

NWCG Task Book for the Positions of:



**RETARDANT CREW MEMBER (RTCM)/
MIX MASTER (MXMS)**

PMS 311-94

MARCH 2019

Task Book Assigned To:

Trainee's Name: _____

Home Unit/Agency: _____

Home Unit Phone Number: _____

Task Book Initiated By:

Official's Name: _____

Home Unit Title: _____

Home Unit/Agency: _____

Home Unit Phone Number: _____

Home Unit Address: _____

Date Initiated: _____

The material contained in this book accurately defines the performance expected of the position for which it was developed. This task book is approved for use as a position qualification document in accordance with the instructions contained herein.

**Verification/Certification of Completed Task Book
for the Position of:**

**RETARDANT CREW MEMBER (RTCM)/
MIX MASTER (MXMS)**

Final Evaluator's Verification

*To be completed **ONLY** when you are recommending the trainee for certification.*

I verify that (trainee name) _____ has successfully performed as a trainee by demonstrating all tasks for the position listed above and should be considered for certification in this position. All tasks are documented with appropriate initials.

Final Evaluator's Signature: _____

Final Evaluator's Printed Name: _____

Home Unit Title: _____

Home Unit/Agency: _____

Home Unit Phone Number: _____ Date: _____

Agency Certification

I certify that (trainee name) _____ has met all requirements for qualification in the above position and that such qualification has been issued.

Certifying Official's Signature: _____

Certifying Official's Printed Name: _____

Title: _____

Home Unit/Agency: _____

Home Unit Phone Number: _____ Date: _____

NATIONAL WILDFIRE COORDINATING GROUP (NWCG) POSITION TASK BOOK

NWCG Position Task Books (PTBs) have been developed for designated National Interagency Incident Management System (NIIMS) positions. Each PTB lists the competencies, behaviors and tasks required for successful performance in specific positions. Trainees must be observed completing all tasks and show knowledge and competency in their performance during the completion of this PTB.

Trainees are evaluated during this process by qualified evaluators, and the trainee's performance is documented in the PTB for each task by the evaluator's initials and date of completion. An Evaluation Record will be completed by all evaluators documenting the trainee's progress after each evaluation opportunity.

Successful performance of all tasks, as observed and recorded by an evaluator, will result in a recommendation to the agency that the trainee be certified in that position. Evaluation and confirmation of the trainee's performance while completing all tasks may occur on one or more training assignments and may involve more than one evaluator during any opportunity.

INCIDENT/EVENT CODING

Each task has a code associated with the type of training assignment where the task may be completed. While tasks can be performed in any situation, they must be evaluated on the specific type of incident/event for which they are coded. For example, tasks coded W must be evaluated on a wildfire. Performance of any task on other than the designated assignment is not valid for qualification. The codes are defined as:

O = Other: In any situation (classroom, simulation, daily job, incident, prescribed fire, etc.).

I = Incident: Task must be performed on an incident managed under the Incident Command System (ICS). Examples include wildland fire, structural fire, oil spill, search and rescue, hazardous material, and an emergency or non-emergency (planned or unplanned) event.

W = Wildfire: Task must be performed on a wildfire incident.

RX = Prescribed fire: Task must be performed on a prescribed fire incident.

W/RX = Wildfire OR prescribed fire: Task must be performed on a wildfire OR prescribed fire incident.

R = Rare event: Rare events such as accidents, injuries, vehicle or aircraft crashes occur infrequently and opportunities to evaluate performance in a real setting are limited. The evaluator should determine, through interview, if the trainee would be able to perform the task in a real situation.

Tasks within the PTB are numbered sequentially; however, the numbering does NOT indicate the order in which the tasks need to be performed or evaluated. The bullets under each numbered task are examples or indicators of items or actions related to the task. The purpose of the bullets is to assist the evaluator in evaluating the trainee; the bullets are not all-inclusive. Evaluate and initial ONLY the numbered tasks. DO NOT evaluate and initial each individual bullet.

A more detailed description of this process and definitions of terms are included in the *NIMS Wildland Fire Qualification System Guide*, PMS 310-1, <https://www.nwcg.gov/publications/310-1>.

RESPONSIBILITIES

The responsibilities of the Home Unit/Agency, Trainee, Coach, Training Specialist, Evaluator, Final Evaluator and Certifying Official are identified in the *Wildland Fire Qualification System Guide*, PMS 310-1. It is incumbent upon each of these individuals to ensure their responsibilities are met.

INSTRUCTIONS FOR THE POSITION TASK BOOK EVALUATION RECORD

Evaluation Record #

Each evaluator will need to complete an Evaluation Record. Each Evaluation Record should be numbered sequentially. Place this number at the top of the Evaluation Record page and also use it in the column labeled "Evaluation Record #" for each numbered task the trainee has satisfactorily performed.

