USDA Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

Foreign Animal Disease (FAD) Response
## *Ready Reference Guide — Incident Information Management and Reporting*

Preparedness and response planning for Foreign Animal Disease (FAD) incidents is crucial to protect animal health, public health, animal agriculture, the environment, the food supply, and the economy. This Ready Reference Guide provides a brief overview of the *Animal and Plant Health Inspection Service (APHIS) Foreign Animal Disease Framework: Incident Information Management and Reporting* [FAD PReP] (Manual 3-0), describing Information Management (IM) and routine reporting processes conducted by the National Incident Coordination Group (ICG).

Incident Information Management & Reporting in an FAD Response

IM and reporting are fundamental in any FAD incident. IM systems facilitate the collection, management, reporting, analysis, and dissemination of critical emergency response information in an FAD response. They provide the unified Incident Command, National ICG, and Multiagency Coordination (MAC) Groups with access to timely, appropriate, and accurate data needed to make decisions. The term reporting refers to information—specifically routine situation reports or other types of reports—provided to internal and external stakeholders directly involved in the incident. Because data are so important for situational awareness, field activities, and accurate reporting, all IM activities are a priority during any incident.

While the focus of Manual 3-0 is on IM during an FAD response, there is a great deal of ongoing communication on data management and collection during and after an incident to better prepare for the next FAD emergency.

FAD Incident Information Management/Reporting Life Cycle
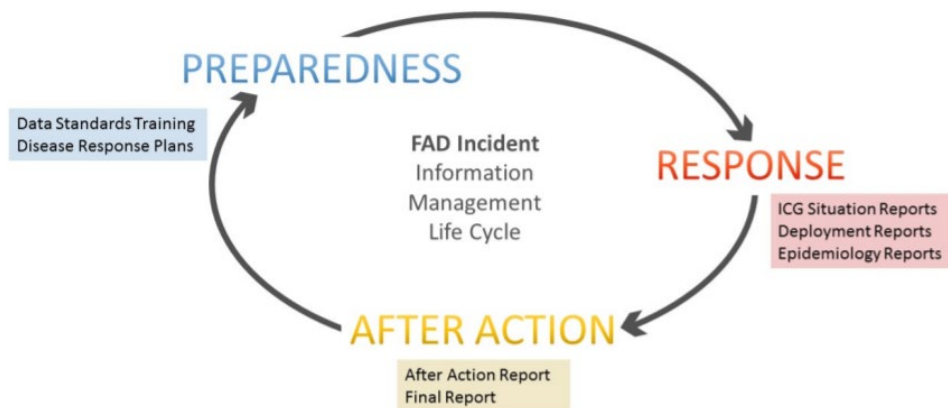
Note: The documents listed are examples, and not meant to be a complete list of all IM or reporting products.

Goals for Information Management Activities

Preparedness

♦ Ensure that local State, Tribal, and Federal IM systems are compatible for sharing data and information or that plans, and processes are in place before an incident to efficiently share data and information.

♦ Identify gaps or weaknesses in current IM systems during a large-scale FAD outbreak, especially related to communicating incident goals and objectives, status reports, tracing information, premises status information, diagnostic results, epidemiology reports, permits for movement, and resource information.

