



# FEMA

## NATIONAL QUALIFICATION SYSTEM (NQS)

POSITION TASK BOOK  
FOR THE POSITION OF

# GEOGRAPHIC INFORMATION SYSTEMS (GIS) ANALYST

Version: September 2017

Check the appropriate position type:

Single Type

Type 1

Type 2

Type 3

|                                          |
|------------------------------------------|
| <b>POSITION TASK BOOK ASSIGNED TO:</b>   |
| TRAINEE'S NAME:                          |
| DUTY STATION:                            |
| PHONE NUMBER:                            |
| E-MAIL:                                  |
| <b>POSITION TASK BOOK INITIATED BY:</b>  |
| OFFICIAL'S NAME:                         |
| TITLE:                                   |
| DUTY STATION:                            |
| PHONE NUMBER:                            |
| E-MAIL:                                  |
| <b>POSITION TASK BOOK WAS INITIATED:</b> |
| LOCATION:                                |
| DATE:                                    |

## Evaluator Verification

*(Do not complete this form unless you are recommending the trainee for all-hazards certification.)*

|                                                                                                                                                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>FINAL EVALUATOR<br/>VERIFICATION</b>                                                                                                                                                                                |
| I verify that _____<br>has successfully completed all tasks as a trainee and should therefore be considered for certification in this position. I also verify that all tasks are documented with appropriate initials. |
| FINAL EVALUATOR'S SIGNATURE:                                                                                                                                                                                           |
| DATE:                                                                                                                                                                                                                  |
| FINAL EVALUATOR'S PRINTED NAME:                                                                                                                                                                                        |
| TITLE:                                                                                                                                                                                                                 |
| DUTY STATION:                                                                                                                                                                                                          |
| PHONE NUMBER:                                                                                                                                                                                                          |
| E-MAIL:                                                                                                                                                                                                                |

## Documentation of Agency Certification

|                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>DOCUMENTATION OF<br/>AGENCY CERTIFICATION</b>                                                                                                                                                                                                       |
| I certify that _____<br>has successfully met all of the criteria set out in the National Incident Management System (NIMS) Job Title/Position Qualifications document for the position and will hereby receive certification of his/her qualification. |
| OFFICIAL'S SIGNATURE:                                                                                                                                                                                                                                  |
| DATE:                                                                                                                                                                                                                                                  |
| OFFICIAL'S NAME:                                                                                                                                                                                                                                       |
| TITLE:                                                                                                                                                                                                                                                 |
| DUTY STATION:                                                                                                                                                                                                                                          |
| PHONE NUMBER:                                                                                                                                                                                                                                          |
| E-MAIL:                                                                                                                                                                                                                                                |

## Position Task Book Overview

The Position Task Book (PTB) documents the performance criteria a trainee must meet to be certified for a position within the National Qualification System (NQS). The performance criteria are associated with core NQS competencies, behaviors, and tasks.

**A trainee may not work on multiple position type PTBs for a specific position at the same time; for example, a trainee may not simultaneously work on a Type 1 Incident Commander PTB and a Type 2 Incident Commander PTB. If a position has multiple types, the trainee must, in most cases, qualify at the lowest type before pursuing the next higher type. For example, before seeking qualification for a Type 1 position, an individual must first qualify at the Type 3 level and then at the Type 2 level.**

### *Evaluation Process*

- Evaluators observe and review a trainee's completion of PTB tasks, initialing and dating each successfully completed task in the PTB.
- Evaluators complete an Evaluation Record Form after each evaluation period by documenting the trainee's performance.
- The Authority Having Jurisdiction (AHJ) may not have enough resources to ensure that every evaluator is qualified in the position being assessed. Therefore, a trainee's supervisor may evaluate the completion of PTB tasks. For example, a Logistics Section Chief has the authority to sign off on completed PTB tasks for a Food Unit Leader trainee.
- The final evaluator is a leader who verifies that a trainee has completed the PTB and met all requirements for the position. A final evaluator is generally qualified in the same position for which the trainee is applying. When possible, the evaluator and the final evaluator should not be the same person, but in situations with limited resources, the evaluator can also serve as the final evaluator.
- Once the final evaluator has completed the Final Evaluator Verification, he/she forwards it to the Quality Review Board (QRB) along with supporting evidence that the trainee has completed all position requirements.
- After the QRB review, the AHJ completes the Documentation of Agency Certification form as appropriate.

