review focused primarily on the condition of radio infrastructure for these systems, which generally consists of towers, shelters, and fencing. We conducted our review from April 2021 through January 2023. We did not include a review of DOI or bureau information system controls. We relied on policy, guidance, and data provided by the DOI and its bureaus.

Because of the COVID–19 pandemic, we could not conduct most of our evaluation in-person. We gathered data remotely and communicated with DOI and bureau officials via email and Microsoft Teams. We also visited a small percentage of total DOI radio sites near the end of fieldwork.

Methodology

We conducted our evaluation in accordance with the *Quality Standards for Inspection and Evaluation* as put forth by the Council of the Inspectors General on Integrity and Efficiency. We believe that the work performed provides a reasonable basis for our conclusions and recommendations.

We included evaluation procedures that were considered necessary to accomplish our objectives. As part of our evaluation, we reviewed internal controls to the extent they related to the objective and scope of the evaluation. Specifically, we reviewed organization structure, policies and procedures, and data reliability. We also reviewed bureau inventory lists, which included a count of radio sites by State or region and identification of missing or blank data fields.

To accomplish our objective, we judgmentally selected and visited 41 individual radio site locations, including 3 BIA, 6 BLM, 11 FWS, and 21 NPS locations. Using bureau inventory lists provided, we selected sites based on location (States in the West—Arizona, California, Colorado, and Montana—and States in the East—Georgia, North Carolina, South Carolina, and Tennessee); accessibility (the ability to drive to the location); type of site (tower site); risk assessment codes (deficiency ratings based on severity and probability) or facility condition index ratings (measure of a facility's condition at a point in time and the ratio of repair cost divided by current replacement value); date of last inspection; DOI or bureau radio officials'

suggestions; bureau representation; and reasonable travel logistics (driving distance for 1-week travel itineraries).

During these site visits, we observed (from ground level) the general condition of the fencing, shelter, and tower. Additionally, we contacted the DOI's Deputy Assistant Secretary for Public Safety, Resource Protection, and Emergency Services and Office of the Chief Information Officer (OCIO) and various bureau offices to discuss the DOI's radio communications program. See Appendix 5 for sites visited or contacted.

In addition, we reviewed the following:

- Applicable regulations, policies, and other criteria, including *Departmental Manual* (*DM*), 340 *DM* 1; the *Real Property and Financial Management Guide*; OCIO Directive No. 2010–008; bureau manuals and handbooks relating to the radio communications programs; the National Telecommunications and Information Administration's manual; and the Federal Real Property Council's *2023 Guidance for Real Property Inventory Reporting*.

- Special project and workgroup information related to radio communications, including charters, plans, and reports.

- Bureaus' inventory records and condition assessment reports pertaining to radio infrastructure as available.

- Budget or funding information related to the DOI's Joint Communications Infrastructure Improvement Project and Field Communications Modernization Project.

- Our prior audit and verification review reports, U.S. Government Accountability Office and U.S. Department of Homeland Security Office of Inspector General reports related to radio communications.

- *U.S. Government Accountability Office Standards for Internal Control in the Federal Government* (the "Green Book").

We also interviewed DOI agency and bureau officials, staff, and technicians who had a role or were involved in radio communications programs.

Appendix 2: Status of Recommendations From 2007 Audit

Status of the seven recommendations we made in our report, *U.S. Department of the Interior Radio Communications Program*, Report No. C–IN–MOA–0007–2005, issued January 2007.

Recommendation	Date Closure Requested	Status	Actions Taken According to Closure Documents
C–IN–MOA–0007–2005–01 We recommend that the Deputy Secretary reinstate wireless telecommunications as a Departmental material weakness until the findings in this report are sufficiently addressed and corrected.	09/2009	Implemented	The U.S. Department of the Interior (DOI) conducted an internal control review (from late 2007 to mid-2009) to assess the condition of bureau radio communication sites. This review identified serious health and safety deficiencies at 58 percent of 183 randomly selected sites. As a result, the DOI agreed with the recommendation to reinstate wireless telecommunications as a material weakness. The DOI removed it as a material weakness in fiscal year 2016.
C–IN–MOA–0007–2005–02 We recommend that the Deputy Secretary assign full responsibility over the radio communications program to the [Office of the Chief Information Officer (OCIO)], including management and funding of all radio equipment and related infrastructure.	08/2014	Implemented*	The OCIO implemented a DOI-wide governance and management structure for the radio communications program by establishing a Radio Program Management Office, a Radio Program Management Council, and a Radio Executive Steering Committee. The OCIO stated it did not have the authority to create a comprehensive budget and planning process to support the DOI's radio program. However, the DOI implemented a universal property management and radio system database for bureaus to create and execute a budget and planning process for radio systems using information contained in the Financial and Business Management System.

Recommendation	Date Closure Requested	Status	Actions Taken According to Closure Documents
C–IN–MOA–0007–2005–03 Once [Recommendations 1 and 2 have] been accomplished, we recommend the [Chief Information Officer (CIO)] develop a comprehensive management plan for the radio communications program with input from users and stakeholders, that includes the following components: (a) the Capital Planning and Investment Control process to manage the radio communications program; (b) a Department-wide action plan with milestones to perform necessary site assessments and correct deficiencies; (c) a determination of the funding necessary to conduct site assessments, correct deficiencies, and perform routine maintenance on the radio infrastructure; and (d) short- and long-term strategies for completing the narrowband conversion.	08/2016	Implemented*	The DOI established a governance structure to include the Radio Program Management Office, the Radio Executive Steering Committee, and the Radio Program Management Council and initiated several projects to address deficiencies in the radio program. The OCIO issued policies and procedures to monitor investment planning and spending of radios as IT investments and required bureaus to report planned radio investments through this process.

Recommendation	Date Closure Requested	Status	Actions Taken According to Closure Documents
C–IN–MOA–0007–2005-04 We recommend the CIO identify specific user groups (for example, fire fighters, law enforcement, and biologists) and ensure the following: (a) user needs are thoroughly assessed and addressed; (b) guidance that meets all users' needs is provided and enforced; (c) all user groups are provided adequate training on radio use; and (d) allow users to purchase analog narrowband technology or to develop hybrid systems to address health and safety issues or limitations in infrastructure capabilities.	08/2014	Implemented	The OCIO implemented a DOI-wide governance and management structure for the radio communications program by establishing a Radio Program Management Office, a Radio Program Management Council, and a Radio Executive Steering Committee. In addition, the OCIO implemented a DOI-wide radio architecture for alternative technologies by developing a DOI-wide architecture and implementation plan, developing policy allowing bureaus to apply for waivers from radio standards, and modifying a radio contract that supports alternative technologies.
C–IN–MOA–0007–2005–05 We recommend the CIO appoint a credentialed project manager to oversee the radio communications program.	07/2009	Implemented	The OCIO hired a Project Management Professional to manage the portfolio of radio program projects, including the recommendations identified in our 2007 report.
C–IN–MOA–0007–2005–06 We recommend the CIO enforce existing safety procedures, such as posting warning signs, to inform employees and the general public of hazardous site conditions.	08/2016	Implemented	The DOI transferred responsibility for employee safety from the OCIO to the Office of Occupational Safety and Health, which issued communication tower policy.

