



# **U.S. Fish and Wildlife Service Radio Handbook**

**March 2016**

# U.S. Fish and Wildlife Service Radio Handbook

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## **Responsibilities**

There are several levels of responsibility for radio use within the U.S. Fish and Wildlife Service (Service). The responsibilities for each of these levels are outlined below (also see 272 FW 2):

### **Director**

The Director ensures there is an effective radio management program in place that supports our mission.

### **Assistant Director - Information Resources and Technology Management (IRTM)**

The AD - IRTM has overall responsibility for our radio program.

### **Radio Program Manager (RPM)**

Part 377 in the Departmental Manual (DM) establishes the requirement for a Radio Program Manager (RPM) in each of the bureaus using the radio frequency spectrum. The Service RPM:

- Works for the Division of Information Resources and Technology Management, Branch of Enterprise Services and Operations, located in Denver, Colorado;
- Has broad responsibility in the area of radio frequency assignments and radio system management, including planning, design, and maintenance; and
- Can be reached directly at 303-236-5058 or at karen\_wood@fws.gov, or through the National Radio Helpdesk at 877-852-2424 or radio@fws.gov.

The RPM is responsible for Servicewide management of all radio communications. These responsibilities include the following:

1. Manages the National Radio Helpdesk at 877-852-2424.
2. Works with the Telecommunications Systems Division, Office of Resources Management, Office of the Secretary, and with other Federal agencies, State and local governments, tribes, and with the private sector for matters relating to or impacting the Service's radio program.
3. Provides Servicewide radio frequency management and promulgates Departmental policies and standards for radio frequency use. This includes supervising performance and use of radio frequency equipment, whether maintained by Service personnel or under contractual agreements with other Federal agencies or private repair shops.
4. Serves as the final technical authority on radio frequency use and radio acquisition in the Service. Provides guidance to Service technicians who have been delegated broad Regional authority to evaluate use and performance of communication systems.
5. Develops and manages Servicewide radio policy and directs radio planning for all field units of the Service. Prepares and recommends policy guidelines to supplement or implement the requirements of the Department and the National Telecommunications and Information Administration (NTIA).
6. Conducts training programs, workshops, and seminars to promote the effective management of the Service's radio systems by refuge, program, and Regional office staff.
7. Provides technical assistance to Regions, programs, refuges, and other field offices, including assistance in planning and designing radio systems. Assists with development of technical specifications for radio procurement and maintenance by field offices.

8. Provides technical support and access to specialized test equipment for field areas to identify and resolve radio frequency interference. Conducts technical assessments of facilities as requested and assists in resolving site management problems. Recommends techniques to minimize harmful radio interference to Service facilities from other users of the spectrum, and to minimize the Service's own emission of interfering signals.
9. Maintains a national database of Service radio equipment.
10. Advises Regional Radio Coordinators about their duties and responsibilities.

### **Regional Radio Coordinator**

Each Regional Director designates a Regional Radio Coordinator annually; contact information for the current Regional Radio Coordinators is included in Section 11 of this handbook. The Regional Radio Coordinator serves as a liaison between the sites within the Region and the RPM, and performs the following functions:

1. Ensures that the use of radio frequencies within the Region conforms to established Service policy.
2. Oversees the operational performance of field radio systems within the Region. Ensures that equipment is checked annually in accordance with established technical criteria. Periodically evaluates the effectiveness of in-house maintenance programs.
3. Originates or reviews and submits requests for Departmental approval to the RPM.
4. Updates the list of Site Radio Coordinators within the Region, and provides this updated list to the RPM annually.
5. Ensures that Site Radio Coordinators within the Region perform their duties as required and that effective use is made of Service technicians. Refers disputes with field service organizations to the RPM for arbitration.
6. Coordinates assistance to Service areas for planning, designing, implementing, maintaining and managing their radio systems. Ensures that due consideration is given to alternatives and to the most efficient use of facilities, personnel, and maintenance contracts.
7. Coordinates transfer of radio equipment between field stations and ensures that Site Radio Coordinators update their site's radio equipment inventory listing each year.

### **Site Radio Coordinator**

The manager of any unit with radio equipment must annually designate a Site Radio Coordinator for radio systems management. This person has overall responsibility for managing the radio system within the unit. The Site Radio Coordinator performs the following functions:

1. Ensures that radio use at the site conforms to the mandatory requirements in 272 FW 2, and informs the site manager if it doesn't. In particular, the Site Radio Coordinator is responsible for reviewing the site's Radio Frequency Authorizations (RFAs) for accuracy at least every 5 years or during a planned change to the site's radio system.
2. Maintains a station record or log for all radio transmissions that go through a base station, regardless of where that base station is located (see 377 DM 1 and 2). Because the Office of Law Enforcement (OLE) does not use base stations, this requirement is not applicable to OLE employees.
3. Assigns personal call signs to each individual using the site radio system. Although there is no required format, these call signs are usually two to three digit codes, and may be divided into groups such as:

- The first digit of the call sign may show to which part of the complex the user is assigned. For example, call signs for the Headquarters office begin with 1, and call signs for the first Refuge of the complex begin with 2, etc.
  - The second digit of the call sign may show with which group the user works. For example, call signs for administrative employees have a second digit of 0, call signs for law enforcement employees have a second digit of 1, etc.
4. Ensures that appropriate personnel receive adequate dispatcher training, both formal and informal, on an annual basis. Any Service employee using radio communications through a non-Service radio system must rely on the owner of that system to maintain that system and train dispatchers as necessary.
  5. Coordinates radio user training, particularly for seasonal employees. The objective of this training must be complete comprehension of system operation, including knowledge of appropriate radio procedures, techniques, and recommended practices relating to the use and care of radio equipment, as well as the constraints imposed by the terms of the site's RFAs.
  6. Administers the radio system maintenance contracts, if any, and maintains a case history for each unit. Ensures that measurement and adjustment of radio unit frequencies (in both transmit and receive modes), deviation, modulation, and other tests are performed annually as required. Ensures that equipment is maintained at top performance level, optimizing the system's designed performance and meeting approved minimum standards for the system as governed by the RFA. When it appears that a maintenance shop is not performing as required under contract or is providing poor workmanship, the Site Radio Coordinator must refer the matter to the Regional Radio Coordinator.
  7. Ensures that proposed purchases conform to Service standards, and that any necessary Departmental clearances have been obtained before procuring radio equipment. Ensures that existing RFAs cover the proposed operation or prepares requests for new or modified RFAs.
  8. Understands radio communications coverage within the unit and annually evaluates system performance to determine that the coverage has not degraded.
  9. Maintains property records for radio equipment, obtaining proper signatures for Transfer of Property documents as appropriate, and providing inventory information to the Regional Radio Coordinator annually.

