



WASHINGTON STATE DEPARTMENT OF
Natural Resources

DNR Aviation Mishap Response Guide and Checklist

*Do not waste time trying to figure out if an event is an accident, that's the job of the NTSB
(National Transportation Safety Board).*

If you have an event with an aircraft that results in damage or injury no matter how slight.

Has 911/ search & rescue been notified

Revised June 2011

Administrative Information

This is a generic aircraft mishap response guide and checklist. It is not intended to be all encompassing but rather it provides the minimum essential elements that apply to most aviation mishaps. **You must tailor this plan to your own Region, mission, and operational location. All responsible DNR Employees are encouraged to review procedure # PR20-001-220 and 230 at the start of each fire season and attach a copy of the procedure to this mishap guide. PR20 can be found at <http://sharepoint/agency/DNRPolicy/default.aspx>**

All personnel involved in aviation operations should be familiar with the Aviation Mishap Response Guide and Checklist. **Ensure that your plan is up-to-date. It must be verified a minimum of annually AND prior to operations conducted in new locations.** When you review your Aviation Mishap Response Checklist ensure that all of the points-of-contact listed and their respective phone numbers and e-mail addresses are still valid.

Priority of Actions. As soon as you are aware of the accident **START A LOG OF ALL ACTIONS AND CALLS**, then refer to the expanded subsections of this plan. The subsections are listed in order of priority.

- a. **Protect people** (Tab A). Life saving operations takes first priority.
- b. **Protect property** (Tab B). Property should be protected from unnecessary additional damage.
- c. **Preserve evidence** (Tab C). Treat the area as if it were a crime scene and provide 24-hour security until the investigation team arrives. Identify witnesses, get their addresses and phone numbers.
- d. **Notify and investigate** (Tab D). Report the accident. **Do not delay reporting** even if detailed information is not immediately available.
- e. **Recovery operations** (Tab E). Everything at the site is under the control of the NTSB until released.

Practice -- The absolute best way to be prepared for the unexpected is to periodically practice your Aviation Mishap Response Plan. Coordinate in advance and get as many responders as possible to participate when you conduct a training drill.

Update Record

Date of Review	Signature
_____	_____
_____	_____
_____	_____



Protecting People

- a. Many times in the urgency to assist accident victims the **rescuers may place themselves in jeopardy** and become victims themselves. **Risk assessment and mitigation procedures should be enforced.**
- b. Ensure **ALL** crew and passengers involved in an aircraft accident are cleared by medical authority prior to returning to duty.
- c. Aircraft wreckage attracts people like a magnet. Keep non-essential personnel well clear, and preferably upwind.
- d. **Hazards at an aircraft accident site** can include:
 1. **Biological Hazards** -- Hepatitis B Virus (HBV), Human Immunodeficiency Virus (HIV), and many others. See OSHA's 29 CFR 1910.1030 for control measures.
 2. **Toxic Substances** -- Fuel, oil, hydraulic fluid, and exotic aircraft materials such as beryllium, lithium, chromium, and mercury. You must also consider the cargo the aircraft was carrying.
 3. **Pressure Vessels** -- Tires (often above 90 psi), hydraulic accumulators, oleo struts, oxygen cylinders, and fire extinguishers. They may look OK, but they may have been damaged in the crash.
 4. **Mechanical Hazards** -- Metal under tension (rotor blades bent under fuselage), heavy objects, composite materials, and innumerable sharp edges.
 5. **Fire Hazards** -- Unburned fuel, hot metal (or other components), aircraft batteries, pyrotechnics, and the ignition of grass as a result of the accident. Be cautious of smoldering items which may re-ignite.
 6. **Environmental Hazards** -- Weather, terrain, and animals (snakes, spiders, scorpions, etc.) Depending on the location and time of year, the environment may be among the most serious hazards at the scene.
- e. **Utilize available protective devices and clothing**, and use extreme caution when working around the wreckage. Protective measures include:
 1. Minimize the number of personnel allowed to enter the accident site.
 2. Ensure exposed personnel use appropriate personal protective equipment (PPE) such as boots, long pants, long-sleeved shirts, leather gloves (use surgical gloves as inserts if blood or bodily fluids are present), and appropriate respirators if toxic vapors or composite material pose respiratory hazards.
- f. Do whatever is necessary to extricate victims and to extinguish fires, but keep in mind the need to protect and preserve evidence. **Document and/or photograph the location of any debris, which must be disturbed** in order to carry out rescues or fire suppression activities.

