

Strategy and Tactics Guide for Heavy Equipment

1. Strategy and Tactics For Using Heavy Equipment During Wildfire Operations

STRATEGY: A plan of action designed to achieve a particular goal.

TACTICS: The operational means used to meet a planned objective.

This questionnaire is for gathering information and lessons from field experience of agency and private sector wildland firefighters regarding strategies and tactics using heavy equipment.

You can respond to some or all of the questions. If you respond to the entire survey, the approximate time required for your participation is 30 minutes. You can enter and exit online as many times as necessary to complete your responses, or print the survey for your convenience and mail your responses to __ (TBA) __.

Results from this survey will be published for review, and contribute to the 2011 Guidebook on Wildland Fire Operations - Strategies and Tactics Guide for Heavy Equipment.

Please provide contact information. Fire incident names, name/company name, position/title and location will be published with your permission. Written responses using this online and printed survey tool are preferred; but, voice-recorded input will also be accepted. Please contact __ (TBA) __ for assistance or questions.

The following pages are in four sections (Contacts, Equipment, Fire Incidents, Recommendations). Some questions may have one or more answer choices; others provide space for your text answers.

YOUR INPUT IS VALUABLE AND GREATLY APPRECIATED!

2. CONTACT

1. Contact Information

Name	<input type="text"/>
Title/Position	<input type="text"/>
Company Name	<input type="text"/>
Mailing Address	<input type="text"/>
Phone (primary)	<input type="text"/>
Phone (secondary)	<input type="text"/>

2. May we call you for clarifications or additional detail, if necessary?

- Yes
 No

*3. May we have your permission to print your name/company name, title, resident town location and fire incident(s) you enter in publication of these results?

- Yes
 No

Strategy and Tactics Guide for Heavy Equipment

3. HEAVY EQUIPMENT (CONTRACTED / MANAGED)

If you are an equipment Owner or Owner/Operator, please describe the equipment you contracted for use on fire incidents.

If you are an Equipment Manager, i.e. Dozer Boss, Task Force Leader, please check the equipment category or categories and unique features of the equipment you managed.

1. Equipment category you operated or managed on the incident (select all the apply).

- | | |
|---|---|
| <input type="checkbox"/> Dozer | <input type="checkbox"/> Super-Skidgine |
| <input type="checkbox"/> Tracked Skidder | <input type="checkbox"/> Forwarder |
| <input type="checkbox"/> Pumpercat | <input type="checkbox"/> Feller Buncher |
| <input type="checkbox"/> Wheeled Skidder | <input type="checkbox"/> Harvester |
| <input type="checkbox"/> Wheeled Skidgine | <input type="checkbox"/> Excavator |
| <input type="checkbox"/> Softrack Skidder | <input type="checkbox"/> Shovel |
| <input type="checkbox"/> Softrack Skidgine | <input type="checkbox"/> Mulcher (Masticator) |
| <input type="checkbox"/> Other (please specify) | |

2. Equipment specifications (Machine Modifications/Attachments, Unique Features)

3. Additional comments on your equipment, or the equipment you managed.

4. FIRE INCIDENTS

The following set of 15 questions focus on particular fire incidents. You can report details on up to TWO specific incidents (2 sets of 15 questions), with your general comments on heavy equipment use for fire operations requested on the last page of the survey.

Please answer questions related to each particular incident. If you only answer questions for one fire incident, then skip to the last page of this survey for the final general questions.

Strategy and Tactics Guide for Heavy Equipment

***1. If you prefer to only enter general equipment use recommendations, choose "General Recommendations and Comments"**

- Go to Fire Incidents
- Go to General Recommendations Comments

5. FIRE INCIDENT 1

1. DISPATCH AND GETTING THERE

Fire Name (if known)	<input type="text"/>
Dispatch Date(s)	<input type="text"/>
Dispatch Location	<input type="text"/>
Inspection Location(s)	<input type="text"/>
Transport Time to Incident Command Post	<input type="text"/>
Staging Duration	<input type="text"/>
Reason for Staging Time/Wait	<input type="text"/>
Position/Role on the Incident (i.e. Single Resource, Strike Team, Task Force)	<input type="text"/>

2. CONDITIONS AND COMMAND ON INCIDENT COMMAND POST (ICP) ARRIVAL

Size of fire (acres)	<input type="text"/>
Fire Team Type (i.e. I, II)	<input type="text"/>
Fire Team - Home Region (i.e. N,S,NE) or	<input type="text"/>
Incident Commander Name	<input type="text"/>
Dozer (Equipment) Boss or Bosses Assigned	<input type="text"/>

3. WORKSITE ARRIVAL TIME and OPERATING PERIOD

**What time did you arrive at the worksite? How long was your average or longest shift?
How many actual operating hours? Percent utilization of the equipment?**

Strategy and Tactics Guide for Heavy Equipment

4. WORKSITE LOCATION CONDITIONS

What time did you arrive at the worksite? Describe worksite location, position on slope, slope steepness, aspect, soil condition, vegetation type and species and density, snags.

Structures or improvements nearby? Available natural or constructed barriers? Distance to available water? Sensitive areas involved (i.e. stream crossings, marshy, scree slope, archeological site, wildland urban interface)?

5. WORKSITE CONDITIONS - WEATHER/OTHER

When assigned to fire task, describe fire conditions at the worksite including fire size, weather, wind direction and velocity, visibility, precipitation, temperature, smoke, darkness.

6. WORK/FIRE PHASE

- | | | |
|---|----------------------------------|------------------------------------|
| <input type="checkbox"/> Initial Attack | <input type="checkbox"/> Holding | <input type="checkbox"/> Transport |
| <input type="checkbox"/> Reinforcement | <input type="checkbox"/> Mop-up | <input type="checkbox"/> Camp |
| <input type="checkbox"/> Extended Attack | <input type="checkbox"/> Rehab | |
| <input type="checkbox"/> Other (please specify) | | |

Strategy and Tactics Guide for Heavy Equipment

7. WORK TASK(S)

Please check all that apply.