### **Radio End User**

The radio end user is responsible for the following:

1. Familiarizes him/herself with this handbook and 272 FW 2, and follows proper operating procedures outlined in both.
2. Familiarizes him/herself with the equipment and acquires a basic understanding of how the equipment functions.
3. Comprehends the coverage area and avoids illegal use of the radio equipment outside the licensed area.
4. Memorizes his/her personal call sign and uses it consistently and appropriately.
5. Refrains from using obscene, indecent, or profane language while using the radio system.
6. Minimizes low-priority transmissions to ensure that important transmissions can be heard.

### **Items to Consider When Planning a Radio System**

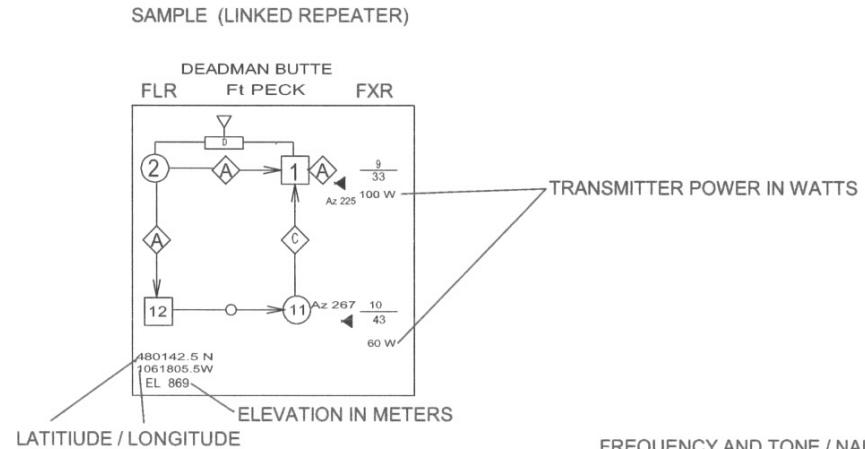
- What areas need radio coverage, and what kind of terrain is involved?
- Will the radios be used to support law enforcement, fire fighting, interpretation, management, or other functions?
- When will the radio system be used?
  - At all times?
  - Only during the day?
  - Seasonally?
- How many people will use the system, and what number and types of equipment need to be purchased to serve their needs?
- Is there a non-Federal trunked system available in the area? If so, does the trunked system provide adequate coverage for the site? Can the site afford to pay any recurring fees to use the trunked system?
- Can the site share frequencies, backbone equipment, towers, or a communication site with an existing Federal Government radio system? If so, is network connectivity already available in any form?
- How much will the system cost, including costs for engineering, equipment, programming, installation, annual rental and electricity fees (if necessary), maintenance, and life-cycle management?
- If the communications site is leased, is there a signed Memorandum of Agreement (MOA) between the Service and the site owner?
- Will the radio system require dispatching?
- What cooperator frequencies will be used?



# RADIO SYSTEM LEGEND / SYMBOLS

## SYMBOLS

- RECEIVER
- TRANSMITTER
- ▽ ANTENNA
- ◇ CTCSS &/OR NAID
- NON DIRECTIONAL — ●  $\frac{10}{33}$  ANTENNA GAIN IN DB  
ANTENNA ELEVATION ABOVE GROUND
- ◀ DIRECTIONAL
- X → CARRIER CONTROL
- ○ → CONTROL OFF
- ◇ → CTCSS / NAID CONTROL
- ▭ D DUPLEXER
- ▭ RC WIRELINE REMOTE CONTROL
- AZ AZIMUTH IN DEGREES
- EL ELEVATION in METERS
- $\frac{10}{33}$  ANTENNA GAIN IN DB  
ANTENNA ELEVATION ABOVE GROUND
- NAID NETWORK ACCESS ID
- DPL DIGITAL PRIVATE LINE
- ▭ VC VOTER COMPARATOR



FREQUENCY AND TONE / NAID CODES

F1	164.625
F2	163.150
F3	164.575
F11	417.775
F12	419.825
NAID A	0001
NAID B	0002
NAID C	0003
DEADMAN BUTTE DPL A=	023



### Radio Frequency Authorization Legend

SPECIAL HANDLING (Only appears if the FOI Section is checked)

This Authorization is granted pursuant to Chapter 1 Part 1.1 Section 6.i of the NTIA Manual by authority of the US Department of the Interior.

This Authorization must be updated by: (Date). For continued use of this equipment, YOU MUST SUBMIT a request to your Frequency Manager by (Date).

Serial Number	FOI	MSD	BUR	NET	RVD	AUS	EXD
I 123456	X		S4				
	Note 1		Note 2				

FRQ	BIN	TME	SPD	STC	Bandwidth	Emission	Power
163.15 MHz		1		FB(R)	11.00 kHz	F3E	60 Watt(s)
Note 3		Note 4		ML	11.00 kHz	F3E	90 Watt(s)
				Note 5	Note 6		

XAL, XSC (Transmitter)	XRC	XLA, XLG	XCL	XAP	XAZ
City, State	Control Name	Geo-Coordinates	Call Sign		ND
				Note 7	

XAD(Transmitter)  
06GCOLLINEAR 00002H0030T (Note: Red = antenna gain, Blue = type antenna, Green = height above sea level, black = feed point height)

RAL, RSC (Receiver)	RRC	RLA, RLG	ACL	RAP	RAZ
City State	Control Name	Geo-Coordinates	Call Sign		ND
				Note 7	

RAD (Receiver)	REMARKS
06GCOLLINEAR 00002H0030T	* Remarks

Restrictions (NTS, \*NTS, SUP)  
Supplementary Details -

#### SPECIAL HANDLING INSTRUCTIONS

Exempt from release outside US Government IAW 5 U.S.C. Paragraph 552. (Only appears if the FOI Section is checked)

#### Notes:

1. FOI = For Official Information.
2. BUR= Bureau or Region (we use S instead of R thus S4 is Region 4)
3. FRQ = Frequency
4. TME = Time the frequency is used.
5. STC = Station Class : Examples FB is Fixed Base if it has an R on the end FBR then it is a fixed base Repeater. ML stands for Mobile.
6. Characteristics of the frequency in use. Includes Bandwidth, Emission and Power. Bandwidth is how wide the signal is (normally in Khz or Kilohertz). Emission is a designator for modulation used. Examples F3E = Frequency Modulation (FM), A3E = Amplitude Modulation (AM), J3E = Sideband. Power = Transmitter power normally in watts.
7. XAP/RAP = Antenna Polarization (vertical, horizontal)  
XAZ/RAZ = Physical direction or movement of the antenna for example ND for Non directional.