REMEMBER, it's already a bad day; don't make it worse by letting someone else get hurt!

Emergency Actions Tab A
(Protect People)

Protecting Property

NTSB Sec. 831.12 Access to and release of wreckage, records, mail, and cargo.

Only the Board's accident investigation ~~personnel~~, personnel and persons authorized by the investigator-in-charge to participate in any particular investigation, examination or testing shall be permitted access to wreckage, records, mail, or cargo in the Board's custody.

Wreckage, records, mail, and cargo in the Board's custody shall be released by an authorized representative of the Board when it is determined that the Board has no further need of such wreckage, mail, cargo, or records. When such material is released, Form 6120.15, "Release of Wreckage," will be completed, acknowledging receipt.

Treat the accident site like a crime scene. Wreckage, cargo, and debris should not be disturbed or moved except to the extent necessary:

- a. To remove victims.
- b. To protect the wreckage from further damage.
- c. To protect the public.

In addition to the authority explicit in NTSB 831.12 another (very good) argument for restricting access is for the protection of the public from the hazards of the accident site (Tab A).

Initially the accident site should be protected by either your own people (e.g. if the accident occurred at a fire) or by local law enforcement officers. The investigation team may request extended security until the investigation is complete.

Emergency Actions

Tab B
(Protect Property)

Preserving Evidence

NTSB Sec. 830.10 Preservation of aircraft wreckage, mail, cargo, and records.

- a. *The operator of an aircraft involved in an accident or incident for which notification must be given is responsible for preserving to the extent possible any aircraft wreckage, cargo, and mail aboard the aircraft, and all records, including all recording mediums of flight, maintenance, and voice recorders, pertaining to the operation and maintenance of the aircraft and to the airmen until the Board takes custody thereof or a release is granted pursuant to Sec. 831.12(b) of this chapter.*
- b. *Prior to the time the Board or its authorized representative takes custody of aircraft wreckage, mail, or cargo, such wreckage, mail, or cargo may not be disturbed or moved except to the extent necessary:*
 1. *To remove persons injured or trapped;*
 2. *To protect the wreckage from further damage; or*
 3. *To protect the public from injury.*
- c. *Where it is necessary to move aircraft wreckage, mail or cargo, sketches, descriptive notes, and photographs shall be made, if possible, of the original positions and condition of the wreckage and any significant impact marks.*
- d. *The operator of an aircraft involved in an accident or incident shall retain all records, reports, internal documents, and memoranda dealing with the accident or incident, until authorized by the Board to the contrary.*

In addition to those items required by law (above) you should also:

Control access to the site by cordoning off the area and allowing into the area only those individuals who have official business. Establishing a pass system to identify authorized personnel is an excellent technique for serious accidents. Everyone who enters should be briefed on the known or suspected hazards and cautioned to avoid disturbing the evidence (flipping switches and souvenir hunting).

Photograph everything. Film is cheap and some evidence may be easily destroyed prior to the arrival of the accident investigators. Photograph switch positions, ground scars, and other perishable evidence.

Identify witnesses and request statements. Request witnesses to write out their statements as soon as possible (before witnesses can compare notes). Be sure to **GET WITNESSES' NAMES, ADDRESSES AND PHONE NUMBERS.** Supervisors must ensure that personnel with information pertinent to the investigation are made available to the investigators in a timely manner. If possible, coordinate with the accident investigator(s) **PRIOR** to de-mobilizing personnel with information pertinent to the accident.

Secure equipment and records. Crew items (i.e. helmets, survival equipment (if used), notes, charts, etc.) as well as dispatch logs and records should be controlled and provided to the IIC/investigation team upon arrival.