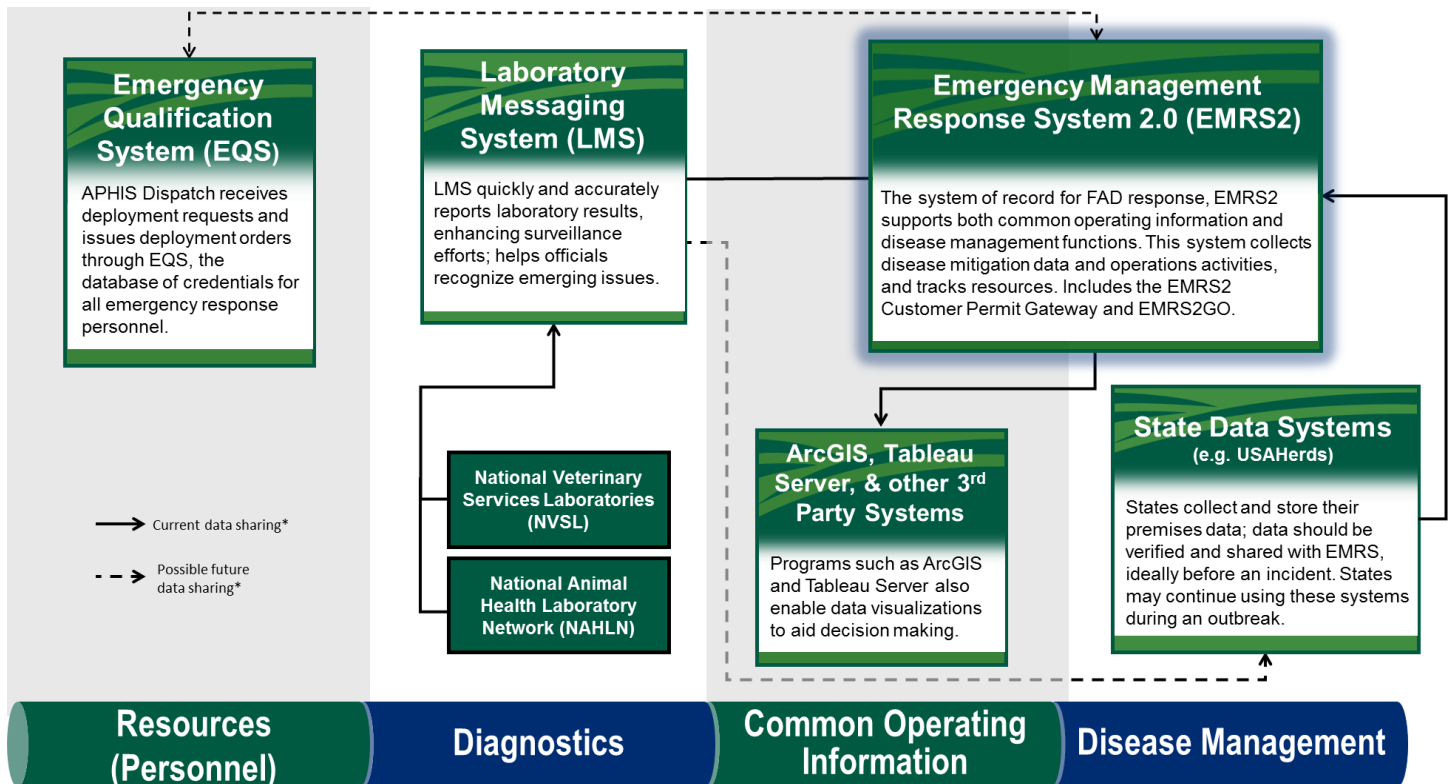♦ Improve capabilities for IM for a large-scale or complex outbreak.

Response

♦ Perform Emergency Management Response System 2.0 (EMRS2) data entry processes or information downloads in 24-hour intervals or less, or as requested by the National Incident Coordinator (NIC) or Deputy NIC. Data entry should be as close to real-time as feasible.

♦ Effectively communicate incident goals and objectives, progress, tracing information, premises status information, diagnostic results, epidemiology reports, permits for movement, and resource information in a timely and accurate manner both internally and externally.

Overview of Information Management systems used in an FAD Incident

The primary IM systems used for disease management, diagnostics, common operating information, and logistics are as follows: EMRS2, Emergency Qualification System (EQS), Laboratory Messaging System (LMS), State data systems (e.g. USAHerds or others), and Third party systems (e.g. Geographic Information Systems (GIS) or Tableau).

Data flow of current Information Management systems

Emergency Qualification System (EQS)

APHIS Dispatch receives deployment requests and issues deployment orders through EQS, the database of credentials for all emergency response personnel.

Laboratory Messaging System (LMS)

LMS quickly and accurately reports laboratory results, enhancing surveillance efforts; helps officials recognize emerging issues.

Emergency Management Response System 2.0 (EMRS2)

The system of record for FAD response, EMRS2 supports both common operating information and disease management functions. This system collects disease mitigation data and operations activities, and tracks resources. Includes the EMRS2 Customer Permit Gateway and EMRS2GO.

National Veterinary Services Laboratories (NVSL)

National Animal Health Laboratory Network (NAHLN)

ArcGIS, Tableau Server, & other 3rd Party Systems

Programs such as ArcGIS and Tableau Server also enable data visualizations to aid decision making.

State Data Systems (e.g. USAHerds)

States collect and store their premises data; data should be verified and shared with EMRS, ideally before an incident. States may continue using these systems during an outbreak.

→ Current data sharing*

⇢ Possible future data sharing*

Resources (Personnel)	Diagnostics	Common Operating Information	Disease Management

Note: Current data flows indicate where it may be currently possible to electronically share specific data between the systems (in the direction of the arrow). Possible future data flows indicate where electronic sharing of specific data may occur in the future.

