

Communication Site Installation and Maintenance Project Aviation Safety Plan Bridger-Teton NF and Grand Teton NP

Mission: Radio Repeater, RAWS, SNOTEL, and Webcam	Project Name: Communication Site Maintenance	Unit: BTF/GRTE
Anticipated Project Date: April 1, 2016 – March 31, 2017	Start Time: TBD	Ending Time: TBD
Project Plan Prepared by: David A. Gomez	Title: Interagency Aviation Officer	Date: 03/23/2016
Note: Signature by the preparer verifies that all personnel will have the required training for the mission.		
Project Plan Reviewed by: Douglas Gibbs	Title: Acting RASM	Date: 03/25/2016
Project Plan Reviewed by: /s/ Samuel Ramsay	Title: RAO	Date: 4/13/2016
This Flight is Approved by: /s/ Jose Castro	Title: Deputy Forest Supervisor	4/14/2016

Project Description:

Radio Repeaters, Remote Automated Weather Stations (RAWS), Snow Telemetry (SNOTEL) and Webcams are located or may need to be installed at remote sites throughout the Forest and Park. The radio repeater network provides an essential communications link between field going resources, Teton Interagency Dispatch Center and administrative offices year-round. The RAWS provide weather information that is critical to the avalanche forecasting center and daily fire management staffing decisions. There are portable RAWS used by fire management that may be placed near large fires or prescribed burns for varying lengths of time. The SNOTEL sites are designed to collect snowpack and related climatic data. Webcams are used to monitor and detect fire and other weather events. These sites may require installation or maintenance during any month of the year. The remote nature and lack of road access to many of these sites require access by helicopter. Communication site technicians may require the transportation of large amounts of equipment utilizing either internal or external cargo operations. A site specific project aviation safety briefing and the risk assessment contained in this PASP will be completed and reviewed each time this plan is implemented.

Only agency approved aircraft and pilots will be used for these missions and a helicopter manager will approve landing areas at the communication sites. Agency Administrator approval for landing in wilderness areas will meet the requirements found in the unit aviation management plan.

Attachments: <input type="checkbox"/> Map – participants will be briefed on applicable project maps and the aerial hazard map prior to implementation	<input type="checkbox"/> Other: Site visit will be conducted prior to implementation
Project Supervisor: TBD	Phone: _____ Cell: _____
Helicopter Manger: TBD	Phone: _____ Cell: _____
Participants:	

Type of Flight: special use	Desired Aircraft Type: Type 3 helicopter	Charge Code: TBD
Type Procurement: Exclusive Use or CWN	Method of Payment: OAS-23/FS-122 (ABS)	Projected Cost:

Vendor: TBD	Phone: _____	Cell: _____
Aircraft N#:	Make & Model:	Aircraft Color:
Pilot Name:	Pilot Carded: <input type="checkbox"/> Yes <input type="checkbox"/> No	A/C Carded: <input type="checkbox"/> Yes <input type="checkbox"/> No
Flight Follow: AFF and Local FF when appropriate on project	Request or Flight #:	
Method of Resource Tracking: <input type="checkbox"/> Phone <input checked="" type="checkbox"/> Radio	<input type="checkbox"/> Prior to Takeoff <input type="checkbox"/> Each Stop Enroute <input type="checkbox"/> Arrival at Dest.	
Scheduling Dispatch Phone: (307) 739-3630	Destination Dispatch Phone: (307) 739-3630	
FM Receive: Forest/Park Net	FM Transmit:	Tones: Forest/Park Net
FM Receive: Available A/G	FM Transmit:	Tones: Available Unit A/G will be assigned
FM Receive:	FM Transmit:	Tones:
AM Air to Air: Available A/A	AM Unicom:	Other: Available Unit A/A frequency

Search and Rescue Procedures: Contact Dispatch, Follow the Aviation Mishap Response Guide

Start Location	Latitude	Longitude	Elevation	Runway length & Surface or Helispot Size
TBD				
Destination Location	Latitude	Longitude	Elevation	Runway length & Surface or Helispot Size
TBD				

Passenger Name	Weight	Departure Point	Destination Point
TBD	TBD		
Cargo Weight	Cubic Feet	Hazardous Material	Destination
TBD		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	
		<input type="checkbox"/> Yes <input type="checkbox"/> No	

Type of Flight	Personnel Protective Equipment Requirements
<input checked="" type="checkbox"/> Air Ops general/ground personnel	Nomex clothing, hardhat w/chin strap, gloves, leather boots, eye protection, hearing protection, fire extinguisher
<input type="checkbox"/> Fixed Wing point to point flights	Hearing protection
<input type="checkbox"/> Fixed Wing mission flights	Nomex clothing, gloves, leather boots, hearing protection
<input checked="" type="checkbox"/> Rotor Wing flights	Flight helmet, Nomex clothing, gloves, leather boots, eye protection, hearing protection, approved secondary restraint harness for doors off flights, PFD for all PAX as required

Justification statement for low-level flights: Low level flight and recon are essential to access the mountain top communication sites. Aerial delivery of cargo through long-line missions is utilized when it is clearly the most cost-efficient and timely means of delivering volumes of supplies and equipment to remote sites. Operational planning and risk considerations include minimizing the time of exposure for mission personnel vs. the demonstrated need for the cargo to be delivered.