Trainee Information

Print the trainee's name, position on the incident/event, home unit/agency, and the home unit/agency address and phone number.

Evaluator Information

Print the Evaluator's name, position on the incident/event, home unit/agency, and the home unit/agency address and phone number.

Incident/Event Information

Incident/Event Name: Print the incident/event name.

Reference: Enter the incident code and/or fire code.

Duration: Enter inclusive dates during which the trainee was evaluated.

Incident Kind: Circle the kind of incident and specify if other (ex: search and rescue, flood, etc.).

Location: Enter the geographic area, agency, and state.

Management Type or Prescribed Fire Complexity Level: Circle the ICS organization level or the prescribed fire complexity level.

Fire Behavior Prediction System (FBPS) Fuel Model Group: Circle the Fuel Model Group letter that corresponds to the predominant fuel type in which the incident/event occurred.

G = Grass Group (includes FBPS Fuel Models 1 – 3): 1 = short grass (1 foot); 2 = timber with grass understory; 3 = tall grass (1½ - 2 feet)

B = Brush Group (includes FBPS Fuel Models 4 – 6): 4 = Chaparral (6 feet); 5 = Brush (2 feet); 6 = dormant brush/hardwood slash; 7 = Southern rough

T = Timber Group (includes FBPS Fuel Models 8 – 10): 8 = closed timber litter; 9 = hardwood litter; 10 = timber (with litter understory)

S = Slash Group (includes FBPS Fuel Models 11 – 13): 11 = light logging slash; 12 = medium logging slash; 13 = heavy logging slash

Evaluator's Recommendation

For 1 – 4, initial only one line as appropriate; this will allow for comparison with your initials in the Qualifications Record.

Comments: Additional information specific to the evaluator's recommendation. The evaluator should note any deficiencies, additional assignment needs, or additional focus areas that were identified. Record additional remarks/recommendations on an Individual Performance Evaluation, or by attaching an additional sheet to the Evaluation Record.

Evaluator's Signature: Sign here to authenticate your recommendations.

Date: Document the date the Evaluation Record is being completed.

Evaluator's Relevant Qualification (or agency certification): List your qualification or certification relevant to the trainee position you supervised.

Note: Evaluators must be either qualified in the position being evaluated or supervise the trainee; Final Evaluators must be qualified in the trainee position they are evaluating.

**Retardant Crew Member (RTCM)/
Mix Master (MXMS) Common Tasks**

Competency: Assume position responsibilities.

Description: Successfully assume role of Retardant Crew Member and Mix Master and initiate position activities at the appropriate time according to the following behaviors.

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
------	------------------	----------------------	--

Behavior: Ensure readiness for assignment.

1. Obtain assignment information or resource order from dispatch.	O		
2. Arrive at incident and check in with appropriate personnel.	I		

Behavior: Gather, update, and apply situational information relevant to the assignment.

3. Obtain initial briefing from assignment supervisor.	I		
4. Demonstrate knowledge of security and enforce protocols and proper identification of personnel on the aircraft ramp.	O		

Competency: Communicate effectively.

Description: Use suitable communication techniques to share relevant information with appropriate personnel on a timely basis to accomplish objectives in a rapidly changing, high-risk environment.

Behavior: Understand and comply with ICS concepts and principles.

5. Follow and apply chain of command according to the Incident Command System (ICS).	O		
--	---	--	--

Behavior: Ensure relevant information is exchanged during briefings and debriefings.

6. Participate in daily briefing, After Action Review (AAR), or functional area briefing.	I		
7. Discuss the Lot Acceptance and Quality Assurance Program (LAQA) and the Qualified Products list. Identify where the information can be found.	O		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

**Retardant Crew Member (RTCM)/
Mix Master (MXMS) Common Tasks**

Competency: Communicate effectively.

Description: Use suitable communication techniques to share relevant information with appropriate personnel on a timely basis to accomplish objectives in a rapidly changing, high-risk environment.

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
8. Obtain and review Safety Data Sheets (SDS) for Wildland Fire Chemicals (WFC) being used and identify proper clean up and disposal of spills. Identify when to report as appropriate to Airtanker Base Manager (ATBM) [or Single Engine Airtanker Manager (SEMG), if applicable].	O		
9. Review Airtanker and/or Single Engine Airtanker (SEAT) Base Operations plan (ABOP/SBOP), simultaneous fueling and loading plan, and hot loading plan.	O		

Competency: Ensure completion of assigned actions to meet identified objectives.

Description: Identify, analyze, and apply relevant situational information and evaluate actions to complete assignments safely and meet identified objectives. Complete actions within established timeframe.