### *Transferring Qualifications*

- Personnel who have documentation of previous education, training, or significant on-the-job incident experience may receive credit toward qualification for a given position. Each AHJ establishes the requirements for transferring qualifications from another AHJ.
- If an AHJ chooses not to accept a trainee's existing certification of qualification, the trainee may be reevaluated in the specific position and issued a new PTB.
- An individual may hold multiple certifications of qualification (that is, the Final Evaluator Verification form and the Documentation of Agency Certification form) along with the completed PTB.

## Position Task Book Competencies, Behaviors, and Tasks

**The PTB sets minimum criteria for certification for a position. The AHJ has the authority to add content to the baseline PTB competencies, behaviors, and tasks as necessary.**

The PTB covers all type levels for a given position, but a trainee may check only one “Type” box and work on only one type at a time. (The National Incident Management System (NIMS) Job Title/Position Qualifications document describes all types.)

**Command and General Staff job titles/positions qualifications are typed based on incident complexity, while all other NIMS positions are typed based on the minimum qualifications.**

### *Definitions*

**Competency:** An observable, measurable pattern of knowledge, skills, abilities, and other characteristics an individual needs to perform an activity and its associated tasks. A competency specifies the skillset a person needs to possess to complete the tasks successfully.

**Behavior:** An observable work activity or a group of similar tasks necessary to perform the activity.

**Task:** A specific, demonstrable action necessary for successful performance in a position. Trainees must demonstrate completion of required tasks.

- Occasionally, PTB tasks are unique to one of the types; for example, certain tasks apply only to a Type 3 Incident Commander, not to a Type 2 or Type 1 Incident Commander. In those cases, the PTB indicates the corresponding type at the beginning of the task.
- All tasks require evaluation; however, bullet statements within a task are examples.

### *PTB Task Codes*

Each task in the PTB model has at least one corresponding code conveying the circumstances in which the trainee can perform the task for evaluation. Evaluators may assess trainees during incidents, in classroom simulations and training sessions, in functional and full-scale exercises, and in other work situations. If a task has multiple codes, the evaluator may evaluate in ANY of those circumstances; the trainee does not need evaluation in all of the listed circumstances.

**Code C:** Task performed in training or classroom setting, including seminars and workshops.

**Code E:** Task performed during a full-scale exercise with equipment deployed under the Incident Command System (ICS).

**Code F:** Task performed during a functional exercise managed under the ICS.

**Code I:** Task performed during an incident or event managed under the ICS. Examples include oil spill, search and rescue operation, hazardous materials (hazmat) response, fire, and emergency or non-emergency (planned or unplanned) events.

**Code J:** Task performed as part of day-to-day job duties.

**Code T:** Task performed during a tabletop exercise.

**Code R:** Task performed very rarely and required only if applicable to the event.

## How to Complete the Evaluation Record Form

Each Evaluation Record Form (see next page) covers one evaluation period. Evaluation periods may involve incidents, classroom simulations, or daily duties, depending on what the PTB recommends. The AHJ determines the number of evaluations required for position qualification and certification. If evaluators need additional evaluation periods, they can copy pages from a blank PTB and attach them to the PTB in question.

### Complete these items AT THE START of the evaluation period:

**Evaluation Record Number:** Label each evaluation record with a number to identify the incident(s), exercise(s), or event(s) during which the trainee completed the PTB tasks. The evaluator should also write this number in the PTB column labeled "Evaluation Record #" for each task performed satisfactorily. This number enables reviewers of the completed PTB to ascertain the evaluators' qualifications before signing off on the PTB.

**Evaluator's name; Incident/office title and agency:** List the name of the evaluator, his/her incident position or office title, and the evaluator's home agency.

**Evaluator's home unit address and phone:** List evaluator's home unit address and phone number.

**Name and location of incident or simulation/exercise:** Identify the name (if applicable) and location where the trainee performed the tasks.

**Incident kind:** Enter the kind of incident (such as hazmat, law enforcement, wildland fire, structural fire, search and rescue, flood, or tornado).

### Complete these items AT THE END of the evaluation period:

**Number and kind of resources:** Enter the number of resources assigned to the incident, and their kind (such as team, personnel, and equipment) pertinent to the trainee's PTB.

**Evaluation period:** Enter inclusive dates of trainee evaluation. This time span may cover several small, similar incidents.

**Position type:** Enter position type (such as Type 3, Type 2, Type 1, or Single Type).

**Recommendation:** Check the appropriate line and make comments below regarding the trainee's future development needs.

**Additional recommendations/comments:** Provide additional recommendations and comments about trainee, as necessary.

**Date:** List the current date.

**Evaluator's initials:** Initial here to authenticate your recommendations and to allow for comparison with initials in the PTB.