**“ONLY SIGNIFICANT ITEMS HAVE BEEN IDENTIFIED”**

## **Other Special Radio Frequency Considerations**

### **Emergencies**

In situations where life, health, or safety is at risk, a Service employee may transmit on any available frequency; no RFA is needed.

### **New Frequency Allocation Table Requirements**

The National Telecommunications and Information Administration (NTIA) has created a Frequency Allocation Table that all DOI and bureau radios must be using by January 1, 2019 (the original frequencies assigned to some Service sites complied with the new table and did not need to be changed). Many sites that did need to change their frequencies have already done so, but some offices still need to get new frequencies and have their equipment reprogrammed. The RPM will request new frequencies as the RFA packets for those sites are reviewed, and each site that needs to change frequencies will have a year to implement the change. There is no national funding for this effort.

### **Call Signs**

We must use call signs to ensure that stations can be identified if there's harmful interference. You must announce the appropriate call sign at the beginning of each transmission, at the end of a series of transmissions, and at least every 10 minutes during continuous periods of transmission. To protect personal privacy, you should not announce your name over the radio.

- When transmitting through a base station, you must announce the base station's call sign. This base station call sign is assigned by the RPM during system design.
- When transmitting through a mobile or portable radio, you do not use a call sign assigned to the radio; instead you must announce your own personal call sign. The Site Radio Coordinator assigns personal call signs to each person using the site's radio system.

### **Encryption**

Per OCIO Directive 2006-020 (copy attached below), all law enforcement and/or other sensitive radio communications must be encrypted. If you buy radio equipment with encryption, it must have the Advanced Encryption Standard (AES) encryption algorithm, unless your radio system is linked with local cooperators using older encryption algorithms such as the Digital Encryption Standard (DES) or output feedback (OFB). (Please note: the contact list in this memo is out of date; an updated list is attached in Section 11 of this handbook.)

### **Trunked Systems**

Part 377 in the DM requires Departmental bureaus and offices to use local, non-federally-owned trunked systems in lieu of Department-owned radio systems when it's beneficial to the Federal Government. Currently, the number of trunked systems is limited, but more are being installed. When affordable trunked systems with adequate coverage become available, nearby Service offices will migrate to using the trunked systems as they obtain funding to upgrade or replace existing equipment.

### **Microwave Systems**

Part 377 in the DM also requires Departmental bureaus/offices using microwave networks to use commercial common carrier services when possible; bypassing these commercially available services requires a Departmental waiver. If a Departmental bureau/office purchases a microwave system, non-Federal offices may use excess channel capacity if there is a mutual need.

Point-to-point microwave devices must have RFAs and use AES encryption. Although point-to-point microwave devices are available on FCC bands that don't require licenses, Federal offices are not allowed to use these devices.

### **Mutual Aid Frequency Sharing**

Service offices requesting non-emergency mutual aid may allow any responders to program their radios with the office's frequencies if:

- There is a valid RFA for each frequency,
- The frequency is only used in the area specified on the RFA,
- The number of radios using the frequency in the mutual aid situation does not exceed the number of mobiles/portables specified on the RFA, and
- A signed MOU is in place allowing the responders to use the frequency during the mutual aid operation.

In emergency mutual aid situations, no signed MOU is necessary, and the number of mobiles/portables specified on the RFA may be exceeded.

Any Service employee providing mutual aid to another organization must follow that organization's rules for mutual aid frequency sharing.

Regardless of the circumstances, any frequency used in a mutual aid situation must be removed from the radio as soon as the radio is no longer in the area designated on the RFA.

### **Travelers' Information Service (TIS) Radio Systems**

Use TIS radio systems according to the instructions in 377 DM 2. TIS radio systems require coordination with non-Federal frequencies within the State. Please contact the RPM to begin this coordination when purchasing a TIS radio system.

### **Specific Use Frequencies**

The Interdepartmental Radio Advisory Committee, National Telecommunications and Information Administration (IRAC/NTIA) has made certain frequencies available for use in specific circumstances. You must have a valid RFA in place to use any of these frequencies, except as noted below.

These frequencies, which are available to all Government agencies, can't be used for any purpose other than those listed below. No station operating on these frequencies will receive protection from interference by other stations operating on the same frequency. Because of this, you should not use these frequencies for critical services involving safety of life and property (except for fire use). Use Network Access Codes (NAC codes) and talk groups with these frequencies to reduce nuisance interference from other users.

You must use the minimum effective radiated power (ERP) that will transmit these frequencies, and they can't be used on repeaters, except as noted below.

- **Local Common Use**

Local common use frequencies are for occasional communications within an 80 kilometer (50 mile) radius. You can use them on fixed repeaters, but not on airplanes. The maximum transmitter output power must not exceed 30 watts. The gain of the base station antenna must not exceed 7 decibels and the height of the base station antenna must not exceed 20 feet above the height of the structure containing the transmitting equipment.

- **Wide Area Common Use**

Wide area common use frequencies are for occasional communications across more than an 80 kilometer (50 mile) radius. You can use them on transportable repeaters, but not on fixed repeaters. The maximum transmitter output power must not exceed 30 watts. The gain of the base station antenna must not exceed 7 decibels and the height of the base station antenna must not exceed 20 feet above the height of the structure containing the transmitting equipment.

- **Fire Use**

The National Interagency Fire Center (NIFC) assigns frequencies for use at specific fires, and you must delete them from radios once the radios leave the scene of the fire. Do not use the frequencies for any other purpose, including fighting another fire, without permission from NIFC. Because NIFC assigns these frequencies directly, you do not need an RFA to use them.