Recommendation	Date Closure Requested	Status	Actions Taken According to Closure Documents
C–IN–MOA–0007–2005–07 We recommend the CIO implement the following best practices, where appropriate: (a) establish a universal property management and radio system network database to better identify existing resources Department-wide and to help identify resource-sharing opportunities within DOI; (b) share infrastructure with other federal agencies and state and local governments; (c) consider alternate technologies; (d) centralize the bureaus' technical service capabilities to take advantage of expertise and resources Department-wide; (e) establish a consistent funding mechanism, such as a working capital fund, to ensure availability of funds for annual maintenance; and (f) establish a life-cycle replacement program to systematically track the condition and useful life of the radio infrastructure so radio costs can be systematically projected.	08/2014	Implemented	The DOI and OCIO reported the following: (a) the DOI implemented a universal property management and radio system database; (b) the OCIO established agreements with Federal, State, and local governments to share infrastructure and issued policy requiring a sharing analysis for any new system development; (c) the OCIO issued policies allowing waivers from DOI radio and spectrum standards, including purchase contracts, so bureaus can acquire and use alternative technologies; (d) the OCIO established a technical services center to coordinate common services across the DOI through the Radio Program Management Council; (e) the OCIO does not have the authority to establish a working capital fund for annual maintenance; and (f) the universal property management database mentioned under 7(a) gives bureaus the ability to manage the lifecycle of radio infrastructure and equipment.

* During our evaluation we found that the DOI's corrective actions did not appear to fully address the recommendations; therefore, we make 26 new recommendations to the DOI and bureaus to address the deficiencies we identified.

Appendix 3: Primary Radio Workgroups

Below are four principal workgroups the U.S. Department of the Interior (DOI) has established since our 2007 audit report. These workgroups were established to improve the DOI's management of its radio communications program, improve coordination and communications among radio users, and consolidate and improve radio infrastructure. According to Office of the Chief Information Officer (OCIO) radio officials or status documents, the two disbanded workgroups did not accomplish their established goals. It is too early to determine the accomplishments of the newest active workgroup.

Title	Purpose	Outcome
Executive Radio Advisory Council 2009–2010	To provide oversight, coordination, and guidance for the DOI radio program and to improve management of the program.	The council was disbanded in April 2010 (shortly after inception) and did not accomplish its purpose.
Radio Executive Steering Committee 2014–2021	To provide executive leadership and strategic direction with the goal of resolving identified material weaknesses and to support radio users with the goal of creating safe, reliable, and efficient radio infrastructure.	The committee was responsible for overseeing the Southwest Border Demonstration Project and the Joint Communications Infrastructure Improvement Project. The committee did not develop a DOI-wide action plan that included milestones and expectations for completing facility inventories, condition assessments, and corrective actions (one of its objectives).
Radio Program Management Council 2014–Present	To foster exchange of information and collaboration and cooperation among the various radio user groups.	The council meets monthly to discuss radio operations, standards, and technology.
Field Communications Improvement Program Executive Leadership Team 2021–Present	To provide aid to the bureaus in modernization efforts with a focus on modernizing field communication technologies, including field connectivity capabilities and operational efficiencies.	In May 2022, the team issued a 5-year strategic plan, which includes goals to responsibly manage field communication portfolios, define mission-centric field communication capabilities, and ensure integration of security and mobile data management principles. According to its charter, the team will meet quarterly or as otherwise determined.

Appendix 4: Radio Projects Since 2007

Below are six radio projects the U.S. Department of the Interior (DOI) initiated since our office's 2007 audit report. As with the workgroups, these projects were initiated to improve the DOI's management of its communications program, improve coordination and communications among radio users, and consolidate and improve radio infrastructure. Four of these projects were phased out, canceled, or moved to a new project.

Title	Purpose	Outcome
Radio Program Organizational Transformation Project August 2009– October 2010	To address our 2007 report and obtain an understanding of the way radio programs are managed DOI-wide and develop steps for more effective radio management.	Phase 1 (assessment of DOI radio program) and phase 2 (organizational alternatives: stand-alone bureau programs or single DOI radio program) were completed. The recommended alternative was a single radio program centralized at the DOI level, but according to an Office of the Chief Information Officer (OCIO) radio official no alternative was selected and implemented. Therefore, the project was not completed.
Radio Site Consolidation and State Sharing Project May 2010– April 2011	To study cost and benefits of consolidating DOI and bureau radio sites in the States of Montana and Wyoming by using State systems.	A project management plan was developed but not signed. According to OCIO radio officials, the project terminated because of lack of funding.
Southwest Border Radio Regionalization Project (California, Arizona, New Mexico, Texas) July 2011–June 2012	To gather user and equipment data, to develop engineering architecture to provide interoperability for priority users, and to develop an implementation plan.	Two of the four phases were completed, but the project terminated because of lack of funding. Phase 1 (end user requirements and system baseline) collected quantitative end user needs and requirements and captured an inventory of existing radio systems and equipment. Phase 2 (end user and technical support requirements analysis) conducted a gap analysis of existing systems and system need.
Southwest Border Radio Demonstration Project April 2016–July 2019	To enhance coordination of land mobile radio communications and management of radio services and facilities in Arizona.	Part of phase 2 (of 2) was completed. For phase 2 (radio integration), there were six priorities and priority 1 on monitoring nonpublic safety personnel was completed. Phase 1 for computer-aided dispatch was not completed. The project closed out due to lack of funding and failed product testing (i.e., computer-aided dispatch product). Work on this project carried over to the Joint Communication Infrastructure Improvement Project.

Title	Purpose	Outcome
Joint Communications Infrastructure Improvement Project June 2017–Present	To fund bureau radio equipment upgrades and site improvements. Also, to integrate infrastructure, to eliminate duplicative or obsolete sites, and to resolve deferred maintenance.	OCIO's project financial documentation suggests that the project provided $11.3 million over a 6-year period (2017–2022) to complete 190 projects as of May 2023.
DOI Field Communications Modernization Project Initiated Fiscal Year 2023	To provide employees in the field with broadband capabilities, build more efficient and stronger mission capacity and field operations, and improve public safety and emergency response.	In May 2022, the DOI Field Communications Improvement Program Executive Leadership Team issued a 5-year field communications strategic plan. As mentioned in Appendix 3, the plan's goals are for the DOI to responsibly manage field communication portfolios, define mission-centric-field communication capabilities, and ensure integration of security and mobile data management principles.

Appendix 5: Sites Visited or Contacted

U.S. Department of the Interior	Deputy Assistant Secretary for Public Safety, Resource Protection, and Emergency Services, Washington, DC* Office of the Chief Information Officer, Washington, DC*
Bureau of Indian Affairs	Crow Agency (Wolf Mountain radio site), MT Northern Cheyenne Agency (Fisher Butte radio site), MT Division of Facilities Management and Construction, NM* Office of Justice Services, Washington, DC* Ute Mountain Ute Agency (Hermano Peak radio site), CO Southern California Agency, CA*
Bureau of Land Management	California State Office, CA* Montana/Dakotas State Office, MT* Office of Fire and Aviation, ID* Fowler Peak (radio site), CA Grizzly Peak (radio site), MT Little Snake Field Office, CO* Mount Pisgah (radio site), CO National Interagency Fire Center, ID* National Operations Center, CO* Pine Hill (radio site), CA Walker Ridge (radio site), CA Zapata (radio site), CO
National Park Service	Congaree National Park, SC Cumberland Island National Seashore, GA Glacier National Park, MT Divide (radio site) Duck Lake (radio site) Lake McDonald - Wastewater Treatment Plant (radio site) St. Mary's (radio site) Glen Canyon National Recreation Area, AZ Headquarters (radio site) Page Airport (radio site) Wahweap Chief Ranger Station (radio site) Golden Gate National Recreation Area, CA Mount Tamalpias (radio site) Presidio Hill (radio site) U.S. Park Police Dispatch (radio site) Great Smoky Mountains National Park, TN Clingman Dome (radio site) Gatlinburg (radio site) Headquarters Dispatch (radio site) Lassen Volcanic National Park, CA Table Mountain (radio site) Turner Mountain (radio site) Mesa Verde National Park (Park Point Lookout site), CO

	National Information Technology Center, Washington, DC*
	Pacific West Regional Office, CA*
	Park Facility Management Division, AZ*
	Point Reyes National Seashore, CA
	Mount Barnabe (radio site)
	Point Reyes Hill (radio site)
	Point Reyes Lighthouse (radio site)
	Carolina Sandhills National Wildlife Refuge, SC
	McBee (radio site)
	Ruby (radio site)
	Charles M. Russell National Wildlife Refuge (Cabin Coulee), MT
	Ernest F. Hollings Ace Basin National Wildlife Refuge, SC
	Information Resources and Technology Management, VA*
	Okefenokee National Wildlife Refuge, GA
U.S. Fish and Wildlife Service	East (radio site)
	South (radio site)
	West (radio site)
	Pee Dee National Wildlife Refuge, NC
	Santee National Wildlife Refuge, SC
	Savannah National Wildlife Refuge, SC
	Eulonia (radio site)
	Onslow (radio site)
U.S. Park Police	Services Division, Washington, DC*

* Contacted only.

Appendix 6: Responses to Draft Report

The responses to our draft report from the U.S. Department of the Interior's Office of the Chief Information Officer, Bureau of Indian Affairs, Bureau of Land Management, U.S. Fish and Wildlife Service, and National Park Service follow on page 52.

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

April 23, 2024

Memorandum

To: Mark Lee Greenblatt
Inspector General

From: Darren B. Ash
Chief Information Officer
Office of the Chief Information Officer

DARREN ASH Digitally signed by DARREN ASH
Date: 2024.04.23 12:15:55 -04'00'

Subject: OCIO Response to OIG Report on DOI Radio Communications Recommendations (2021-WR-020)

Thank you for the opportunity to review and comment on the draft report, entitled DOI Radio Communications Recommendations (2021-WR-020). The Department of Interior (Department, DOI), Office of the Chief Information Officer (OCIO) appreciates the Office of Inspector General's (OIG's) work in planning this engagement, conducting its review, and issuing the report on our radio/field infrastructure. The information contained in the report will assist us in successfully moving forward with the improvements to our radio/field communications program throughout the Department.

Department and OCIO leadership understand the importance of leveraging bureau and office collective capabilities to strengthen the DOI Radio Infrastructure and continue to make progress in improving effective integration across the Departmental enterprise. This memorandum and attachment respond to the draft report and will be emailed to aie_reports@doioig.gov as requested.

If you have any questions, please contact Karen Matragrano, Deputy Chief Information Officer, Enterprise Services Division, at [redacted]@ios.doi.gov and Steven E. Goodson, Chief, DOI Field Communications and Spectrum Branch at [redacted] or [redacted]@ios.doi.gov.

Attachment 1: Recommendations and Response

cc: Lisa Branum, Deputy Assistant Secretary for Public Safety, Resource Protection, & Emergency Services
Nazmin Rahman, Chief, Audit Management Division, Office of Financial Management
Deborah (June) Hartley, Deputy Chief Information Officer, OCIO
Karen Matragrano, Deputy Chief Information Officer – Enterprise Services, OCIO
Richard Westmark, Chief, Compliance Management Section, Cybersecurity Division (CSD)
Tiya Samuels, Audit Liaison Lead, Compliance Management Section, CSD
Steven Goodson, Chief, DOI Field Communications and Spectrum Branch, CSD

Attachment 1: Recommendations and Management Responses to Radio OIG DOI Radio Communications Recommendations (2021-WR-020)

Recommendation 1- Update the OCIO Directive on radio communications site standards (OCIO Directive No. 2010-008) to improve consistency by including specific guidance regarding how bureaus should track radio infrastructure inventories and manage their radio programs.

Management Response: Concur. The Office of the Chief Information Officer (OCIO) will complete the initial update edits of the OCIO Directive No. 2010-008, which will then be brought before the Radio Program Managers' Council (RPMC) for collaborative update, review, and edit by the Department and bureau and office representatives.

Responsible Official: Karen Matragrano, Deputy Chief Information Officer (DCIO), Enterprise Services Division (ESD)
Task Lead: Steven Goodson, Chief, DOI Field Communications and Spectrum Branch
Target Date: November 30, 2024

Recommendation 2 - Develop a mechanism to enforce all radio communications site requirements (OCIO Directive No. 2010–008), including the requirement for bureaus to inventory their radio infrastructure and the requirements for bureaus to complete baseline condition assessments, annual condition assessments, and corrective actions of their radio infrastructure.