Behavior: Demonstrate knowledge, skills, and abilities in the execution of duties in various operational areas.

10. Discuss the different types of airtankers used for aerial retardant delivery and their loading procedures. Participate in a briefing with the flight crew on loading procedures of the airtanker to be loaded.	O		
11. Identify limitations of airtankers and/or SEATs being loaded to ensure they are not exceeded. Discuss airtanker contract loads and tank/hopper capacities.	O		
12. Discuss hazards inherent to loading operations and review Risk Management Worksheet (or equivalent) for the airtanker/SEAT loading operation.	O		
13. Discuss and identify various fittings (camlocks/couplings, hose barbs, valves, proper banding, etc.) utilized for mixing and loading operations.	O		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

**Retardant Crew Member (RTCM)/
Mix Master (MXMS) Common Tasks**

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
14. Describe the different classes of Wildland Fire Chemicals (WFC), their effectiveness, and application tactic.	O		
Behavior: Plan for demobilization and ensure demobilization procedure are followed.			
15. Check out with incident or dispatch to demobilize.	I		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

RTCM Specific Tasks

Competency: Assume position responsibilities.

Description: Use suitable communication techniques to share relevant information with appropriate personnel on a timely basis to accomplish objectives in a rapidly changing, high-risk environment.

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
Behavior: Demonstrate knowledge, skills, and abilities in the execution of duties in various operational areas.			
16. Maintain communication with necessary ramp personnel.	I		
17. Ensure ramp cleanliness in Retardant Crew Member's assigned area including spills and Foreign Object Debris (FOD).	I		
18. Receive briefing from MXMS and ensure assignments and expectations for the operational period are understood.	I		
19. Demonstrate safety practices while working around aircraft during loading operations.	I		
20. Assist MXMS in LAQA sampling as appropriate.	I		
21. Assist MXMS with maintenance of retardant mixing, loading, and testing equipment as appropriate.	I		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

MXMS Specific Tasks

Competency: Assume position responsibilities.

Description: Use suitable communication techniques to share relevant information with appropriate personnel on a timely basis to accomplish objectives in a rapidly changing, high-risk environment.

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
22. Plan the specific layout of the mix plant, and ensure equipment such as pumps, hoses, valves, and mass flow meter are installed correctly.	O		
23. Identify if mixing and loading equipment is in good working order, has an identified maintenance schedule, and has the appropriate level of fluids.	O		
24. Demonstrate ability to operate recirculation system and loading equipment at the base of operations, including proper start up and shut down of pumps.	O		
25. Check all equipment such as valves, hoses, pumps and tanks for mix plant safety and operability; ensure agency and Occupational Safety and Health Administration (OSHA) safety measures are in place.	O		
26. Work with ATBM (or SEMG, if applicable) to maintain an adequate WFC product inventory based on current and expected activity. Ensure WFC complies with LAQA program for all WFC products.	I		
27. Identify a recirculation schedule to ensure mixed and concentrate products are maintained in good condition.	O		
28. Ensure storage and handling of WFC products, hazardous waste, and wastewater are in compliance with state and federal Environmental Protection Agency (EPA) regulations. Review Stormwater Pollution Prevention Plan (SWPPP) if in place, as well as the base operations plan to identify proper procedures for disposal and identify local hazardous materials coordinator contact.	O		
29. Demonstrate the ability to operate a refractometer, Marsh funnel, and mass flow meter. Discuss troubleshooting and common issues that may relate to each piece of testing equipment.	O		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

MXMS Specific Tasks

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
30. Discuss procedures and processes for batch mixing vs. on demand systems. Discuss various mixing and blending equipment that could be encountered in the field and associated equipment products (blenders, eductors, blowers, hopper mixer, etc.).	O		
31. Discuss water temperature, quality (pH/hardness, etc.), and its importance in WFC product mixing. Identify potential issues poor water quality could have on the different types of WFC products.	O		
32. Discuss mixing table/chart, mix ratio, and yield for type of product being used.	O		
33. Demonstrate ability to mix liquid and/or powder retardant concentrate to the appropriate mix ratio per the Qualified Products List (QPL) and/or mix factor table.	O		
34. Discuss and identify options for when mixed product is out of specification. Also include if the out of specification product has been loaded onto the airtanker and discuss remedy options.	O		
35. Discuss potential issues with mixing different WFCs (retardant, foam, and gels). Identify possible effects to equipment.	O		
36. Ensure mixed product is tested prior to being loaded into airtankers. *Note: For on demand systems this will need to be done periodically throughout the loading process.	I		
37. Maintain proper documentation for loading operations that includes date/time, tanker number, pounds/gallons, refract reading, and/or density. Coordinate with the ATBM (or SEMG, if applicable), validate as needed, and communicate any concerns.	I		
38. Coordinate with ATBM (or SEMG, if applicable) to ensure assigned mixing area is maintained, clean, and monitored for duration of mixing operational period.	I		
39. Ensure the safety and welfare of personnel working around mix plant. Report all hazards, incidents, and accidents to the ATBM (or SEMG, if applicable) and take appropriate action.	I		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