There are some fire frequencies assigned to specific areas in the western states that can be permanently programmed into fire and law enforcement radios. Only use these frequencies for urgent situations, such as fire or search-and-rescue operations. You do not need an RFA, but you must notify NIFC before using these frequencies.

- **Marine Band**

If you are on a ship or boat and you use a radio for port operations or inter-boat communications, you should use marine band frequencies. These come pre-programmed into specific marine band radios and are limited to 25 watts of power. You do not need an RFA for boat-mounted marine band radios. When using these radios, you must use a call sign assigned by the RPM, and you must scan channel 16, the marine band emergency channel. There are additional requirements for large ships, especially those that travel in international waters.

You can use these marine band frequencies in a fixed coastal marine station (a marine band radio connected to a power source and used on land as a base station), but you must scan channel 16 and you must have an RFA for each marine band frequency you use.

If you are using a mobile or portable radio or a base station other than a fixed coastal marine station, you may listen to these marine band frequencies, but you may not transmit on them except in emergencies. You do not need RFAs in this situation.

- **Marine Radar**

You must have RFAs to use marine radar equipment.

- **Speed Radar**

You must have RFAs to use speed radar equipment, unless the equipment is laser-type.

- **Drug Interdiction**

Approved frequencies are available for drug interdiction (Operation Alliance) operations on specific refuges along the Mexico border in Arizona and New Mexico.

- **Southwest Border Protection**

The Department has a blanket MOU that allows Interior bureaus to use Border Patrol frequencies at any time without an RFA when enforcing border security.

- **National Flight Following**

The national flight following frequency is 168.650. Per OCIO Directive 2009-009 (copy attached below), all Departmental aircraft using the national flight following frequency must transmit a 110.9 Hz CTCSS tone. (Please note: the contact list in this memo is out of date; an updated list is attached in Section 11 of this handbook.)



## United States Department of the Interior

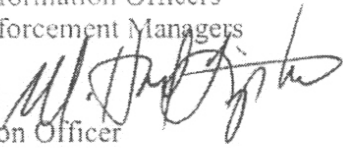
OFFICE OF THE ASSISTANT SECRETARY  
POLICY, MANAGEMENT AND BUDGET  
Washington, DC 20240



OCIO Directive 2006-020

NOV 30 2006

To: Bureau Chief Information Officers  
Bureau Law Enforcement Managers

From: W. Hord Tipton   
Chief Information Officer

Subject: DOI Radio Communications Encryption Policy

### Purpose:

This Directive provides policy for Department-wide deployment of the Advanced Encryption Standard for land mobile radio (LMR) systems.

### Background:

The Department of the Interior uses various forms of encryption to provide secure communications within the Department and with other federal, state, and local cooperators, particularly for law enforcement activities.

The Department's Policy concerning the use of encryption for sensitive radio communications, especially of an investigative and law enforcement nature. The Radio Program Division, Office of the CIO, National Park Service has been designated as the Central Key Management Facility (CKMF) for radio communications for the Department.

During real-time LMR communications, Advanced Encryption Standard (AES) encrypts transmitted voice and data, in either 128, 192 or 256-bit blocks, to an unintelligible form called cipher text and decrypts the cipher text back to its original form, called plaintext. This encryption/de-encryption ensures that sensitive LMR conversations are not transmitted in clear voice and that only authorized LMR users have access to the information being transmitted.

The DOI CKMF manager can be reached at e-mail: [comsecmgr@nps.gov](mailto:comsecmgr@nps.gov), or phone (202) 354-1456.

For a complete listing of this standard please reference:  
<http://esrc.nist.gov/publications/fips/fips197/fips-197.pdf>

**Please note:** the contact information in this memo is out of date. Updated contact information is attached in Section 11 of this handbook.

All Law Enforcement and/or other sensitive LMR communications are to be encrypted. Non-Sensitive LMR communications do not require encryption.

**Timeframe:**

This policy becomes effective upon the date of signing.

**Policy:**

The purchase of new LMR equipment and systems requiring high encryption will use the Advanced Encryption Standard based on Federal Information Processing Standard (FIPS) publication #197.

Within the Department Enterprise Architecture Repository, AES for LMR communications will be identified as the standard and Digital Encryption Standard (DES) will be identified as in containment or in attrition.

Older algorithms, such as DES, DES (Extra Long) XL, and DES (Output Feedback Mode) OFB will be purchased only if they are required for interoperability with local cooperators.

Additionally, as DOI Law Enforcement radio systems are developed and implemented they will be designed to use Over-the-Air Re-keying (OTAR) technology where feasible.

**Contact:**

The DOI OCIO point of contact for this initiative is Mr. Stuart Ott, Deputy Division Chief, Enterprise Infrastructure Division, (703)487-8560 or Mr. Christopher Lewis, Telecommunications Specialist, Enterprise Infrastructure Division, (703)487-8582.

cc: Bureau Radio Liaisons  
Bureau Law Enforcement Managers  
Carol Alexander, NPS, OCIO, CKMF



## United States Department of the Interior


OFFICE OF THE SECRETARY  
Washington, DC 20240




JUL 13 2009

OCIO Directive 2009-009

To: Director, National Park Service  
Director, U.S. Fish and Wildlife Service  
Director, U.S. Geological Survey  
Director, Bureau of Indian Affairs  
Director, Bureau of Land Management  
Commissioner, Bureau of Reclamation

Through: Rhea Suh   
Assistant Secretary  
Policy, Management and Budget

From: Sanjeev (Sonny) Bhagowalia   
Chief Information Officer

Subject: Guidance on Procedure for Toning of the National Flight Following Toning  
Frequency 168.650 MHz

### Purpose

This directive requires all Departmental offices and bureaus using the National Flight Following (NFF) frequency 168.650 MHz to follow a three-phase approach for toning their equipment and scheduled reporting of their progress.

### Background

During the 2008 National Radio Meeting held in Las Vegas, Nevada, the Department of Agriculture (USDA) and the Department agreed that the NFF required tone protection to avoid radio interference. To ensure compliance with this agreement, the Department and the USDA will use the three-phase approach described in this directive.

### Scope

This directive applies to all Departmental offices and bureaus and becomes effective immediately.