Emergency Actions

Tab C
(Preserve Evidence)

Notify and Investigate

If you see something...SAY SOMETHING !!

Do not try to “classify” events as accidents or incidents, that’s the job of the National Transportation Safety Board (NTSB). If you have an event with an aircraft that results in damage or injury, **REPORT IT.**

Initial Notification. Emergency Coordination Center will be contacted by calling 360-902-1300 during regular office hours or 1-800-562-6010 during after hours and providing the information on DNR IIR Form / SAFECOM.

***DO NOT DELAY the initial notification by trying to complete all of the blanks on the form. Call in the accident as soon as possible and call back as more information becomes available.*

The DNR Resource Protection Division Aviation Manager will review your actions and advise you of any additional actions you should be taking, or reports you need to make.

***If you have enough people you should conduct the notification process at the same time as you are conducting other aspects of the immediate response.*

Investigation:

- a. Aircraft **accidents** (fatality, serious injury, or substantial damage) will usually be investigated by NTSB personnel. DNR personnel will generally be a “party” to the NTSB investigation.
- b. Aircraft **incidents-with-potential** will be investigated by personnel designated by the DNR Resource Protection Division Aviation Manager.
- c. Aircraft **incidents** will usually require the DNR Resource Protection Division Aviation Safety Officer to investigate the event and report the facts and circumstances to the Resource Protection Division Manager. No report is required by the NTSB unless specifically requested (Part 830.15)
- d. All aviation-related events that impact aviation safety must be reported using the **SAFECOM** <http://www.safecom.gov/>.
- e. All DNR incidents causing Property damage or injury to DNR employees will be reported on the DNR IIR form in accordance with Procedure # **PR04-600 and PR22-004.**

Emergency Actions

Tab D
(Notify and Investigate)

Recovery Operations

NTSB Sec. 831.12 Access to and release of wreckage, records, mail, and cargo.

- a. *Only the Board's accident investigation personnel and persons authorized by the Investigator-In-Charge to participate in any particular investigation, examination or testing shall be permitted access to wreckage, records, mail, or cargo in the Board's custody.*
- b. *Wreckage, records, mail, and cargo in the Board's custody shall be released by an authorized representative of the Board when it is determined that the Board has no further need of such wreckage, mail, cargo, or records. When such material is released, Form 6120.15, "Release of Wreckage," will be completed, acknowledging receipt.*

If an accident is investigated by DNR investigators, they are responsible for notification of the NTSB and compliance with section 831.12 prior to releasing the wreckage.

Actual recovery (and the associated costs) is usually the responsibility of the owner (or the owner's insurer). Before committing the State to unnecessary costs, check with the DNR Resource Protection Aviation Manager.

Use extreme caution when removing or recovering aircraft wreckage (Tab A). Normally, salvage personnel are aware of, and take appropriate precautions for, hazards at accident sites. Your people may not!

Emergency Actions

Tab E
(Recovery Operations)

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*Anyone who has ever been involved in the immediate response to an aircraft accident will agree that the first few minutes (and hours) are chaotic. **Developing and practicing your Aviation Mishap Response Checklist today is your best defense against the chaos of tomorrow.** Time is an extremely critical factor and immediate positive action is necessary; delay may affect someone's survival.*

Conduct of Aircraft Accident Investigations. All DNR aircraft mishaps are investigated under the authority of the National Transportation Safety Board (NTSB) as defined in:

- a. 49 Code of Federal Regulations (CFR) Parts 830 and 831
- b. Public Law (PL) 106-181, and Federal Management Regulation (FMR) 102-33.185.

** This means that regardless of severity, all aircraft mishaps (accidents or incidents) are the domain of the NTSB. If the NTSB elects to not visit the site and the physical investigation is conducted by DNR personnel, it is still an NTSB investigation and investigative efforts must comply with their rules and standards.

