

**Aerial Survey Working Group Report**  
**January 18-19, 2012**                      **Santa Fe, New Mexico**

The Aerial Survey Working Group (ASWG) meeting was hosted by Danny Norlander, New Mexico State Forestry. The group thanks Danny for his work to provide an excellent state facility for the meeting. This report is the responsibility of Jeff Mai, Forest Health Protection (FHP) National Aviation Safety Manager (NASM).

In attendance were:

1. Amanda Garcia            FHP, Southwestern Region
2. Biff Thompson            Maryland Department of Agriculture
3. Bill Frament              FHP, Northeastern Area
4. Ben Smith                 FHP, Pacific Northwest Region
5. Brian Howell             FHP, Rocky Mountain Region
6. Carol Boyd\*              FHP, Southwestern Region
7. Cliff Dils\*                FHP, Southwestern Region
8. Crystal Tischler          FHP, Southwestern Region
9. Charlie Schrader         RSAC, Bend, Oregon
10. Daniel Ryerson            FHP, Southwestern Region
11. Danny Norlander         New Mexico State Forestry
12. Doug Daoust             FHP, Pacific Northwest Region
13. Frank Krist              FHP, FHTET, WO
14. Frank Sapio              FHP, FHTET, WO
15. J.D. Mullen              FHP, FHTET, WO
16. Jeff Mai                  FHP, FHTET, WO
17. Jami Anzalone\*          FAM, Southwestern Region
18. Justin Backsen          FHP, Rocky Mountain Region
19. Kathleen Matthews      FHP, Northern and Intermountain Regions
20. Kevin Carlin             Pennsylvania Department of Conservation and Natural Resources
21. Marc Roberts            FHP, Northeastern Area
22. Michael McWilliams     Oregon Department of Forestry
23. Sky Stephens            Colorado State Forest Service
24. Steve Swenson          FHP, Alaska Region
25. Zachary Heath          FHP, Pacific Southwest Region

Note:

The ASWG thanks Jami Anzalone, USFS Regional Aviation Safety Manager, for providing the 2011 National Aviation Accident Review and thanks Southwestern Region FHP Leadership for attending for a portion of the meeting and \*accident review.

# **The ASWG Four Key Issues for 2012**

## **1. Lock Haven Accident Investigation Status**

The National Transportation Safety Board (NTSB) has completed its investigation, produced the Factual Report (published 02/01/12) and Probable Cause (published 03/08/12). These reports indicate total loss of power resulting from fatigue failure of the engine's #2 exhaust valve guide, followed by a catastrophic chain reaction of associated engine component failures. Contributing factors include inadequacy of maintenance, inspections, and records. The USFS Serious Accident Investigation Team (SAIT) has been a party to the NTSB's investigation and is preparing a Factual and Management Evaluation Report to be forwarded to the Designated Agency Safety and Health Official (DASHO). The DASHO will soon arrange for an Accident Review Board (ARB) that will be presented reports by the SAIT and either accept, accept with minor corrections, or reject reports. After reports are accepted, the ARB reviews SAIT Preliminary Recommendations and follows the same process of review as with reports, but may also add recommendations. FHP and F&AM aviation safety managers and unit aviation officers remain in contact regarding the status of the investigation and await final recommendations out of the ARB.