### Policy

All bureaus and offices will provide an initial written action plan to their organization's representative within 30 days. Representatives will provide a progress report validating the status of the toning process to their respective Interagency Radio Alliance representative and the DOI OCIO coordinator by the 15<sup>th</sup> of each month until the project is complete. An Equipment



Identifier Road Map will be used during the transition as a status check and as attached to the monthly progress reports.

- **Phase I - Develop NFF Toning Action Plan**  
Phase I consists of building and submitting each organization's NFF Toning Action Plan and a completed Equipment Identifier Road Map to their Interagency Radio Alliance representative within 30 days of the issue of this directive. The action plan will identify all dedicated NFF locations, including base stations, repeaters, portables, mobiles and aircraft radios, and timeframes required to perform the tone change.
- **Phase II - Tone Radio Transmitters** (may be done concurrently with Phase I)  
Phase II consists of toning all transmitters, including those on aircraft, to ensure uninterrupted communications. Without exception, all transmitters using NFF must be programmed to the CTCSS Encoder 110.9 MHz tone within 90 days of the issuance of this directive. Do not proceed with Phase III until notification is received by your respective IRA representative.
- **Phase III - Tone Radio Receivers**  
Phase III will begin only after the completion of Phase II by **all agencies**. All radio receivers used for NFF, without exception, shall be programmed with the CTCSS Decoder 110.9 MHz tone. Due date for Phase III is October 31, 2009.

**Coordination Contact List:**

- Stuart Ott - US/DOI/OCIO
- Chris Lewis US/DOI - DOI Coordinator
- Carroll Alexander - National Park Service
- Noel Newberg - US Fish and Wildlife Service
- Jerry Godbey - U.S Geological Survey
- Annette Box - Bureau of Land Management
- Tony Beitia - Bureau of Indian Affairs
- Tony Juarez - Bureau of Reclamation
- Kevin Hamilton - USDOJ/BLM

**Please note:** the contact list in this memo is out of date. An updated list is attached in Section 11 of this handbook.

**Contact:** For additional guidance and direction in implementing this directive, please contact Mr. Stuart Ott from the Office of the Chief Information Officer at (703) 648-5517 or Mr. Christopher Lewis at (703) 648-5550 or Christopher\_lewis@ios.doi.gov.

**Attachment**

cc: Heads of Bureaus and Offices  
Bureau Chief Information Officers  
Bureau Deputy Chief Information Officers  
Inspector General  
Solicitor

## Radio Purchasing Procedures

Per OCIO Bulletin 2002-008 (copy attached below), anyone in the Department of the Interior purchasing "... equipment, regardless of cost, that uses radio frequencies to accomplish its task, i.e., wireless equipment, must have prior technical approval from their bureau radio liaison, now referred to as the bureau Radio Program Manager (RPM)." (Please note: the contact list in this memo is out of date; an updated list is attached in Section 11 of this handbook.)

All Service radio equipment purchases should be competed like any other requirement, or purchased through the DHS TacCom contract, until a new Departmental radio purchasing vehicle is in place. We expect this new vehicle to be in place by the fall of 2016.

The Service Radio Team will obtain quotes and prepare Acquisition Requests (ARs) for new radio equipment. This ensures you receive the equipment most suited to your needs at the best current pricing, including any available discounts or rebates. You may obtain quotes and prepare the AR yourself, but since incomplete or incorrect ARs must be corrected before approval, it is usually more cost-effective to have the Radio Team do this work.

Once your AR is complete, the RPM will approve it to ensure that the OCIO requirement for technical approval is met prior to purchase. He/she will also suggest appropriate UPC codes for the equipment.

When you receive the AR with the RPM's signature, you can create your Purchase Request (PR) and complete the purchase through your site's normal administrative processes, with the following steps:

- Attach the signed AR to the PR in the Financial and Business Management System (FBMS).
- Use the appropriate UPC codes provided by the RPM.
- Assign the Ad Hoc Approver role to Lorraine Miller in the Headquarters (HQ) IRTM office. Some radio equipment will require you to assign a Personal Property Approver; this person will vary by Region.

More specific instructions about purchasing radio equipment through FBMS can be found in Table E of the ACQ-03, Processing Information Technology Acquisitions in FBMS.

If the radio equipment purchase is below the micro-purchase limit (currently \$3,500 for equipment), you can use a Government purchase card to buy it, but the equipment must then be added to the FBMS inventory using the ABZON process. Because this process can be cumbersome, it may be easier to process the purchase through FBMS instead of using purchase card. Please see section 8 of this handbook for more information.

Once the purchase is complete, please send copies of the purchase order or other purchasing documents to the RPM.

To allow the Service Radio Team time to develop and approve ARs and send them to you for processing before the Regional procurement cutoff dates, the RPM establishes a cutoff date for radio procurements near the end of each fiscal year. You must deliver all requests for radio procurements to the Service Radio Team no later than this date.

Radio accessories, wildlife telemetry equipment, marine radios, and trunked equipment may be shipped directly to you or to another site. To avoid programming errors, we recommend you ship any radio equipment other than wildlife telemetry or trunked equipment to the Service Radio Team for programming, using the Radio Team FBMS address code: 8942016. As an option, the Site Radio Coordinator may program the radio equipment him/herself, or hire someone to do the programming, but they have to ensure the requirements in 272 FW 2 and this handbook are met. See Section 9 of this handbook for more information.

Once you receive any equipment sent directly from the vendor, you must pay the invoice in a timely manner to avoid penalties under the Prompt Payment Act (5 CFR 1315: Prompt Payment). You must also send a receiving report or equivalent documentation to the Service Radio Team, including serial numbers, so they can add it to the Servicewide equipment inventory. For equipment shipped directly to the Service Radio Team, the Team will develop receiving documentation and send it to you so that you can pay the invoices promptly.



## United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, D.C. 20240

JUL 31 2002

OCIO BULLETIN 2002-008

To: Solicitor  
Inspector General  
Heads of Bureaus and Offices  
Bureau/Office Chief Information Officers  
Bureau/Office Deputy Chief Information Officers

From: W. Hord Tipton  
Chief Information Officer, Acting

Subject: Technical Approval of Radio Equipment Acquisitions

### **Purpose:**

This bulletin reiterates policy disseminated by Information Resource Management memorandum dated December 20, 1996, Subject: Technical Approval of Radio Equipment Acquisitions.