Tips and Techniques

- a. **Who's in charge** -- Although the investigation is the responsibility of the NTSB you need to determine in advance who your organization wants to be responsible for the initial actions at the accident site
- b. **Notification of Next-of-Kin** -- See Agency Administrator's Guide to Critical Incident Management for guidance. As a minimum, all supervisors should have a plan on how to contact their employee's next-of-kin.
- c. **Start a journal** -- Write down everything regarding events, actions, points of contact (who, what, when, where, why).
- d. **Control of Records** -- Under the provisions of NTSB Part 831.12 (Tab B) the records pertaining to the aircraft and the flight become a part of the investigation and "belong" to the NTSB until released. Gather and control the appropriate records until they can be turned over to the NTSB (or other authorized investigator). Required records include (but are not limited to) aircraft operating and maintenance documents, crew records (flight and medical), flight plans, weather briefings, weight and balance forms, and load calculations,
- e. **Conduct after-action review (AAR)** -- After the dust has settled and the professional investigators have taken charge it is time to review what happened, what worked, and what needs to be improved. Conduct the AAR while issues and events are fresh in everyone's mind. Update your Aviation Plan with the lessons learned.

Definitions (See 49 CFR (NTSB) 830/831)

- a. **Aircraft Accident** -- an occurrence associated with the operation of an aircraft, which takes place between the time any person boards the aircraft with the intention of flight and all such persons have disembarked, and in which any person suffers death or serious injury, or in which the aircraft receives substantial damage.
- b. **Substantial Damage** -- damage or failure which adversely affects the structural strength, performance, or flight characteristics of the aircraft, and which would normally require major repair or replacement of the affected component. Engine failure or damage limited to an engine if only one engine fails or is damaged, bent fairings or cowling, dented skin, small punctured holes in the skin or fabric, ground damage to rotor or propeller blades, and damage to landing gear, wheels, tires, flaps, engine accessories, brakes, or wingtips are not considered “substantial damage” for the purpose of this part.

**** Incident with Potential (IWP)**-- *an incident that narrowly misses being an accident and in which the circumstances indicate significant potential for substantial damage or serious injury. The DNR Aviation Safety Officer, as appropriate, will determine final classification.*

- c. **Aircraft Incident** -- an occurrence other than an accident, associated with the operation of an aircraft, which affects or could affect the safety of operations.
- d. **Investigator In Charge** -- the designated Investigator-In-Charge (IIC) organizes, conducts, controls, and manages the field phase of the investigation. The IIC has the responsibility and authority to supervise and coordinate all resources and activities of all personnel, both Board and non-Board, involved in the on-site investigation. The IIC continues to have considerable organizational and management responsibilities throughout later phases of the investigation, up to and including Board consideration and adoption of a report or brief of probable cause(s).
- e. **Serious Injury** -- any injury which:
 - 1. Requires hospitalization for more than 48 hours, commencing within 7 days from the date the injury was received;
 - 2. Results in a fracture of any bone (except simple fractures of fingers, toes, or nose);
 - 3. Causes severe hemorrhages, nerve, muscle, or tendon damage;
 - 4. Involves any internal organ; or
 - 5. Involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

** In-flight damage to rotor blades or propellers can easily fit into the definition of “Substantial Damage.” If you have damage to the main or tail rotor blades, or to the propeller, the chances are good that you have at least an incident with potential... **report it immediately!**

General Information

(page 2)

Media Relations

NTSB Sec. 831.13 Flow and dissemination of accident or incident information.

- a. *Release of information during the field investigation, particularly at the accident scene, shall be limited to factual developments, and **shall be made only through the Board Member present at the accident scene, the representative of the Board's Office of Public Affairs, or the Investigator-In-Charge.***

All information concerning the accident or incident obtained by any person or organization participating in the investigation shall be passed to the IIC through appropriate channels before being provided to any individual outside the investigation. Parties to the investigation may relay to their respective organizations information necessary for purposes of prevention or remedial action. However, no information concerning the accident or incident may be released to any person not a party representative to the investigation (including non-party representative employees of the party organization) before initial release by the Safety Board without prior consultation and approval of the IIC.