## **2. Continued Development and Implementation of Safety Management Systems (SMS)**

James Hubbard, Deputy Chief of S&PF, approved the Aviation Safety Management Systems (ASMS) guide June 20<sup>th</sup>, 2011. His letter cites: compliance with Federal Management Regulations for aircraft, the Federal Aviation Administration's established principles for SMS, industry standards and best practices, and makes reference to our Agency's Safety Journey. On January 17<sup>th</sup>, 2012 the General Services Administration and Interagency Committee for Aviation Policy awarded the FS with the Gold Standard Certificate for meeting aviation safety requirements. Continued implementation of SMS includes documenting compliance through the International Standard for Business Aircraft Operations (IS-BAO) audit process, the Agency is currently scheduling our first external IS-BAO audit. FHP has been and continues to be engaged with the National Aviation Safety Council (NASC) on all matters of SMS development and implementation and is represented on several national, interagency, cooperative working groups and councils. FHP and cooperative aviation programs have increased activities within each of the four primary SMS components: safety promotion, policy, assurance and risk management. Additional effort is placed on higher standards of training for users and supervisors, updating program risk assessments to address new hazards and new mitigations, challenging and drafting new policy to improve safety and efficiency. Currently, our greatest opportunity for improvement in terms of safety and program delivery is through quality assurance including internal and external reviews, audits and strategic risk assessments (see 'B' below).

## **3. Improving the Safety Profile of Aerial Detection Survey (ADS)**

At the request of FHP Directors in a letter dated August 23, 2011, Frank Sapio, Director of FHTET, discusses safety and production, advocating examination of alternatives and strategy development to better meet FHP and cooperator information and safety needs. The ASWG was presented with an alternative grid-based collection method, discussed possible technological improvements and the Spatial Tool for Aviation Risk (STAR). The ASWG was not convinced the "solution" had been found but unanimously supports further investigation of grid-based data capture and is interested in testing a prototype method and redesigned tablet. FHTET has continued to refine and make progress in each of these areas. An RFI has been released for a new tablet on FedBizOpps. The ASWG failed to see immediate utility in STAR but the model has since been through a few iterations, a draft presented to

the NASC and the concept is gaining traction to aid strategic decisions. Two or three geographic areas representing varying forest type and terrain should be selected this year to examine utilization of STAR and the grid data collection method. Though it is clear we can prioritize areas of relatively higher aviation risk and relatively higher pest risk for either satellite remote sensing or to further reduce risk by mitigating through aircraft choice, altitude or flight technique, the practicality of these choices in meeting our informational, safety and fiscal needs is not tested nor well described.

#### **4. Survey Hours, Automated Flight Following (AFF) and Digital Aerial Sketch Mapping (DASM)**

Approximately 4,870 flight hours were reported by FHP and state cooperators conducting aerial survey in 2011. The total aerial survey hours break down as follows: 46% FHP, 44% State and 10% cooperatively flown (both FHP and State on board). AFF was utilized 64% of the total survey flight time, a decrease from last year. The proportion of reported AFF use dropped significantly due to more thorough reporting of state hours, many of whom do not use AFF. Several cooperators in the Northeastern Area and Region 8 do not appear to be realizing the full benefit of this added safety measure. DASM systems were used 81% of the total survey flight time, a decrease from last year's proportion. Both AFF and DASM proportions are skewed due inconsistent reporting.

In addition to aerial survey, FHP and States cooperated to fly 1,120 hours aerial application; FHP and PSW 171 hours aerial photography. Total flight hours, all operations = 6,161.4

Summary Chart by Region/Area: [www.fs.fed.us/foresthealth/aviation/safety/safety-statistics.shtml](http://www.fs.fed.us/foresthealth/aviation/safety/safety-statistics.shtml).

#### **Additional Information**

**A.** The 2011 FHP Aviation Safety Award was presented to Ken Zogas, Alaska Region, for his outstanding effort and achievement in the areas of safety promotion, supporting forest health, building efficiency and effectiveness among partners. "Congratulations Ken and thanks for 30 years of ADS!" Nominees for the 2012 Award have been evaluated and the recipient will soon be announced.

**B.** Safety assurance reviews for aerial spray programs is entering a third year of implementation; the first aerial survey review planned last year was cancelled due to travel. Travel restrictions are affecting key meeting attendance, increasing aircraft ferry time to avoid per diem and impacting the ability to conduct ground checks. Leader and travel support is needed for program improvements, promotion and assurance: two internal reviews proposed for survey and spray; one external strategic risk assessment proposed for FHP aviation overall; we are also in early stages of communication and information gathering regarding the coordinated Northeastern Area and Region 9 Aviation Review.