### **Background:**

The purchase of radio equipment without frequency authorization is a violation of Federal Regulation 47 CFR 300. Examples of devices requiring this oversight are radios and systems in the HF, VHF, UHF, and microwave frequency bands whether voice, data, or telemetry; Differential Global Positioning Systems; and audio and video wireless surveillance.

### **Scope:**

This bulletin applies to all Departmental offices and bureaus.

### **Policy:**

All bureaus within the Department procuring any equipment, regardless of cost, that uses radio frequencies to accomplish its task, i.e., wireless equipment, must have prior technical approval from their bureau radio liaison. This assures all DOI wireless devices have required radio frequency authorizations and are compatible with existing radio systems. The equipment must also meet the requirements set forth in Department Manual 377DM 1, Telecommunications Management, the Radio Communications Handbook 377DM, and the National Telecommunications and Information Administration's Manual of Regulations and Procedures for Federal Radio Frequency Management (NTIA Manual). Low power devices

commonly classified by the Federal Communications Commission (FCC) as FCC Type Accepted Part 15 or 90 must also be approved by your bureau radio liaison to prevent the expenditure of funds for equipment that is not protected from interference. Low power Part 15 or 90 devices not requiring prior approval are: cordless telephones, garage door openers, microwave ovens, and commercially provided transmission services such as cellular telephone or commercial radio paging. The use of Family Radio Service and Multi-Use Radio Service equipment is expressly prohibited.

**Time Frame:**

This bulletin is effective immediately.

**Contact:**

When in doubt, you should contact your respective bureau radio liaison for specific guidance. The following are Interior Bureau Radio Liaisons.

- Glenn Cascino    BOR    303-445-3336
- Robert Dutrow    USGS    703-648-7017
- Noel Newberg    FWS    303-275-2401
- Ron Strong    BLM    303-236-6635
- Frank P Weed    NPS    303-969-2084
- John King    BIA    505-346-6511

**Please note:** the contact list in this memo is out of date. An updated list is attached in Section 11 of this handbook.

For bureaus/offices not having a radio liaison, contact Chris Lewis in the Office of the Chief Information Officer at 202-208-6758.

For additional information or clarification, please contact Jim Dolezal, Telecommunications Systems Division Chief, at 202-208-5002 or Art Nelson at 202-208-3939.

cc:  
Bureau Procurement Chiefs  
Telecommunications Managers  
Bureau Radio Liaisons

### **Accountability of Radio Communications Equipment**

As described in the memorandum dated September 26, 2014, Accountability of Radio Communication Equipment as System-Controlled Property (copy attached below), all radio communication equipment (RCE) is system-controlled personal property, regardless of the cost or acquisition method. This includes all radio, GPS, satellite, and telemetry devices, EXCEPT for the following:

- Radio pieces and parts (such as batteries, antennas, etc.),
- Receive-only GPS devices that cost less than \$5,000, and
- Wildlife telemetry tags and collars.

All new RCE must be accounted for in the FBMS system. Purchases that are processed through FBMS will create asset records for equipment as appropriate. You may use a Government purchase card to buy RCE that costs less than the micro-purchase limit, but the equipment must then be added to the FBMS inventory using the ABZON process. Instructions for this process can be found in the FBMS Technical Bulletin PP-01, Personal Property ABZON Entry Process (copy attached below as pages 4-6 of the Accountability of RCE memo). Because the ABZON process can be cumbersome, it may be easier to process the purchase through FBMS instead of using a purchase card.



## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Washington, D.C. 20240



In Reply Refer To:  
FWS/CGS/058340

SEP 26 2014

### Memorandum

To: Service Directorate

From: Assistant Director and Chief Financial Officer - Business Management and Operations 

Subject: Accountability of Radio Communication Equipment as System-Controlled Property

In accordance with the Department of the Interior (Department) Property Policy Release (DIPPR) 2014-01 issued June 6, 2014 (attached), the U.S. Fish and Wildlife Service (Service) is required to account for radio communication equipment (RCE) as system-controlled personal property, regardless of cost or acquisition method. RCE includes devices that transmit and receive data and are categorized under asset class 33CA58RD – Capitalized Radio Communications Equipment, or 33NC58RD – Non-Capitalized Radio Communications Equipment. Non-transmitting handheld GPS devices are considered system-controlled personal property only if the purchase price is \$5,000.00 or more per unit. Wildlife telemetry tags and collars are not included in this list, as they are not considered system-controlled personal property.

This policy change is in response to a 2007 Office of the Inspector General (OIG) audit report recommendation to identify Department-wide radio equipment resources and sharing opportunities through the establishment of a central database. The Department Office of Acquisition and Property Management (PAM) identified the Financial and Business Management System (FBMS) as the database of record.

Detailed guidance on how to enter radio communication equipment in FBMS, including a list of the User Product Codes (UPCs) staff should use when entering the equipment, can be found in the attached files.

Please direct questions to Ms. Veronica Ahmad, FWS Personal Property Manager, General Services Branch, Division of Contracting and General Services, 703.358.1843.

#### Attachments:

- Attachment 1: Creating Radio Communication Equipment Property Records in FBMS
- Attachment 2: Radio UPCs as of 2014\_09\_16
- Attachment 3: FBMS Technical Bulletin PP-01, Personal Property ABZON Entry Process
- Attachment 4: DIPPR 2014-01 Designation of Radio Communication Equipment as System Controlled Property

Attachment 1

**Accountability of Radio Communications Equipment as System-Controlled Property – Creating Radio Communication Equipment Property Records in FBMS**

Effective October 1, 2014, Regions must use one of the following methods to create the Radio Communication Equipment (RCE) property record in FBMS once the FWS Radio Program Manager approves the purchase:

1. RCE purchases above micro-purchase threshold:
  - a. A Purchase Requisition is required and the requisitioner must include the appropriate radio User Product Code (UPC) with asset class 33CA58RD or 33NC58RD. See Attachment 2 – Radio UPCs as of 2014\_09\_16 for a current list of applicable UPCs.
  - b. The Regional contracting office awards the contract.
  - c. FBMS automatically creates the asset record as part of the procurement and receiving process.
2. RCE purchases below the micro-purchase threshold made with a Government purchase card:
  - a. The office receiving the equipment must notify their Regional Property Manager when the RCE is received and accepted.
  - b. The Regional Property Manager requests the manual creation of a property record in FBMS, sending a completed ABZON request form to the Division of Financial Management – Denver Operations. See Attachment 3 - FBMS Technical Bulletin PP-01 Personal Property ABZON Entry Process for detailed instructions.