Special Instructions: A briefing of the unit aerial hazard map will occur prior to project implementation. Known temporary flight restrictions and MTR IR-499 will also be mitigated.

Pilot and flight manager will ensure that weight and balance and/or load calculations are completed. Load must be within limitations and remain within limits considering fuel consumption.

Aircraft Manager must confirm with Dispatch prior to the flight that affected routes' Schedulers contacted for Route Activity

Military Training Route (MTR) Information

MTR	Route Legs-Altitude	Activity	Time	Time Zone
<input checked="" type="checkbox"/> IR-499	Begins SE of Cody, WY and ends near Palisades Lake, ID. Altitude of the route is from 100 feet AGL to 13,000 feet MSL 1-4 nautical miles either side of centerline. Hours of operation are continuous. Scheduling Activity is through Offutt AFB. Originating activity is through Ellsworth Air Force Base, South Dakota (phone # 605-385-1230) or (on call # 605-431-3025).	<input type="checkbox"/> Hot <input type="checkbox"/> Cold	Start Stop	<input type="checkbox"/> UTC <input type="checkbox"/> PST
<input type="checkbox"/>		<input type="checkbox"/> Hot <input type="checkbox"/> Cold	Start Stop	<input type="checkbox"/> UTC <input type="checkbox"/> PST
<input type="checkbox"/>		<input type="checkbox"/> Hot <input type="checkbox"/> Cold	Start Stop	<input type="checkbox"/> UTC <input type="checkbox"/> PST
<input type="checkbox"/>		<input type="checkbox"/> Hot <input type="checkbox"/> Cold	Start Stop	<input type="checkbox"/> UTC <input type="checkbox"/> PST

4/14/2016

Job Risk Analysis: Aircraft manager/pilot will review prior to implementation to ensure adequate planning and resource commitment.

Is everything approved with clear instructions, aviation plan signed and reviewed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Are communications and flight following established, including repeater tones?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Can terrain, altitude, temperature or weather that could have an adverse effect be mitigated?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Are all aerial hazards identified and known to all participants?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Have mitigating measures been taken to avoid conflicts with military or civilian aircraft	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Have adequate landing areas been identified and or improved to minimum standards	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Are all agency personnel qualified for the mission?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Is the pilot carded and experienced for the mission to be conducted?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Are there enough agency personnel to accomplish the mission safely?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Will adequate briefings be conducted prior to flight to include Pilot, Passengers and Dispatch?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Are all involved aware that the pilot has the final authority, but if any passenger feels uncomfortable, that they can decline the flight without fear of reprisal?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Is the aircraft capable of performing the mission with a margin of safety?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Have manifests of cargo and passengers, load calculations and/or weight & balance completed?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Is the aircraft properly carded?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Do all personnel have the required PPE?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Fuel planning, adequate fuel on board, fuel truck location, availability of commercial fuel?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Remember; maps of areas/sites, handheld radios, cell phones, day/survival packs, sic sacks	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Will the mission be conducted at low levels? (Below 500' AGL)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Can the same objective be achieved by flying above 500' AGL?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Are pilot flight and duty times compromised?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Is there an alternative method that would accomplish the mission more safely?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA

Helicopter Mgr. Signature: _____ **Date:** _____ **Pilot Signature:** _____ **Date:** _____

Job Hazard Analysis: Aircraft manager/pilot will review applicable elements with all participants as part of preflight briefing.

Hazard	Hazard Mitigation
MTR's	Practice risk management. Check routes in advance, confirm that Dispatch has made calls
Private aircraft	See and avoid. Transmit in the blind on 122.925 near backcountry airstrips
Airport traffic	Stay in radio contact. Announce intentions, use established patterns
Weather	Use weather advisory. Maintain VFR minimums. Cancel mission if conditions deteriorate
Terrain	Avoid performance related situations, cross terrain at it's lowest point, consider downdrafts
Low level obstacles	Complete a high level recon, no unnecessary low level flight
Unimproved landings	Recon LZ. Download on first load. Stay in radio contact
Doors off helicopter operations	Use approved secondary restraint harness. Remove loose items from cabin
Pilot not familiar with area	Supply hazard maps. Complete high level recon prior to low level work
Noise, rotor wash	Wear ear and eye protection, utilize dust abatement
Internal and external loads	Have trained personnel assigned to the mission, plan around fuel, Hook and equipment checks
Unplanned aircraft events	All personnel equipped with required PPE and trained in crash procedures, maintain flight follow
Hazardous materials	Trained personnel will handle, inform pilot, utilize Hazmat guide w/current exemption
Non aviation personnel	Maintain control, provide through briefings
Communications	Maintain communications at all times, establish backup options, and know alternate frequencies. Take handheld radio along. Call in prior to landing. If radio contact is lost, climb, check tones, if unable to re-establish, return to best suitable landing area and check in
Overload conditions/CG issues	Complete accurate load calculations and/or Weight and Balance
Wintertime operations	Use appropriate clothing for varying altitudes/climatic conditions, utilize winter survival kit
Prop/Rotor hazards	Pilot perform aircraft safety brief, Approach/Depart sensibly after shutdown & prop/rotor stop
Multiple project aircraft	Adequate aerial supervision. Carded managers for each aircraft. Establish and maintain separation, utilize common frequencies communications
Aircraft Fueling	Vendor responsibility. No agency personnel onboard. Aircraft shutdown unless closed circuit, open port in accordance with NFPA 407 3-21, 4073-21.2(b). Trained personnel staff extinguisher