**C.** There is increased interest in high performance aircraft, either single or twin engine in some areas and nationally (e.g. turbine-powered Quest Kodiak, Partenavia P68 twin, Aero Commander 500 twin). FHP's options include new procurement, acquisition of surplus, utilizing current Agency or cooperator aircraft. Replacement or acquisition, purchase or any transfer is on hold until the Agency completes its FS Aviation Strategic Plan. FHP needs to complete its risk assessment and cost/benefit analysis to outline remote sensing and various aircraft options commensurate with the synoptic strategy for more consistent, safe, strategically placed coverage.

**D.** The ASWG continues to coordinate with FHM through this meeting. ASWG was briefed regarding ADS Standards Review Team progress: chartered through FY 2012, stalled at solidifying business need, assessing current standard's ability to meet or whether standards should change.

**E.** FHTET detailed capture methodology, data quality and utility, reporting challenges. Tools for enhanced communication and product delivery including the Forest Health Conditions Portal [www.foresthealth.info](http://www.foresthealth.info) have been successfully implemented.

**F.** Agency aviation contracts for CWN and Exclusive-Use Light Fixed Wing must adhere to minimums in the national template. P25 digital radio implementation continues; phase-in period was negotiated for resource aviation contracts in 2010, with full FHP implementation by 2013 (excluding AK). Safety evaluation scoring and SMS contract criteria have been further developed; section "C" provisions requesting bidder synopsis of operator safety program (organization, safety systems, accident history, etc) have been provided to NIFC Contracting for use in all new contracts.

**G.** Mentoring, development and recruitment was discussed. There are increasing demands among aviation managers and users for advanced skills (now more complex in terms of technology, biology, analysis, reporting and aviation safety). PDs and unit structures may not adequately address current staffing, development needs or program goals. The ASWG Chair has again requested current technical and professional PDs from all UAOs; received several from R2, 5, 6, 10 and has worked with R10 in developing an aerial survey coordinator position description. More work needed...

**H.** FHP sponsors training for aviation users annually, as-needed for supervisors and assists with other interagency events. Supervisors were provided training in Spring of 2011, some need a few classes prior to this flight season, are attending scheduled IAT sessions or AS2M (a limited test of video is planned for two classes). Requirements [www.fs.fed.us/foresthealth/aviation/training.shtml](http://www.fs.fed.us/foresthealth/aviation/training.shtml).

**I.** There is a need for qualified Interagency Aviation Training Instructors to assist with a variety of F&AM, FHP and externally-sponsored training. This is a great opportunity for state and federal employee development and sharing resource aviation expertise - thanks to R2, R5, R6 and PA DCNR for recruiting instructors and supporting 2012 and future training programs.

**J.** Pre/post-season workshops and reviews are paramount to improving safety and quality. Calibration flights coupled with ground checks are recommended annually. R2, R5, R6 and R10 are planning calibration with ground checks (R2 is including comparison of TPA to %); other regions likely to participate; NA SPFO is holding state coordination meetings; DASM classroom is planned in Denver and Lansing. R2 and R5 also plan to host pinch-hitter courses. Announcements have been requested and will be posted [www.fs.fed.us/foresthealth/aviation/news.shtml](http://www.fs.fed.us/foresthealth/aviation/news.shtml).

**K.** Assistance across Region/Area boundaries is encouraged for employee development, teamwork and achieving FHP mission goals; contact individual UAOs for more information. Assistance is needed in R8 and NA/MFO currently and possibly R10 in 2013.

**L.** **The** 2013 ASWG meeting will be held January 23<sup>rd</sup> – 24<sup>th</sup>, Marc Roberts is exploring options in TN, LA, CA).

Meeting notes are available and questions will be answered upon request - End of Report.