When the field investigation is conducted by DNR personnel they will comply with the law by referring all questions, requests for interviews, etc. to the NTSB IIC or to the appropriate NTSB office.

Tips and techniques when working with the media:

- a. Advise the media that the investigation of this accident is under the jurisdiction of the NTSB and any questions or requests for access to the site must be directed to them.
- b. Don't aggravate the media and don't get aggravated by the media; they're just doing their job. Even aircraft accidents don't stay in the headlines forever... unless the reporter thinks you're hiding something.

Most reporters have prior experience at accident sites. Remind them of the hazards, to avoid disturbing the wreckage, and ask them to be respectful of the victims.

Media Relations

OVERDUE AIRCRAFT

An aircraft is considered “overdue” when it fails to arrive within 30 minutes past the estimated time of arrival (ETA) and cannot be located.

MISSING AIRCRAFT

An aircraft is considered “missing” when it has been reported to the FAA as being “overdue” and the FAA has completed an administrative search for the aircraft without success.

The aircraft is OFFICIALLY missing when the fuel duration, as reported on the request for flight following, or as reported on the FAA flight plan, has been exceeded and the aircraft location is unknown.

Time	Action	Contact and Phone	Time Log
Immediately at time aircraft is due	Attempt to contact aircraft by radio or phone. If equipped, review Automated Flight Following data. Contact destination agency airbase or airport. Gather info required for Aircraft Accident Report.		
15 minutes past due	Contact originating or en-route agency dispatch. Contact originating or en-route agency airbase. Contact originating or en-route airports		
30 minutes past due	Contact vendor home base. Contact FAA Flight Service Station and request an Alert Notice (ALNOT)		

Anytime the fuel duration exceeded or if an accident is suspected	Submit data from the Aircraft Accident Checklist to: FAA Flight Service Station and request an Alert Notice (ALNOT) Aviation Safety Manager Local Aviation Manager	1 800 - WX BRIEF (800 992-7433) or the Comm Center at 1 202 267-3333 360-480-0490	
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Do not delay notification if you do not have all the blocks filled. Provide as much information as you can and follow-up when additional info is available.

SEARCH AND RESCUE. Search and Rescue (SAR) operations may be coordinated through the FAA to the Air Force Rescue Coordination Center (AFRCC) or with local law enforcement agencies.

Overdue and Missing Aircraft

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Emergency Contact Checklist

DNR Emergency Coordination center (1-800-562-6010)

FAA Flight Service Station 1-800-WX BRIEF (1 800 992-7433)

FAA Communication Center 1-202-267-3333

NTSB Communication Center 1-202-314-6290

Update phone numbers, frequencies, and POCs quarterly and for each mission

1. Primary Response (Emergency Responders - dial 911, use discrete numbers as a back-up)
a. Fire Department
b. Police
c. Ambulance
d. Air Ambulance
e. Hospital
f.
2. Secondary Response (Support Personnel)
a. Flight Following -- FAA Flight Service Station (1 800-992-7433)
b. Local Dispatcher Center
c. DNR Aviation Safety Officer/Helicopter Coordinator (360) 480-0490 or Cell 360-480-0490
d. -DNR Aviation Program Manager (360-902-1300) or Cell 253-307-0196
e. NTSB (1-202-314-6290)
f. Photographer
g. HAZMAT Response Team
h. Coroner
i. Clergy
j. Explosive Ordnance Disposal (Military or Police)
k. -Engineer / Recovery Specialists
3. Agency Management and Other Agencies (as required)
a. DNR Resource Protection Assistant Division Manager, Fire Control & Aviation (360)902-1207 or Cell (360) 742-7442
b. DNR Resource Protection Division Manager (360)902-1300 or Cell 360-791-8360
c. Public Affairs Officer
d. Military Base Operations
e. Federal Emergency Management Agency (FEMA)
f. Airport Operations
g. Aircraft Owner/Operator
h. Contracting Officer
i. Security
j.
k.

Emergency Contact List

Notes

Notes