Once the RCE record is established as system-controlled property, it must also be maintained in accordance with the provisions of Interior Property Management Directive (IPMD) Section 114-60.3. Requirements include, but are not limited to the:

1. Designation of an Accountable Property Officer (APO) and Custodial Property Officer (CPO) for each RCE.
2. Inclusion on the FWS inventory.



Accountability of RCE as System Controlled Property (page 3)

The original Attachment 2 for the Accountability of RCE as System Controlled Property memo is a list of radio UPCs dated September 16, 2014. As the attachment is long and has been updated several times, that UPC list is not attached here. This table includes the most common radio-related UPCs, and identifies whether the item is considered to be RCE. If the item is RCE, it must be added to the FBMS inventory as directed on the previous page.

For more specific information, please contact the RPM.

Category	Type of Radio Equipment	UPC	RCE
<b>Land Mobile Radios (LMR)</b>	Portable (handheld)	58201110	Yes
	Mobile (car)	58201120	Yes
	Base station (desk)	58251990	Yes
	Repeater	58201140	Yes
<b>LMR peripherals and accessories</b>	Duplexer	59851700	No
	Microphone/headset/speaker	59650000	No
	Battery	61400000	No
	Battery charger (single)	61250300	No
	Battery charger (multi-unit)	58203300	No *
	Control head/antenna	59994000	No
<b>GPS</b>	GPS with a radio transmitter	58253000	Yes
	GPS handheld, receive only, purchase price \$5,000 or higher	58253100	Yes
	GPS handheld, receive only, purchase price less than \$5,000	58253100	No
<b>Telemetry</b>	Receiver	58203200	Yes
	Transmitter (tags and collars)	58951300	No

\*Although this item is not considered RCE, the UPC recommended for this item will create an asset shell.



U.S. Fish and Wildlife Service

**Financial and Business  
Management System (FBMS)  
Personal Property ABZON  
Entry Process**

Ref. # PP-01

Version 01

Last Updated: Wednesday, April 10, 2013



## Personal Property ABZON Entry Process

FBMS Reference Number: PP-01

### Primary Points of Contact (POC)

The table below provides primary POCs relevant to this Technical Bulletin:

Name	Organization	Email	Phone
Veronica Ahmad	HQ – CGS	Veronica_ahmad@fws.gov	703-358-1843
Taurean Frazier	HQ – CGS	Taurean_frazier@fws.gov	703-358-2638
Doran Woolf	DFM – Denver Operations	Doran_Woolf@fws.gov	303-984-6809

### Document Control

The table below documents revisions to this Technical Bulletin.

Version	Review Date	Reviewer Name	Description of Changes Applied
V01	04/01/2013	Veronica Ahmad	Exposure Draft

### Cancellations

None

### Attachments / References

1. ABZON Form (pdf):  
<https://fishnet.fws.doi.net/regions/9/bmo/CGS/prp/ layouts/DocIdRedir.aspx?ID=CFZ3AFNNF4NM-1817-1>
2. ACQ-10, UPC Overrides

### Target Audience

Regional Personal Property Managers



## Personal Property ABZON Entry Process

### Introduction

The purpose of this technical bulletin is to provide guidance to the Regional Personal Property Managers regarding the process of manually adding assets or adjusting asset acquisition value within FBMS using the ABZON transaction. The ABZON transaction is used to create records for personal property items that are donated, found in inventory, purchased with credit cards, and transferred into the Service from another agency.

In addition, the ABZON transaction is used to adjust the acquisition cost to account for shipping and delivery costs as well as any property traded in for capitalized personal property purchases. Refer to Technical Bulletin ACQ-10 (UPC overrides) on acquisition scenarios that involve the ABZON process.

### Guidance

The table below provides the steps necessary to create personal property asset records outside of the acquisition cycle in FBMS. All requests should come from the Regional Personal Property Manager and approved requestors; requests from other individuals will be returned and asked to be processed through the Regional Personal Property Manager.

Step	Action	Responsible Individual
1.	Identifies need to enter an ABZON transaction	Regional Personal Property Manager
2.	Completes the ABZON form (provided as an attachment to this guidance document)	Regional Personal Property Manager
3.	Emails the ABZON form and DI-102 to the following address: <a href="mailto:DFMproperty@fws.gov">DFMproperty@fws.gov</a>	Regional Personal Property Manager
4.	Processes the ABZON transaction in FBMS and completes the asset shell in the system; attaches the DI-102 form to the asset record in FBMS	DFM Denver Operations
5.	Emails the Regional Personal Property manager with the new asset number within 3 business days from receipt of request	DFM Denver Operations
6.	Reviews new asset record to ensure information is accurate and makes adjustments as necessary	Regional Personal Property Manager
7.	Reviews and monitors ABZON reports to ensure that the transaction is not performed outside of authorized personnel	CGS Headquarters Personal Property Team



## United States Department of the Interior

OFFICE OF THE SECRETARY  
Washington, DC 20240

**JUN 6 - 2014**

### Department of the Interior Property Policy Release (DIPPR) 2014-01

**Subject:**                    **Designation of Radio Communication Equipment as System-Controlled Property**

**References:**            Interior Property Management Directives (IPMD) Section 114-60.300, *Personal Property Administration*; and IPMD Section 114-60.100, *Definitions*

**1. Purpose:**

The purpose of this DIPPR is to designate radio communication equipment (RCE) as system-controlled property, regardless of cost or acquisition method.

**2. Effective Date:**

Effective immediately upon issuance.

**3. Expiration Date:**

No expiration unless cancelled or superseded.

**4. Background and Explanation:**

The Department relies on RCE as a critical component of employee and public safety, emergency management and efficient management of our public lands. In 2007, the Office of Inspector General (OIG) issued an audit report, *Department of the Interior Radio Communications Program* (Report No. C-IN-MOA-0007-2005), which recommended that the Department implement the following best practice: "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."

Designation of RCE as system-controlled property establishes the requirement to record all RCE in the Financial and Business Management System (FBMS), the property management system of record, which will provide greater Department-wide visibility over RCE assets and ensure that RCE is properly accounted for and within bureau/office control.