- | | |
|---|---|
| <input type="checkbox"/> Fuelbreak | <input type="checkbox"/> Timber Felling |
| <input type="checkbox"/> Fireline - Direct | <input type="checkbox"/> Hazard Tree Removal |
| <input type="checkbox"/> Fireline - Indirect | <input type="checkbox"/> Vegetation Mulching |
| <input type="checkbox"/> Water Delivery | <input type="checkbox"/> Patrolling |
| <input type="checkbox"/> Machine/Vehicle Extraction | <input type="checkbox"/> Rehab |
| <input type="checkbox"/> Skidding | <input type="checkbox"/> Construction -Roads/Crossing/Staging |
| <input type="checkbox"/> Materials Delivery | <input type="checkbox"/> Safety Zone |
| <input type="checkbox"/> Earth Moving | |
| <input type="checkbox"/> Other (please specify) | |

8. WORK TASK(S) DETAILS

Work details and "Other" task details? Include production adjustments (low/avg/high) and challenges to complete the task(s).

Strategy and Tactics Guide for Heavy Equipment

9. HOW WELL DID YOUR USE OF HEAVY EQUIPMENT MEET INCIDENT OBJECTIVES (i.e. opening roads, building safety zones or helispots, bunching, skidding and decking trees/logs for fuel breaks, rehab)? Please check all that apply.

- Met the mission objective.
- Given the conditions, it was the most effective method possible.
- No other method was considered.
- Another tactic would have been more efficient.
- My training was inadequate for accomplishing the mission.

Comments . Please provide details regarding any/all of your selected choices.

10. SAFETY and PERSONNEL

Check if you directly (vs. indirectly) supported one or more of the following resources.

- Handcrews
- Engines
- Blasters
- Aviation
- Fallers
- Water Tender
- Other (please specify)

11. COMMUNICATION

What communication system did you find most effective between equipment operator and equipment manager? Check all that apply.

- Equipment has Open Cab
- Walkie-Talkie
- Mirror Flash
- Equipment has Closed Cab
- Flagging
- Incident Radio
- Lights
- Other (please specify)

Strategy and Tactics Guide for Heavy Equipment

12. SAFETY PRECAUTIONS

Did you know the escape route?

Who/What constructed the escape route?

Farthest distance to safety?

Estimated time to Safety Zone?

Not Applicable (i.e. blackline)

13. WORKSITE DANGERS

What dangers did you observe at the worksite? Check all that apply.

- Potential entrapment Flying objects
- Rollover Falling objects
- Other (please specify)

14. UNANTICIPATED PROBLEMS

Briefly describe problems that occurred.

Work injuries?

Machine breakdowns?

Communication problems?

Other problems?

15. SOLUTIONS/ACTIONS TO UNANTICIPATED PROBLEMS

Briefly describe how you solved problems.

Work injuries

Machine breakdowns

Communication problems

Other problems

***16. To enter information on another incident, go to the next page. Otherwise, skip to the last page of this survey for a few last general questions.**

- Go to FIRE INCIDENT 2
- Skip to RECOMMENDATIONS AND COMMENTS

6. FIRE INCIDENT 2

1. DISPATCH AND GETTING THERE

Fire Name (if known)	<input type="text"/>
Dispatch Date(s)	<input type="text"/>
Dispatch Location	<input type="text"/>
Inspection Location(s)	<input type="text"/>
Transport Time to Incident Command Post	<input type="text"/>
Staging Duration	<input type="text"/>
Reason for Staging Time/Wait	<input type="text"/>
Position/Role on the Incident (i.e. Single Resource, Strike Team, Task Force)	<input type="text"/>

2. CONDITIONS AND COMMAND ON INCIDENT COMMAND POST (ICP) ARRIVAL

Size of fire (acres)	<input type="text"/>
Fire Team Type (i.e. I, II)	<input type="text"/>
Fire Team - Home Region (i.e. N,S,NE) or	<input type="text"/>
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3. WORKSITE ARRIVAL TIME and OPERATING PERIOD

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Strategy and Tactics Guide for Heavy Equipment

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|--|----------------------------------|------------------------------------|
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Strategy and Tactics Guide for Heavy Equipment

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| <input type="checkbox"/> Skidding | <input type="checkbox"/> Construction -Roads/Crossing/Staging |
| <input type="checkbox"/> Materials Delivery | <input type="checkbox"/> Safety Zone |
| <input type="checkbox"/> Earth Moving | <input type="checkbox"/> Other (describe below) |

8. WORK TASK(S) DETAILS

Work details and "Other" task details? Include production adjustments (low/avg/high) and challenges to complete the task(s).

Strategy and Tactics Guide for Heavy Equipment

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Strategy and Tactics Guide for Heavy Equipment

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Other problems

7. RECOMMENDATIONS AND COMMENTS

Strategy and Tactics Guide for Heavy Equipment

1. REFERENCES

Can you offer one or two references for your work?

2. CASE STUDIES

Are there other heavy equipment strategies or tactics stories on wildfire incidents of which we should be aware?

3. RECOMMENDATIONS

Hind-sight is often 20/20. What heavy equipment strategies and/or tactics do you think should have been/could have been used to meet fire management goals and objectives (i.e. opening roads, building safety zoneds or helispots, bunching, skidding and decking trees/logs for fuel breaks, rehab)?

4. ADDITIONAL COMMENTS OR QUESTIONS?

THANKS! Your participation in gathering this field information is greatly appreciated.

Stay tuned for the 2011 Summary of this effort.

** SURVEY END **