Emergency Management and Response System 2.0

EMRS2 is the USDA APHIS official system of record for all IM in FAD investigations and incidents.

- EMRS2 automates many tasks associated with animal disease outbreaks and emergencies.
- EMRS2 provides a secure, accessible system for data collection, management, and analysis utilizing a web-based comprehensive investigation, task, and resource management suite on a universal information platform.
- EMRS2 offers users (Federal, State, Tribal officials, specialists, technicians, and epidemiologists) a means to respond to animal disease outbreaks, routine surveillance of FADs, and all-hazard animal incidents.

There are five critical uses of EMRS2 in FAD preparedness, response, and after an FAD incident:

- *Disease management:* records and manages complex information about premises and the actions that occur on those premises from detection to recovery.
- *Tracing:* robust ability to manage and report information on the movement of animals, groups of animals, and items/objects associated with outbreaks.
- *Permitting*: ability to issue and track all permits through EMRS2 and the EMRS2 Customer Permit Gateway.
- *Resource management:* can be used to manage personnel deployments and track other types of resources such as equipment and supplies.
- *Mapping:* real-time data using the advance Mapping Tool to provide a common operating picture to responders and the National ICG.

Emergency Qualification System

EQS is a database of emergency response personnel and their credentials for all emergency response positions; this system is used to officially deploy qualified personnel to an incident.

- ♦ EQS is managed by the APHIS Emergency Management, Safety, and Security Division (EMSSD).
- ♦ EMSSD can provide more information on EQS functionality and procedures.
- ♦ During an FAD incident, APHIS Dispatch uses EQS to fill resource orders submitted to the NIC.

Laboratory Messaging System

The National Veterinary Services Laboratories serves as a reference laboratory both nationally and internationally. The National Animal Health Laboratory Network diagnostic laboratories provide early detection and response capabilities for FADs; they also provide critical surge capacity for specific disease agents.

NAHLN and NVSL use LMS to do the following:

- ♦ Provide alerts on defined events to authorized personnel.
- ♦ Securely transmit and store data using nationally recognized health information standards, which improves data quality and reuse in systems, including EMRS2.
- ♦ Report on relevant laboratory findings, allowing for effective data routing and aggregation.

Third Party Systems for Advanced Mapping and Visualization

Other systems provide important analyses and visualizations for FAD response.

- ♦ *Geographic Information Systems* enables the development of complex, standardized map products and create maps and analyze geographically referenced data for patterns and trends.
- ♦ *Tableau/Tableau Server* are interactive data visualization software products that provide the ability to conduct and visualize advanced data analyses. These products can be useful in a response for all stakeholders.

State Data Systems

Some States use EMRS2; other States record and collect information on premises within their State in other IM systems.

- ♦ There is a wide variation in how States manage premises identification and collection of premises data.
- ♦ Veterinary Services (VS) continues to collaborate with States, stakeholders, and agency partners to encourage the opportunity to contribute to and strengthen the repository of animal agriculture and health data.

Preparedness — Prior to an Incident

There are many groups involved with IM and reporting as a part of FAD preparedness; general activities in anticipation of a potential incident include the following:

- ♦ ***Developing IM system capabilities:*** program staff plays a critical role in identifying needs and defining requirements for IM systems.
- ♦ ***Data management and quality:*** data must be accurate and valid to be useful to responders; quality control and quality assurance programs must be developed and implemented.
- ♦ ***Reporting templates and processes:*** prior to an incident, a wide range of situation reports need to be developed with those internal and external stakeholders who have specific reporting needs.

Response — During an Incident

IM and reporting during an FAD incident ensures that responders, stakeholders, and decision-makers have access to accurate and timely critical emergency response information.

During FAD incidents, a variety of routine reports are required for internal and external reporting purposes. The unified Incident Command and Incident Command Post have separate and concurrent reporting requirements not covered in Manual 3-0.

IM Roles and Responsibilities

Roles vary depending on the incident and may also vary over the course of a response, based on changes in size and complexity. During an incident, for the National ICG, most of the routine IM responsibilities fall under the IM Section. Coordination with other sections and branches, as well as the Incident Management Teams /unified Incident Command is required to obtain and verify data. Data collection and entry is largely done by the unified Incident Command. Data quality assurance and control activities are conducted both in the field and by National ICG personnel.

Data Management/Quality Assurance

IM requires significant preparedness so that an effective and timely response can be executed. It is crucial that premises information and all other data associated with a response be entered into EMRS2 in a timely and accurate manner. Staff must be trained to use IM systems effectively and enter data based on consistent procedures and quality standards. The EMRS2 Staff are the first point of contact for data management and quality issues in EMRS2.

> The **Tally Sheet** is a component of EMRS2 where personnel can quickly record the best-known information during an incident. This information is centralized but may not always be confirmed. All data in the Tally Sheet UNDERLINE MUST be reconciled with the full EMRS2 records when complete information is available. Typically, data are reconciled at 24-hour intervals by personnel in the IM Section. The National ICG relies on the Tally Sheet as the source for data for routine incident reports and maps. One of the most

National ICG Reporting

The ICG takes on the bulk of reporting activities during an FAD incident. The ICG may use, analyze, and share information to respond to requests for information from VS or APHIS leadership, States, and any MAC Group that has been established.

There are three primary report types produced by the ICG:

1. **Situation Reports:** are the primary tool to summarize actions and conditions of an incident.
2. **Specific Reports:** provide further detail and summarize data on a specific topic. Specific reports may vary depending on the severity and complexity of the incident, but typically include the visualization of cases over time, permits and permitted movements during an outbreak, and data/mobilization information (both on-site and virtual).
3. **Maps**: visualize the situation and incident response. The IM Section utilizes both the EMRS2 Advanced Mapping feature as well as GIS maps produced by the GIS Mapping Cell within the ICG. The National Situation Group provides quality assurance/control for all map products.

Summary of Reports

Report Type		Frequency of Report	Source of Data (Currently)	Potential Audience
Situation Reports	Daily (Mini Report and/or Briefing)	Daily	EMRS2 (including Tally Sheet), IMT/State sitreps, phone calls	ICG, States
Situation Reports	Weekly (National ICG Report)	Weekly	EMRS2 (including Tally Sheet), IMT/State sitreps, phone calls, financial staff, other reports	USDA and APHIS Leadership, ICG, States
Situation Reports	Summary List of Infected Premises	Daily	Tally Sheet	APHIS Leadership, ICG
Specific Reports	Epidemiological	Bi-Weekly	EMRS2	ICG, States
Specific Reports	Permitting & Movements	Weekly	EMRS2	ICG, States
Specific Reports	Deployment	Weekly	APHIS Dispatch, EMRS2	APHIS Leadership, ICG, States
Maps	ICG Maps	Daily then weekly	Tally Sheet	APHIS Leadership, ICG, States
Maps	Standard Maps	Daily then weekly	Tally Sheet	APHIS Leadership, ICG, States
Maps	Summary Mapbook	Bi-Weekly (As needed)	EMRS2, Tally Sheet, wildlife data	Public

Additionally, an **ICG Action Plan** is produced to communicate the overall objectives of a response and provide context for operational and support activities. The ICG Action plan provides critical day-to-day information about the activities of the ICG, documenting how the response is progressing and the ongoing coordination with the field. ICG Action Plans are important tools to document the response and helpful in developing final and After-Action Reports (AAR).

After Action — After an Incident

At the conclusion of an incident or outbreak, VS conducts an evaluation process to capture what occurred. Typically, two products are produced – a final outbreak report and an AAR. Post-incident reporting is comprehensive; it is very important that data in the final report and AAR is accurate and based on the best available information. The final outbreak report captures the "who, what, why, when and where" summarizing much of the incident data, while the AAR focuses on lessons learned, challenges, and successes of the incident.

Final Outbreak Report: Typically, the National Situation Group writes a comprehensive report summarizing the incident. Reviews actions from the field, to headquarters/ICG, to any MAC or leadership decisions. Provides final, summarized data on all critical activities. Important historical record for both internal and external stakeholders. The final report is provided for both internal and external review to ensure the information is as accurate as possible and that quality control measures are taken to validate all existing data in other reports.

AAR: At the conclusion of an incident, VS conducts a post incident process to capture lessons-learned for future incidents. An AAR summarizes the results of the after-action reviews (also called hot washes), and other data collection methods (e.g., surveys, interviews, etc.). Written by the Lessons Learned/AAR Section, the AAR documents both what went well and what areas need improvement. An AAR is an important historical record of the incident and can provide a framework for a corrective action program/training priorities. After-action reviews and AAR are used interchangeably; the key difference is that an AAR is comprehensive and deliberate whereas an after-action review occurs immediately after an incident. The AAR process may take weeks to capture tangible and actionable recommendations and areas of improvement to improve future responses.