MXMS Specific Tasks

TASK	C O D E	EVAL. RECORD #	EVALUATOR: Initial & date upon completion of task
40. Discuss and identify procedures to properly clean, drain, and store mixing and loading equipment for end of season use.	O		
Behavior: Establish work assignments and performance expectations, monitor performance, and provide feedback.			
41. Ensure RTCM personnel understand assignments and expectations for the operational period.	I		
42. Identify and take immediate steps to request personnel and equipment to perform operations safely and efficiently.	I		
43. Evaluate RTCM performance and provide feedback and training opportunities where available.	I		

Evaluate the numbered tasks ONLY. DO NOT evaluate bullets; they are provided as examples/additional clarification.

Trainee Information

Printed Name:
 Trainee Position on Incident/Event:
 Home Unit/Agency:
 Home Unit /Agency Address and Phone Number:

Evaluator Information

Printed Name:
 Evaluator Position on Incident/Event:
 Home Unit/Agency:
 Home Unit /Agency Address and Phone Number:

Incident/Event Information

Incident/Event Name: _____ Reference (Incident Number/Fire Code): _____
 Duration: _____
 Incident Kind: Wildfire, Prescribed Fire, All Hazard, Other (specify): _____
 Location (include Geographic Area, Agency, and State): _____
 Management Type (circle one): Type 5, Type 4, Type 3, Type 2, Type 1, Area Command
OR Prescribed Fire Complexity Level (circle one): Low, Moderate, High
 FBPS Fuel Model Letter: G = Grass, B = Brush, T = Timber, S = Slash

Evaluator's Recommendation

(Initial only one line as appropriate)

- _____ 1) The tasks initialed and dated by me on the Qualification Record have been performed under my supervision in a satisfactory manner. The trainee has successfully performed all tasks in the PTB for the position. I have completed the Final Evaluator's Verification section and recommend the trainee be considered for agency certification.
- _____ 2) The tasks initialed and dated by me on the Qualification Record have been performed under my supervision in a satisfactory manner. However, opportunities were not available for all tasks (or all uncompleted tasks) to be performed and evaluated on this assignment. An additional assignment is needed to complete the evaluation.
- _____ 3) The trainee did not complete certain tasks in the PTB in a satisfactory manner and additional training, guidance, or experience is recommended.
- _____ 4) The individual is severely deficient in the performance of tasks in the PTB for the position and additional training, guidance, or experience is recommended prior to another training assignment.

Comments: _____

Evaluator's Signature: _____ Date: _____
 Evaluator's Relevant Qualification (or agency certification): _____

Trainee Information

Printed Name:
 Trainee Position on Incident/Event:
 Home Unit/Agency:
 Home Unit /Agency Address and Phone Number:

Evaluator Information

Printed Name:
 Evaluator Position on Incident/Event:
 Home Unit/Agency:
 Home Unit /Agency Address and Phone Number:

Incident/Event Information

Incident/Event Name: _____ Reference (Incident Number/Fire Code): _____
 Duration: _____
 Incident Kind: Wildfire, Prescribed Fire, All Hazard, Other (specify): _____
 Location (include Geographic Area, Agency, and State): _____
 Management Type (circle one): Type 5, Type 4, Type 3, Type 2, Type 1, Area Command
OR Prescribed Fire Complexity Level (circle one): Low, Moderate, High
 FBPS Fuel Model Letter: G = Grass, B = Brush, T = Timber, S = Slash

Evaluator's Recommendation

(Initial only one line as appropriate)

- _____ 1) The tasks initialed and dated by me on the Qualification Record have been performed under my supervision in a satisfactory manner. The trainee has successfully performed all tasks in the PTB for the position. I have completed the Final Evaluator's Verification section and recommend the trainee be considered for agency certification.
- _____ 2) The tasks initialed and dated by me on the Qualification Record have been performed under my supervision in a satisfactory manner. However, opportunities were not available for all tasks (or all uncompleted tasks) to be performed and evaluated on this assignment. An additional assignment is needed to complete the evaluation.
- _____ 3) The trainee did not complete certain tasks in the PTB in a satisfactory manner and additional training, guidance, or experience is recommended.
- _____ 4) The individual is severely deficient in the performance of tasks in the PTB for the position and additional training, guidance, or experience is recommended prior to another training assignment.

Comments: _____

Evaluator's Signature: _____ Date: _____
 Evaluator's Relevant Qualification (or agency certification): _____