Management Response: Concur. The Office of the Chief Information Officer (OCIO) will develop a process to enforce all radio communications site requirements contained within the updated OCIO Directive No. 2010-008 and other directives as required. This will include identifying Bureau and Office Associate Chief Information Officers (ACIOs) as the senior accountable officials for Radio Communications, **updates to Senior Executive position descriptions and Performance Evaluation Criteria** and requiring bureaus and offices to manage Radio as a Capital Planning and Investment Control (CPIC) investment. The governance body oversight will be through the quarterly Field Communications Improvement Program-Executive Leadership Team (FCIP-ELT) meetings. Bureaus and offices will be asked to provide updates on progress, successes, and challenges, and to exchange ideas on meeting OIG recommendations. The OCIO will also develop and enforce an interim reporting process and solution to bureaus and offices, by leveraging existing resources such as Microsoft 360 tools or other applications for consistent data collection and inventory of radio assets, until a fully capable enterprise capability is deployed to the bureaus and offices.

The OCIO will begin exploration into an enterprise data collection capability for radio inventory and condition collection, either through existing systems or another system, that will take in the data collection. The initial efforts will use a standardized spreadsheet. Noting that this effort may require additional or new funding sources, fiscal year funding cycles will have to be leveraged and schedules established accordingly.

Responsible Official: Karen Matragrano, DCIO, ESD
Task Manager: Steven Goodson, Chief, DOI Field Communications and Spectrum Branch
Initial Target Date: November 30, 2024 (Policy Updates)
Target Date: December 30, 2026 (Enterprise System)

Interim actions: Within thirty (30) days, the OCIO will begin exploration into an enterprise system for radio inventory and condition collection, through an existing system such as the Bison Support System (BSS) or another system that will take in the data collection in the initial effort using a standardized spreadsheet.

The OCIO, in coordination with the Deputy Assistant Secretary for Public Safety, Resource Protection, & Emergency Services (DAS-PRE), will integrate recommendation progress into the FCIP-ELT meetings following bureau and office submissions of timelines and milestones related to their individual recommendations.

Again, the Department thanks you for the opportunity to review and comment on the OCIO Response to OIG Report on DOI Radio Communications Recommendations (2021-WR-020). We appreciate the review of our radio/field infrastructure. The information contained in the report will assist us in successfully moving forward with the improvements to our radio/field communications program throughout the Department.

Points of Contact:
Please direct questions regarding this policy to the Office Chief information Officer, Karen Matragrano, DCIO, ESD, at [redacted] or [redacted]@ios.doi.gov, and Steven E. Goodson, Chief, DOI Field Communications and Spectrum Branch, at [redacted] or [redacted]@ios.doi.gov.

United States Department of the Interior

OFFICE OF THE SECRETARY
Washington, DC 20240

Memorandum

To: Kathleen Sedney
Assistant Inspector General for Audits, Inspections, and Evaluations

Through: Bryan Newland 05/03/24
Assistant Secretary – Indian Affairs

From: Darryl LaCounte
Director, Bureau of Indian Affairs

Darryl LaCounte
Digitally signed by Darryl LaCounte
Date: 2024.04.30 13:20:16 -04'00'

Jason Freihage
Deputy Assistant Secretary – Management, Indian Affairs

JASON FREIHAGE
Digitally signed by JASON FREIHAGE
Date: 2024.05.02 13:30:26 -04'00'

Subject: Response to Recommendations in Draft Evaluation Report – *Improvements Needed to the U.S. Department of the Interior's and Bureau's Oversight of Radio Infrastructure* (Report No. 2021-WR-020)

Indian Affairs (IA) appreciates the opportunity to comment on the U.S. Department of the Interior Office of Inspector General (OIG) Draft Evaluation Report – *Improvements Needed to the U.S. Department of the Interior's and Bureau's Oversight of Radio Infrastructure*.

This memorandum transmits IA management's response to each of the recommendations addressed to IA and plans for corrective actions. IA management is committed to improving the inventory, inspections, and maintenance of our radio equipment and infrastructure. Our responses are listed below:

Recommendation 3: Develop and implement an action plan to ensure its radio infrastructure inventory is complete and accurate. This plan should include—at a minimum—steps to be taken, resources needed, and milestones.

Actions Planned: Concur. IA will plan to increase its oversight by developing and implementing an action plan to ensure IA's radio infrastructure inventory is complete and accurate. IA will first identify the resources needed to verify the completeness and accuracy of IA's radio infrastructure inventory. IA plans to develop an action plan with milestone dates by July 1, 2025, in accordance with relevant departmental directives and IA policies. IA will then implement the plan by verifying the existence of the radio infrastructure included in IA's inventory, removing any duplicate or non-existent infrastructure, and adding omitted infrastructure, if any is identified. Many of the sites are in remote locations and due to weather and road conditions access is limited. Therefore, verification of IA radio

communications sites and radio infrastructure inventory will take an extended period of time.

Responsible Parties: The Division of Facilities Management and Construction (DFMC) and the Land Mobile Radio (LMR) Program Office

Target Date: October 31, 2026.

Recommendation 4: Complete baseline condition assessments for all radio communication sites in accordance with the updated OCIO Directive.

Actions Planned: Concur. Per the actions planned in response to Recommendation 3, IA will complete an initial baseline condition assessment for all IA radio communication sites in accordance with OCIO's updated directive. The OCIO's Directive is scheduled to be updated in November 2024. IA's Action Plan with milestone dates will be developed by July 1, 2025, and implemented by October 31, 2026. Many of the sites are in remote locations and due to weather and road conditions access is limited. Therefore, completion of the baseline assessments for IA radio communications sites will take an extended period of time.

Responsible Parties: DFMC and LMR

Target Date: October 31, 2026

Recommendation 5: Develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed and corrective actions are promptly taken.

Actions Planned: Concur. IA will develop and implement a comprehensive plan to ensure that annual condition assessments of IA LMR infrastructure is completed and corrective actions are promptly taken, in compliance with the updated OCIO Directive. The OCIO's Directive is scheduled to be updated in November 2024. The Action Plan with milestone dates will be developed by July 1, 2025, and the baseline assessments will be completed by October 31, 2026. In addition to the access limitation due to location and weather mentioned in the responses to Recommendations 3 and 4 above, an annual condition assessment will be conducted a year after the baseline condition assessment is completed for selected radio infrastructure sites. Therefore, some sites will need another year to ensure the annual assessments are completed for all IA sites. IA plans to take necessary corrective actions promptly to address any deficiencies identified during the annual assessments.

Responsible Parties: DFMC and LMR

Target Date: October 31, 2027

Recommendation 6: Develop and implement a plan to bring the Wolf Mountain radio site into compliance with DOI radio communication standards.

Actions Taken: Concur. IA has assessed the condition of the radio equipment and infrastructure at the Wolf Mountain radio site and has developed a plan to bring the site into compliance with DOI radio communication standards, including obtaining and installing a

new shelter and fencing. IA is in the process of obtaining quotes for the materials and labor that are required to implement the plan to bring the site into compliance.

Actions Planned: IA will fully implement the plan and make the necessary repairs to bring the Wolf Mountain radio site into compliance. Work orders will be entered in Maximo for funding. Once funded a contract will be awarded to complete the work.

Responsible Parties: DFMC and LMR

Target Date: April 15, 2025

Recommendation 7: After the issuance of the updated OCIO Directive, develop and implement a policy that includes comprehensive procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions to ensure bureau wide and Departmentwide consistency and compliance with OCIO Directives.

Actions Planned: Concur. IA will develop a policy via a National Policy Memorandum that is consistent with the requirements of the updated OCIO Directive. This IA National Policy Memorandum will include comprehensive procedures for ensuring that the LMR infrastructure inventory is complete and accurate, conducting initial baseline condition assessments and follow on assessments, and promptly addressing identified corrective actions. Based on the updated OCIO Directive scheduled to be published in November 2024, the National Policy Memo will be drafted by April 2025 and published by June 2025.

Responsible Parties: DFMC and LMR

Target Date: June 30, 2025

Recommendation 8: Conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.

Actions Planned: Concur. IA will conduct an assessment of its Land Mobile Radio program to determine whether it has the internal controls and appropriate senior responsible officials, staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications. The assessment will be performed after the issuance of the updated OCIO Directive in November 2024, so the directive's impact on LMR's internal controls, staffing, funding, technology, systems, and other resources can be taken into account.

Responsible Party: LMR

Target Date: April 30, 2025

Recommendation 9: Develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.

Actions Planned: Concur. IA will develop an action plan with measurable goals and milestones to address gaps identified by comprehensive assessment performed to address Recommendation 8. IA will then take the necessary actions to implement the action plan.

Responsible Party: LMR

Target Date: April 30, 2026

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
National Headquarters
Washington, DC 20240
https://www.blm.gov

In Reply Refer To:
1245/9122/ (750/FA-330)

Memorandum

To: Kathleen Sedney
Assistant Inspector General for Audits, Inspections, and Evaluations

Through: Steven H. Feldgus
Principal Deputy Assistant Secretary,
Land and Minerals Management

Steven H. Feldgus
Digitally signed by Steven H. Feldgus
Date: 2024.05.14 11:53:17 -04'00'

From: Tracy Stone-Manning
Director

Tracy Stone-Manning
Digitally signed by Tracy Stone-Manning
Date: 2024.05.14 09:22:58 -04'00'

Subject: Response to Office of Inspector General Draft Inspection Report titled, "Improvements Needed to U.S. Department of the Interior's and Bureaus' Oversight of Radio Infrastructure" (2021WR-020)

Thank you for the opportunity to respond to your draft report, "Improvements Needed to U.S. Department of the Interior's and Bureaus' Oversight of Radio Infrastructure" (Report No. 2021-WR-020). This memorandum provides comments from the Bureau of Land Management (BLM) on the recommendations in that report and describes actions to be taken to address those recommendations.

The BLM appreciates the Office of Inspector General's continued interest in the Department of the Interior's (DOI's) and the Bureau's radio program in an effort to ensure enhanced oversight and the successful implementation of improvements to the radio communications program throughout the Department and Bureaus.

The BLM generally agrees with the findings and concurs with the recommendations.

Recommendation 10. We recommend that the BLM complete baseline condition assessments for any radio communication sites that have not been assessed, in accordance with the updated OCIO Directive.

Response: The BLM concurs with the recommendation and recommends the report acknowledge the BLM's completion of 796 baseline condition assessments by the December

2014 deadline established by the DOI's Office of the Chief Information Officer (OCIO) Directive No. 2010-008, which defines DOI radio communications site standards. The attached general comments provide background on completed assessments. The BLM will work with the state programs to complete baseline condition assessments on any radio communication sites that have not been assessed.

Target Date: September 30, 2025

Responsible Officials: Assistant Director, Fire and Aviation
Director, National Operations Center

Recommendation 11: We recommend that the BLM develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.

Response: The BLM concurs with the recommendation.

The BLM will provide a subject matter expert(s) to assist the Departmental effort regarding the update of OCIO Directive No. 2010-008, "Department of the Interior Radio Communication Site Standards," as well as ensure collaboration with the Radio Program Management Committee. Within 90 days of the updated OCIO Directive being published, the BLM will initiate developing a comprehensive plan to address annual condition assessments and any corrective actions needed.

Target Date: September 30, 2025 (development of the comprehensive plan)
Full implementation of the BLM comprehensive plan anticipated March 30, 2026

Responsible Officials: Assistant Director, Fire and Aviation
Director, National Operations Center

Recommendation 12: We recommend that the BLM conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.

Response: The BLM concurs with the recommendation.

The BLM, in conjunction with guidance from OCIO, will develop a plan to conduct a comprehensive assessment of the BLM radio communication program to ensure its internal controls are consistent with DOI OCIO guidance, including appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.

Target Date: September 30, 2025 (development of the comprehensive plan)

Full implementation of the BLM comprehensive assessment of the BLM radio program anticipated October 30, 2026.

Responsible Officials: Assistant Director, Fire and Aviation
Director, National Operations Center
Assistant Director, Information and Technology Management

Recommendation 13: We recommend that the BLM develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.

Response: The BLM concurs with the recommendation.

The BLM will develop and implement an action plan as stated in the recommendation; the action plan will be included as an addendum to the comprehensive plan required in Recommendation 11.

Target Date: September 30, 2025 (development of the action plan)
Full implementation of the BLM action plan anticipated November 30, 2026.

Responsible Officials: Assistant Director, Fire and Aviation
Director, National Operations Center
Assistant Director, Information and Technology Management

If you should have any questions or need additional information, please contact Amy Hay, Chief, Division of Business, Engineering, and Evaluations, at [redacted]; or LaVanna Stevenson, Audit Liaison Officer, at [redacted].

Attachment
General and Technical Comments to Report No. 2021WR-020

Attachment

Bureau of Land Management
Response to Office of Inspector General Draft Inspection Report titled, "Improvements Needed to U.S. Department of the Interior's and Bureaus' Oversight of Radio Infrastructure" (2021-WR-020)

General Comments:

The Office of Inspector General (OIG) did not find substantial deficiencies in the Bureau of Land Management's (BLM) inventory of 796 radio sites recorded in the BLM Radio Infrastructure Compliance Assessment Safety, Health, and the Environment (RI CASHE) database. The OIG completed site visits and confirmed baseline condition assessments were conducted at the six radio sites it selected for review.

The BLM has completed baseline condition assessments on all but one radio site in its current inventory. The unassessed site is located within the Mojave Trails National Monument in the BLM Desert District, Needles Field Office in California, and can only be accessed by helicopter. Due to particularly narrow windows of acceptable environmental conditions for helicopter access, completing a baseline condition assessment at this site has been challenging. The California State Telecommunications Manager is aware of the need and will work with the National Radio Operations Section and National Operations Center to complete the assessment.

The BLM appreciates OIG's acknowledgement of its radio infrastructure internal review process as a best practice for other bureaus to consider. The BLM has made significant effort to ensure a highly responsive field communications program that supports the BLM mission.

Technical Comments:

- Page 7, Figure 3, BLM, second bullet – Suggest correction to: The program consists of the National Radio Operations Section headed by the Branch Chief, Preparedness and Suppression Support, who serves as the National Radio Program Manager, and a staff five telecommunication specialists.

- Page 7, Figure 3, BLM, fifth bullet – Suggest correction to: State telecommunication specialists or radio technicians are responsible for the preventative maintenance of <u>radio</u> equipment systems.

- Page 20, third paragraph, clarification on last two sentences: Access issues due to contractual arrangements is not the reason why the BLM is having difficulty getting RI CASHE issues corrected at U.S. Forest Service and other radio sites not owned by the BLM. Through interviews with OIG, it was pointed out that 20% of BLM's 4,100 incomplete findings are in radio sites owned by the U.S. Forest Service and another 22% of incomplete RI CASHE findings are on privately owned radio sites where the BLM is a tenant. Instead, the difficulty is in getting cooperation from the U.S. Forest Service and

private owners to correct deficiencies at the radio sites that they are responsible for or own.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

In Reply Refer To:
FWS/MA/PERMA/RM/080831

Ms. Kathleen Sedney
Assistant Inspector General for Audits, Inspections, and Evaluations
U.S. Department of the Interior
Office of the Inspector General
1849 C Street, NW, MS 4428
Washington, DC 20240

Dear Ms. Sedney,

Thank you for the opportunity to comment on and respond to the draft Evaluation Report – *Improvements Needed to the U.S. Department of the Interior's and Bureaus' Oversight of Radio Infrastructure,* (Report No. 2021–WR–020). Resolving audit issues continues to be an agency priority, and the Service values the opportunity to improve.

The U.S. Fish and Wildlife Service (Service) responses to the recommendations in the draft report and the Service's planned actions to address the recommendations are enclosed. If you require additional information, please contact Ms. Kathy Garrity at [redacted]@fws.gov.

Sincerely,

STEPHEN GUERTIN
Digitally signed by STEPHEN GUERTIN
Date: 2024.04.24 06:16:33 -04'00'

Stephen Guertin
Acting Director

Enclosure

FWS leadership is committed to collaborating across impacted Programs such as Information Resources and Technology Management (IRTM), National Wildlife Refuge System (NWRS), Joint Administrative Operations (JAO), and the Director's Office to coordinate a Service-wide response with impacts and assistance from all programs rather than a singular responsible Program.

Recommendation 14. Develop and implement an action plan to ensure its radio infrastructure inventory is complete and accurate. This plan should include—at a minimum—steps to be taken, resources needed, and milestones.

Corrective action planned:

1. Infrastructure inventories within FWS are governed by policy manual part 372, and the Constructed Real Property Assets handbook, Chapter 3 – Maintaining a Complete and Accurate Inventory of Assets. Radio Management policy 272 FW 2 will be amended to provide reference and links to those policy documents.
2. FWS will explore the internal development of a singular tool to manage both radio infrastructure and radio equipment inventories, that will also interface with the appropriate systems of record for those assets to keep inventories updated.

Responsible Officials: Associate Chief Information Officer (ACIO); Chief, National Wildlife Refuge System

Target Date: December 31, 2024

Recommendation 15. Complete baseline condition assessments for all radio communication sites, in accordance with the updated OCIO Directive.

Corrective action planned:

Compliance will also be dependent on impending update to OCIO Directive 2010-008. Assuming the updated OCIO Directive will be similar to the previous version, FWS will take the following steps to further bring the Radio Program in alignment with the OCIO Directive:

1. Update the Service Radio Handbook with references and links to manual part 372, the Constructed Real Property Assets handbook, and FM-01 Condition Assessment User Guide. If specific guidance does not exist on comprehensive inspection criteria for towers, shelters, or any other radio communication site assets, such information will be added to the Service Radio Handbook updates.

2. Utilize a combination of Service employee and contract personnel to perform baseline assessments for radio communications sites.
3. FWS will work to determine an appropriate contract vehicle to perform condition assessments[1].
4. Evolve the current Tower Inspector contract and initiative to a contracted position of Site Inspector and renew the requirement to travel at least monthly to conduct the follow-on five-year inspections. Given the continuous requirement for inspections, this position will optimally be a Fulltime Equivalent (FTE) moving forward.

Responsible Officials: Associate Chief Information Officer (ACIO); Chief, National Wildlife Refuge System; Associate Director, Management and Administration

Target Date: December 31, 2025 – heavily dependent on funding and resources necessary.

Recommendation 16. Develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.

Corrective action planned:

Compliance will also be dependent on impending update to OCIO Directive 2010-008. Assuming the updated OCIO Directive will be similar to the previous version, FWS will take the following steps to further bring the Radio Program in alignment with the OCIO Directive:

1. Update the Service Radio Handbook with references and links to manual part 372, the Constructed Real Property Assets handbook, and FM-01 Condition Assessment User Guide. If specific guidance does not exist on annual inspection criteria for towers, shelters, or any other radio communication site assets, such information will be added to the Service Radio Handbook updates.
2. OCIO Directive 2010-008, pg 2, para 4, requires radio communication sites to be inspected annually by qualified radio technicians. Assuming the updated OCIO Directive will contain similar verbiage, FWS will collaborate internally to determine how to increase staffing within the Radio Program to meet this requirement.
3. The FWS Radio Program will evaluate the condition assessments, then prioritize and initiate mitigation projects as funding permits.

[1] Per manual 372 FW 4 and the Constructed Real Property Assets handbook, chap 4.2, CCAs must be performed by FMCs or contract/specialized inspectors with industry standard certifications for the asset types being inspected.

4. FWS Radio Program will evaluate whether a separate, IRTM managed system will be necessary to capture and record the Annual Condition Assessments.

Responsible Official: Associate Chief Information Officer (ACIO); Chief, National Wildlife Refuge System

Target Date: December 31, 2026 – Dependent on funding and resources necessary.

Recommendation 17. Develop and implement a plan to bring the Eulonia radio site into compliance with DOI radio communication standards.

Corrective action planned:

The Eulonia tower was inspected in 2019 by Allstate Tower, during which it was discovered there were damaged structural cross-members (resulting from severe rust as is typical in coastal environments). The damage was such that it would be prudent to completely replace that tower.

As guyed towers require more maintenance, the Radio Team recommends replacing the current 300' guyed tower with a 300' self-supporting tower. One estimate[2] obtained from Allstate Tower was $[redacted] to demolish the existing guyed tower and construct a new self-supporting tower in its place. As current Infrastructure Facilities DM funds available for radio infrastructure will not be sufficient for this, specific funding for this action will be required.

Responsible Official: Associate Chief Information Officer (ACIO); Chief, National Wildlife Refuge System; Assistant Director, Management and Administration

Target Date: December 31, 2025 – heavily dependent on funding necessary.

Recommendation 18. After the issuance of the updated OCIO Directive, develop and implement a policy that includes detailed procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective

[2] The estimate was provided in 2024 and is a general statement from the vendor based on the 2019 inspection report. It is not an official price quote.

actions to ensure bureau-wide and Department-wide consistency and compliance with OCIO Directives.

Corrective action planned:

Compliance will be dependent on the update to OCIO Directive 2010-008. Assuming the updated OCIO Directive will be similar to the previous version, FWS will take the following steps to further bring the Radio Program in alignment with the OCIO Directive:

1. Radio infrastructure inventories – As radio infrastructure are real property and covered under Infrastructure Facilities, they are governed by policy manual part 372 – Management of Constructed Real Property Assets; the Constructed Real Property handbook; and FM-01 – Condition Assessment User Guide. In accordance with those policy documents, radio infrastructure inventories are recorded in the Service Asset and Maintenance Management System (SAMMS i.e. DOI Facility Maintenance Management System (FMMS)). FWS will develop and implement a radio-specific inventory that can not only capture radio infrastructure inventories and inspections, but also Land Mobile Radio (LMR) equipment inventories and maintenance histories.
2. Conducting condition assessments – instructions on how to conduct condition assessments are also contained within part 372, the Constructed Real Property Handbook, and FM-01. As above, the Service Radio Handbook will add specificity for the specialized nature of radio sites.

Responsible Officials: Associate Chief Information Officer (ACIO); Chief, National Wildlife Refuge System

Target Date: May 31, 2025

Recommendation 19. Conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.

Corrective action planned:

Any decisions on changes or improvements made to the FWS Radio Program could have effects throughout the bureau, so FWS will identify the Program stakeholders and conduct a

comprehensive and collaborative assessment of the Radio Program to evaluate its effectiveness and identify areas that may be improved.

Responsible Official: Associate Chief Information Officer (ACIO); Deputy Director for Programs

Target Date: December 31, 2024

Recommendation 20. Develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.

Corrective action planned:

Internal controls will be partially addressed by the updates previously mentioned to the radio policy and handbook. Leadership support across all programs will be required to implement those internal controls.

Possible solutions to any gaps in the FWS Radio Program identified in the assessments from Recommendation 19 could include:

- Minimum of 1 field radio engineer per region. Each engineer would also require basic tool compliment and test equipment. This would meet the requirement set forth in OCIO Directive 2010-008, pg 2, para 4, requiring radio communication sites to be inspected annually by qualified radio technicians.
- Establish a personal property account specific to LMR equipment and move personal property asset records for all fixed station backbone radio equipment (base stations, repeaters, etc.) to the radio program for accountability and lifecycle maintenance.
- Field Stations will still be responsible for maintenance and replacement of their mobile and portable radios (Subscriber Units).

Once the assessments from Recommendation 19 are complete, FWS will reassess this list and tailor as needed to correct any of the gaps identified.

Responsible Official: Associate Chief Information Officer (ACIO); Associate Director, Management and Administration; Chief, National Wildlife Refuge System.

Target Date: December 31, 2025

United States Department of the Interior
NATIONAL PARK SERVICE
1849 C Street, NW
Washington, DC 20240

To: Assistant Inspector General for Audits, Inspections and Evaluations

From: Director CHARLES SAMS Digitally signed by CHARLES SAMS Date: 2024.04.30 13:16:34 -04'00'

Subject: National Park Service (NPS) responses to Office of Inspector General (OIG) Draft Evaluation Report entitled: *"Improvements Needed to the U.S. Department of the Interior's and Bureau's Oversight of Radio Infrastructure (Report No. 2021-WR-020)"*

Thank you for the opportunity to review and comment on the OIG subject report. We appreciate OIG's review of the Department of the Interior (Department) issues related to radio infrastructure as required by policy. Radio infrastructure refers to the towers, shelters, and fencing needed to operate and protect installed radio equipment.

The OIG issued multiple recommendations to the Department, including six to the NPS. Below are the responses to the specific recommendations, including the steps the NPS has taken or will be taking to address the concerns raised.

Recommendation 21: Develop and implement an action plan to ensure its radio infrastructure inventory is complete and accurate. This plan should include—at a minimum—steps to be taken, resources needed, and milestones.

Management Response: Concur. The Radio & Spectrum Management Branch (RSMB) and Park Facilities Management Division (PFMD) will collectively develop a project plan to ensure the radio inventory is complete and accurate in the NPS's Facilities Management Software System (FMSS). The plan will include the steps to be taken, resources needed, and milestones.

Responsible Officials:
Kashif Jamil, Deputy ACIO, IRMD - National Information Technology Center
Sandhya Soni, Division Manager (acting), Park Facility Management Division

Target Date: Plan Development Completion - September 30, 2024. Plan Implementation timeline will be determined after the scope of the plan has been developed and will also depend on the availability of funding to implement the plan.

Recommendation 22: Complete baseline condition assessments for all radio communication sites, in accordance with the updated OCIO Directive.

Management Response: Concur. The RSMB and PFMD will collectively develop communications to the field to provide guidance on completing baseline condition assessments for radio communications sites in accordance with the updated OCIO Directive.

Responsible Officials:
Kashif Jamil, Deputy ACIO, IRMD - National Information Technology Center

Sandhya Soni, Division Manager (acting), Park Facility Management Division

Target Date: To Be Determined **-** Dependent on completion of updated OCIO Directive and availability of funding. Information Resources (IR) submitted a budget request for FY25 to establish a Radio Facilities Infrastructure (Sites) Safety Program, but this request did not make it into the President's budget for FY25. IR is submitting another request for FY26 for a Radio Facilities Infrastructure (Sites) Safety Program.

Recommendation 23: Develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.

Management Response: Concur. The RSMB and PFMD will collectively develop a comprehensive plan that ensures compliance with the updated OCIO Directive, and periodic condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken. The frequency of condition assessments will depend on funding.

Responsible Officials:
Kashif Jamil, Deputy ACIO, IRMD - National Information Technology Center
Sandhya Soni, Division Manager (acting), Park Facility Management Division

Target Date: To Be Determined **-** Dependent on completion of updated OCIO Directive and availability of funding. IR submitted a budget request for FY25 to establish a Radio Facilities Infrastructure (Sites) Safety Program, but this request did not make it into the President's budget for FY25. IR is submitting another request for FY26 for a Radio Facilities Infrastructure (Sites) Safety Program.