5. **Action Required:**

Bureaus and offices are responsible for establishing policy and procedures to implement the following actions:

- Manage all RCE as systems-controlled property, regardless of cost or acquisition method, in accordance with the provisions of IPMD Section 114-60.300.
- Record all RCE in FBMS using asset class numbers 33CA58RD and 33NC58RD, and appropriate UPCs.

6. **Additional Information:**

For questions regarding this DIPPR, please contact Albert Green, Office of Acquisition and Property Management, at (202) 513-7542 or by e-mail at [Albert\\_Green@ios.doi.gov](mailto:Albert_Green@ios.doi.gov).



Debra E. Sonderman, Director  
Office of Acquisition and Property Management

### Radio Programming Procedures

To ensure that all Service radios are properly programmed and use only authorized frequencies, and to minimize errors that may compromise communication, we recommend that the Service Radio Team program all radio equipment (except wildlife telemetry equipment and trunked or marine radios) using the Radio Programming Information Table (FWS Form 3-2422) provided by the Site Radio Coordinator. Wildlife telemetry equipment and marine radios are programmed by the vendor, and the owner of each trunked system decides who should program radios used on that system. Some trunked system owners have limited programming staff available, and are now recommending that the Service Radio Team program their trunked radios.

Once the RPM receives a Radio Programming Information Table, the Service Radio Team reviews the table to ensure that the information provided is verifiable. If any of the frequencies listed on the table cannot be verified, or if the information in the table does not match the information listed on the frequencies' RFAs, the site can proceed in any of three different ways:

- The radio equipment can be programmed with only the channels that are supported by a current or imminent RFA, and that match the information listed in the RFA.
- The Site Radio Coordinator (or someone else at the site) can revise the Radio Programming Information Table.
- The Service Radio Team can research the frequencies in question and revise the Radio Programming Information Table. The Service Radio Team charges the requesting office an hourly rate for this work (currently \$80 per hour).

The Radio Programming Information Table can be changed at any time until the equipment is programmed, but changing it may result in extra chargeable hours.

Once the Radio Programming Information Table is complete and agreed upon by both the site and the Service Radio Team, the Site Radio Coordinator chooses who will do the programming. Although we highly recommend the Service Radio Team do the programming, the Site Radio Coordinator may program the radio equipment him/herself or hire someone to do the programming. They may do this only if the Site Radio Coordinator signs a Frequency List Agreement Memorandum (FWS Form 3-2450), and submits the signed copy to the RPM.

If the Service Radio Team programs the radio equipment, they estimate the number of hours required to program and test each radio for the site, and write a Memorandum of Agreement (MOA) that describes estimated costs, based on the hourly rate (currently \$80 per hour). No equipment will be programmed before the Site Radio Coordinator and the RPM sign the MOA and programming funds are transferred to the Service Radio Shop.

The Service Radio Team ships the radio equipment to the site using the site's FedEx® account number. We insure every shipment of new radio equipment to cover full replacement in case the shipment is damaged.

### **Wildlife Telemetry**

There are 925 specific frequencies between 162.000 and 173.999 MHz assigned to the Federal Government for wildlife telemetry use; these frequencies are located between the frequencies used for Federal Government two-way radio communications. If you use telemetry frequencies in the 162.000 – 173.999 range, you must use the specific frequencies assigned to us. You can't simply pick any frequency in the 162.000 – 173.999 MHz range.

Our frequencies have five digits after the decimal point. Because most transmitter manufacturers only use three digits after the decimal point, this can sometimes cause confusion. Upon request, the RPM will work with the manufacturer to identify transmitters that fall within the 0.003% allowable tolerance.

You do not need an RFA to use these 925 frequencies, but you must coordinate with the RPM because the Department delegated the responsibility for managing these frequencies Governmentwide to him/her.

There are also 18 frequencies in the 30 MHz range and some frequencies in the 218 – 220 MHz range available for wildlife telemetry use; you must have an RFA to use these frequencies. These frequency ranges are shared with FCC spectrum users, so frequencies may be limited, and there is no protection against harmful interference.

To request use of telemetry frequencies, you must complete a Telemetry Radio Frequency Request (FWS Form 3-2427) and send it to the RPM. The RPM will create a telemetry project and send you an email listing the frequencies assigned to your project.

You must have a current telemetry project before the RPM will approve telemetry equipment purchases.



**Radio Contacts**

Each Service Region has a Regional Radio Coordinator; the Headquarters Office and the Headquarters Office of Law Enforcement also have specific Radio Coordinators. Those coordinators are:

Region 1	Mike Fields	503-231-2165	mike_fields@fws.gov
Region 2	Gerry Gajeton	505-248-6851	gerardo_gajeton@fws.gov
Region 3	Chris Jussila	612-713-5408	chris_jussila@fws.gov
Region 4	Stan Zazado	404-679-7159	stan_zazado@fws.gov
Region 5	Kevin Ortyl	413-253-8626	kevin_ortyl@fws.gov
Region 6	Stephen A Smith	303-236-4583	stephen_a_smith@fws.gov
Region 7	John Wolfe	907-786-3315	john_wolfe@fws.gov
Region 8	Mike Fields	503-231-2165	mike_fields@fws.gov
Headquarters OLE	Paul Beiriger	703-358-2075	paul_beiriger@fws.gov
NCTC	Karin Christensen	304-876-7222	karin_christensen@fws.gov
Refuge Law Enforcement	Jeff Lucas	703-358-2642	jeffrey_lucas@fws.gov
Other Headquarters offices	Karen Wood	303-236-5058	karen_wood@fws.gov

Each bureau in the Department of the Interior has a Radio Program Manager (RPM). Those RPMs are:

Bureau of Indian Affairs	Mike Van Dermeyden	571-436-3147	michael.vandermyden@bia.gov
Bureau of Land Management	Mark Jones	208-387-5934	mjones@blm.gov
Bureau of Reclamation	Steve Trujillo	303-445-2805	strujillo@usbr.gov
National Park Service	Carroll Alexander	202-354-1844	carroll_alexander@nps.gov
U.S. Fish and Wildlife Service	Karen Wood	303-236-5058	karen_wood@fws.gov
U.S. Geological Survey	Carol Swan	703-648-7023	cswan@usgs.gov

The main contact for Departmental radio issues is:

DOI Radio Coordinator	Russ Sveda	303-236-5091	russell_sveda@ios.doi.gov
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