Line Officer Signature or Authorized Representative: */s/ Jose Castro* **4/14/2016**

Chart 3-2: Risk Assessment			HAZARD PROBABILITY				
			Frequent	Likely	Occasional	Seldom	Unlikely
Matrix			A	B	C	D	E
EFFECT	Catastrophic	I	Extremely High				Medium
	Critical	II	High	High	Medium		
	Moderate	III	High	Medium			
	Negligible	IV	Medium			Low	

RISK ASSESSMENT WORKSHEET

Assess the risks involved with the proposed operation. Use additional sheets if necessary.

Assignment: Date: 03/23/2016	Probability (A-E)	Effect (I-IV)	Risk Level
Describe Hazard:			
1. Lack of mission clarity, command, roles and responsibilities.	C	II	High
2. Weather: poor visibility, thunderstorms, density altitude, turbulence	C	II	High
3. Mountain flying	B	II	High
4. Airspace: general aviation and military training routes	C	II	High
5. Low level flight profile below 500 AGL: low altitude obstructions	C	II	High
6. Fatigue	C	II	High
7. Improper, nonstandard, or faulty external load equipment.	D	II	Medium
8. Transportation of batteries and hazardous materials.	B	II	High
9. Snow Operations	C	I	High
10. Aircraft hard landing or crash.	D	I	High
Mitigation Controls:	Probability (A-E)	Effect (I-IV)	Risk Level
1. Brief all participants on the mission and the associated hazards and mitigations.	D	II	Medium
2. Maintain VFR, obtain current weather forecasts and continuously monitor conditions. Abort mission until more favorable conditions are present, have alternate landing locations identified. Establish trigger points to stop operations.	D	II	Medium
3. Ensure pilots are trained and carded for mountain flying, select aircraft appropriate for the mission; ensure performance planning is completed for environmental conditions; complete weight/balance and/or load calculations.	D	II	Medium
4. Perform airspace de-confliction with TIDC; be on the lookout for other aircraft, review Aerial Hazard maps; utilize CRM.	D	II	Medium
5. Review aerial hazard map and maintain awareness of terrain and obstacles	D	II	Medium
6. Adhere to work/rest guidelines. Follow agency policy to ensure duty limitations are not exceeded.	D	II	Medium
7. Use qualified personnel or trainees with adequate supervision to inspect equipment used for packaging and hauling cargo.	E	II	Low
8. Transportation of such devices shall conform to procedures outlined in the Aviation Transport of Hazardous Materials Handbook and Emergency Response Guide.	D	II	Medium
9. Ensure that the aircraft used is equipped with snow kits including snow pads as prescribed by the approved flight manual and the pilot is carded for snow landings. Ensure VFR conditions prevail during flight.	D	I	High
10. Brief all personnel on crash rescue and SAR plan to provide EMS support if applicable. Ensure positive flight following and communications.	E	I	Medium

FINAL RISK EFFECT: LOW MEDIUM HIGH (HIGHLIGHT ONE)

Operation Approved by: */s/ Jose Castro* Title: Deputy Forest Supervisor Date: 04/14/2016

PROJECT AVIATION SAFETY PLAN BRIEFING

Project Aviation Safety Plan Briefing and applicable elements found in the JHA will be discussed with all participants prior to start of operations.

A copy of this briefing page will be submitted to the Forest Aviation Officer within 5 days of the completion of this project.

Briefing Leader: _____

Briefing Date: _____ Time: _____ Location: _____

Discussion Items:

- a. Hazard Analysis (as outlined in plan)
- b. Safety Air Ops (Ground)
- c. Safety Air Ops (Flight)
- d. Military Training Routes
- e. Flight Following
- f. Frequencies
- g. Fueling
- h. Emergency Evacuation. Plan
- i. Authorities
- j. Weather Considerations
- k. Other
- L. other

Attendees Signature and Concurrence: