

## 3.2 Explosives and Pyrotechnics

### Safety Initiatives in Place Prior to Review

WS is recognized by commercial explosives industry officials at The Institute of Makers of Explosives (IME) as the leader in explosives safety and accountability for wildlife management applications. WS' explosives safety training and certification program is recognized by the IME as "the premier explosives program of its type in the United States."

In 1986, WS recognized the need for an effective explosives safety program. In cooperation with the commercial explosives industry, WS developed policy and procedural guidance for field operations and established an in-depth explosives safety training program. Two private explosives engineering consultants were recruited to assist the newly formed WS Explosives Safety Committee with developing a nationwide explosives safety and regulatory compliance program.

The WS explosives safety program features the following elements for explosives applications in wildlife damage management.

- Voluntary use of commercial explosives industry safety standards and Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) regulations. Occupational Safety and Health Administration (OSHA) and U.S. Department of Transportation regulations and standards are also observed.
- Safety procedure field checklists similar to an airplane pilot's checklist
- A proactive Explosives Safety Committee established to do the following:
  - train and certify WS Explosives Specialists,
  - promote and represent the interests of WS and APHIS cooperators to the commercial explosives industry and Federal regulatory agencies,
  - ensure safe and legal storage, transportation, and handling of explosives by WS personnel,
  - assist WS state programs implementation of explosives security measures and state-of-the-art explosives industry safety measures,
  - provide assistance to other agencies with jurisdiction or interests in explosives including ATF, OSHA, Consumer Product Safety Commission, U.S. Fish and Wildlife Service, U.S. Geological Survey, U.S. Forest Service, state wildlife and regulatory agencies, and Foreign governments, and
  - serve as an information source for WS Certified Explosives Specialists, the WS Management Team, other federal and state agencies, university wildlife departments, private wildlife management organizations, and other wildlife managers.
- A history and willingness to respond positively to explosives and other hazardous materials reviews and audits. The WS explosives program underwent an OIG/OSHA audit in 1994-96 which resulted in a number of recommendations. WS actively participated in and assisted OIG and OSHA in every way possible during the review, and implemented many

of the recommendations prior to the final audit report. All audit recommendations were implemented and remain in effect today.

- Training developed by WS in 2005 to teach rocket and cannon capture net safety for avian influenza sample collections has been undertaken by 146 biologists and wildlife technicians to date from WS and cooperating Federal and state agencies, universities, and private conservation organizations. Wildlife Services also developed a capture net operated by air pressure which is in use for AI surveillance.

### **Review Activities**

Review of the WS explosives and pyrotechnics program was conducted by The Institute of Makers of Explosives (IME). The IME is recognized in the U.S. as the premiere organization dedicated to promoting safe use of explosives. During the review, IME representatives examined all pertinent WS documents and manuals pertaining to management and operations, training requirements and curricula and training records, explosives and pyrotechnics safety procedures, and interviewed WS management and field personnel. As part of the review the IME team visited five WS state offices and accompanied field personnel on projects including dynamiting beaver dams and using pyrotechnics to haze wildlife.

### **Summary of Review Findings**

The Institute of Makers of Explosives (IME) conducted a safety and security review of WS use of explosives and pyrotechnics. Wildlife Services has an outstanding explosives and pyrotechnics safety and security program and fosters a culture, from top to bottom, that promotes safety. The WS explosives and pyrotechnics safety and security program could serve as a model for other agencies or groups looking to improve their own program.” The recommendations made by IME in this report address relatively minor safety and security issues. They should in no way reflect poorly on WS employees. Only through IME’s intimate knowledge and experience of commercial explosives and blasting could these recommendations be known.

The IME reviewed six WS Directives and 36 documents used for safety and security training by WS. In general, WS documentation was well written and covered the essential topics. IME suggested many minor modifications to the documentation that WS should consider making.

No training classes were held during the review period so IME was not able to attend one. Wildlife Services training instructors are highly skilled and experienced safety professionals and WS training documents are outstanding. IME has no doubts that the WS training and certification programs could serve as a model for other agencies.

IME conducted four separate field audits of state WS explosives programs, involving six field offices. Each auditor prepared a field-audit report that was reviewed by IME. Each auditor was very impressed with the emphasis WS places on safety and in particular, explosives safety and security. Field audits included a

review of the availability of relevant safety information and equipment, employee knowledge of and adherence to safety policies, use of personal protective equipment, on-site hazard communication rules, transportation, handling and storage of hazardous materials, and equipment condition. No major deficiencies were observed in any of these areas, although IME made recommendations to resolve some minor issues.

**Priority Recommendations**

The top priority recommendations made by the IME were as follows:

1. Implement ways to limit WS employees working alone with explosives and water hazards related to beaver impoundments.
2. Improve cooperator assistance with safety.
3. Involve the WS Explosives Committee in the review of all accidents involving explosives or pyrotechnics.
4. Ensure that at least ½ FTE be devoted to the national coordination of the WS explosives and pyrotechnics safety and security program.
5. Carry-over the certification process for blasters to the rocket net program.