Recommendation 24: After the issuance of the updated OCIO Directive, develop and implement a policy that includes detailed procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions to ensure bureau wide and Departmentwide consistency and compliance with OCIO Directives.

Management Response: Concur. The RSMB and PFMD will collectively develop and implement a policy that includes detailed procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions to ensure bureau wide and Departmentwide consistency and compliance with OCIO Directives.

Responsible Officials:
Kashif Jamil, Deputy ACIO, IRMD - National Information Technology Center
Sandhya Soni, Division Manager (acting), Park Facility Management Division

Target Date: To Be Determined **-** Dependent on completion of updated OCIO Directive and availability of funding.

Recommendation 25: Conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.

Management Response: Concur. The RSMB will work with the NPS Enterprise Risk Management and Internal Control (ERM-IC) Program to review and update its Programmatic Risk and Control Register. The ERM-IC program is also performing an internal control review and root cause analysis

in FY24. Findings and recommendations from this assessment will be incorporated into a Corrective Action Plan (CAP).

Responsible Officials:
Kashif Jamil, Deputy ACIO, IRMD - National Information Technology Center
Jason Gibson, Chief, Business Management Group

Target Date: December 31, 2024

Recommendation 26: Develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.

Management Response: Concur. Upon completion of the response actions to OIG Recommendation 25, the RSMB will work with the NPS Accountability Office's ERM-IC Program to develop a sustainable CAP with target remediation dates and assignments distributed among associated stakeholder directorates and programs, NPS RSMB, Regional Directorates, and park/field units. The CAP will incorporate failure ratios and indicate where greater internal control measure implementation is needed. The CAP will be used to monitor progress and for reporting to NPS senior leadership to ensure operational effectiveness through a strong internal control environment.

Responsible Officials:
Kashif Jamil, Deputy ACIO, IRMD - National Information Technology Center
Jason Gibson, Chief, Business Management Group

Target Date: December 31, 2024

If you have any questions or need additional information, please contact Vera Washington, NPS Audit Liaison Officer, at [redacted]@nps.gov.

Appendix 7: Status of Recommendations

Recommendation	Status	Action Required
2021–WR–020–01 We recommend that the U.S. Department of the Interior (DOI) Office of the Chief Information Officer (OCIO) update the OCIO Directive on radio communications site standards (OCIO Directive No. 2010–008) to improve consistency by including specific guidance regarding how bureaus should track radio infrastructure inventories and manage their radio programs.		
2021–WR–020–02 We recommend that the U.S. Department of the Interior (DOI) Office of the Chief Information Officer (OCIO) develop a mechanism to enforce all radio communications site requirements (OCIO Directive No. 2010–008), including the requirement for bureaus to inventory their radio infrastructure and the requirements for bureaus to complete baseline condition assessments, annual condition assessments, and corrective actions of their radio infrastructure.	**Resolved**	We will track implementation.
2021–WR–020–03 We recommend that the Bureau of Indian Affairs (BIA) develop and implement an action plan to ensure its radio infrastructure inventory is complete and accurate. This plan should include—at a minimum—steps to be taken, resources needed, and milestones.		
2021–WR–020–04 We recommend that the BIA complete baseline condition assessments for all radio communication sites in accordance with the updated OCIO Directive.		

Recommendation	Status	Action Required
2021–WR–020–05 We recommend that the BIA develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.		
2021–WR–020–06 We recommend that the BIA develop and implement a plan to bring the Wolf Mountain radio site into compliance with DOI radio communication standards.		
2021–WR–020–07 We recommend that the BIA, after the issuance of the updated OCIO Directive, develop and implement a policy that includes comprehensive procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions to ensure bureauwide and Departmentwide consistency and compliance with OCIO Directives.	**Resolved**	We will track implementation.
2021–WR–020–08 We recommend that the BIA conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.		
2021–WR–020–09 We recommend that the BIA develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.		

Recommendation	Status	Action Required
2021–WR–020–10 We recommend that the Bureau of Land Management (BLM) complete baseline condition assessments for any radio communication sites that have not been assessed, in accordance with the updated OCIO Directive.		
2021–WR–020–11 We recommend that the BLM develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.		
2021–WR–020–12 We recommend that the BLM conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.	**Resolved**	We will track implementation.
2021–WR–020–13 We recommend that the BLM develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.		
2021–WR–020–14 We recommend that the U.S. Fish and Wildlife Service (FWS) develop and implement an action plan to ensure its radio infrastructure inventory is complete and accurate. This plan should include—at a minimum—steps to be taken, resources needed, and milestones.		

Recommendation	Status	Action Required
2021–WR–020–15 We recommend that the FWS complete baseline condition assessments for all radio communication sites, in accordance with the updated OCIO Directive.		
2021–WR–020–16 We recommend that the FWS develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.		
2021–WR–020–17 We recommend that the FWS develop and implement a plan to bring the Eulonia radio site into compliance with DOI radio communication standards.		
2021–WR–020–18 We recommend that the FWS, after the issuance of the updated OCIO Directive, develop and implement a policy that includes detailed procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions to ensure bureauwide and Departmentwide consistency and compliance with OCIO Directives.	**Resolved**	We will track implementation.
2021–WR–020–19 We recommend that the FWS conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.		

Recommendation	Status	Action Required
2021–WR–020–20 We recommend that the FWS develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.		
2021–WR–020–21 We recommend that the National Park Service (NPS) develop and implement an action plan to ensure its radio infrastructure inventory is complete and accurate. This plan should include—at a minimum—steps to be taken, resources needed, and milestones.		
2021–WR–020–22 We recommend that the NPS complete baseline condition assessments for all radio communication sites, in accordance with the updated OCIO Directive.	**Resolved**	We will track implementation.
2021–WR–020–23 We recommend that the NPS develop and implement a comprehensive plan to ensure that, in compliance with the updated OCIO Directive, annual condition assessments of all radio infrastructure are completed, and corrective actions are promptly taken.		
2021–WR–020–24 We recommend that the NPS, after the issuance of the updated OCIO Directive, develop and implement a policy that includes detailed procedures for recording radio infrastructure inventories, conducting condition assessments of radio infrastructure, and addressing identified corrective actions to ensure bureauwide and Departmentwide consistency and compliance with OCIO Directives.		

Recommendation	Status	Action Required
2021–WR–020–25 We recommend that the NPS conduct a comprehensive assessment of its radio communications program to determine whether it has the internal controls, appropriate senior responsible official(s), staffing, funding, technology, systems, and other resources necessary to effectively manage radio communications.	**Resolved**	We will track implementation.
2021–WR–020–26 We recommend that the NPS develop and implement an action plan with measurable goals and milestones to address gaps identified by the radio communication program assessment.		

OFFICE OF
INSPECTOR GENERAL
U.S. DEPARTMENT OF THE INTERIOR

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