**Evaluator's relevant qualification:** List your certification relevant to the trainee position you supervised.

## Evaluation Record Form

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>TRAINEE NAME:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>TRAINEE POSITION:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Evaluation Record Number:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Evaluator's name:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Incident/office title and agency:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Evaluator's home unit address and phone:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Name and location of incident or simulation/exercise:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Incident kind:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Number and kind of resources:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Evaluation period:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Position type:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Recommendation:</b><br>The above named trainee performed the initialed and dated tasks under my supervision. I recommend the following for this trainee's further development:<br><input type="checkbox"/> The trainee has successfully performed all required tasks for the position. The AHJ should consider the individual for certification.<br><input type="checkbox"/> The trainee could not complete certain tasks or needs additional guidance. See comments below.<br><input type="checkbox"/> Not all tasks were evaluated on this assignment. An additional assignment is needed to complete the evaluation.<br><input type="checkbox"/> The trainee is severely deficient in the performance of tasks and needs further training prior to additional assignment(s) as a trainee for this position. |
| <b>Additional recommendations/comments:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Date:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Evaluator's initials:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Evaluator's relevant qualification:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Geographic Information Systems (GIS) Analyst

### 1. Competency: Assume position responsibilities

*Description:* Successfully assume the role of GIS Analyst and initiate position activities at the appropriate time according to the following behaviors.

#### 1a. Behavior: Gather, update, and apply situational information relevant to the assignment

| TASK                                                                                                                                                                                                                                                    | CODE             | EVALUATION RECORD # | EVALUATOR INITIALS AND DATE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------|-----------------------------|
| 1. Gather logistical information: <ul style="list-style-type: none"> <li>• Incident base facilities</li> <li>• Equipment and supplies available (plotter, computers, ink, paper)</li> <li>• Availability of GIS server and software licenses</li> </ul> | C, E, F, I, J, T |                     |                             |

Position Task Book: GIS Analyst

### 2. Competency: Communicate effectively

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

#### 2a. Behavior: Produce and distribute information per established guidelines and ensure recipient understands information

| TASK                                                                                                                                                                                   | CODE             | EVALUATION RECORD | EVALUATOR INITIALS AND DATE |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|-------------------|-----------------------------|
| 2. Meet information requirements to support decisions.                                                                                                                                 | C, E, F, I, J, T |                   |                             |
| 3. Collate data from initial and ongoing assessment of incident-related damage and needs, conduct impact analyses, and inform planning and resource decisions with assessment results. | C, E, F, I, J, T |                   |                             |
| 4. Assist in the production of incident products by completing digital analysis.                                                                                                       | C, E, F, I, J, T |                   |                             |
| 5. Use standard data file structure.                                                                                                                                                   | C, E, F, I, J, T |                   |                             |
| 6. Develop, update, and maintain metadata.                                                                                                                                             | C, E, F, I, J, T |                   |                             |

| TASK                                                                                                                                                                                                                                                                                                                                                                                                               | CODE             | EVALUATION RECORD # | EVALUATOR INITIALS AND DATE |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------|-----------------------------|
| <p>7. Identify and obtain data from internal and external stakeholders to develop and update GIS products:</p> <ul style="list-style-type: none"> <li>• Incident maps</li> <li>• Reference maps: political jurisdiction maps and demographics</li> <li>• Quantitative and qualitative thematic maps</li> <li>• Interactive map products: Keyhole Markup Language (KML), ArcReader, web mapping software</li> </ul> | C, E, F, I, J, T |                     |                             |
| <p>8. Generate and integrate event-specific model output in coordination with authoritative sources.</p>                                                                                                                                                                                                                                                                                                           | C, E, F, I, J, T |                     |                             |
| <p>9. Develop key GIS products in at least four of these functional areas:</p> <ul style="list-style-type: none"> <li>• Emergency Services</li> <li>• External Affairs</li> <li>• Hazard Mitigation</li> <li>• Individual Assistance</li> <li>• Logistics</li> <li>• Long-Term Recovery and Planning</li> <li>• Planning</li> <li>• Public Assistance/Infrastructure</li> </ul>                                    | C, E, F, I, J, T |                     |                             |
| <p>10. Develop and update products within established time frames.</p>                                                                                                                                                                                                                                                                                                                                             | C, E, F, I, J, T |                     |                             |
| <p>11. Define, implement, and maintain a daily archival process:</p> <ul style="list-style-type: none"> <li>• Perform daily backups</li> <li>• Upload data and GIS products to relevant file transfer protocol (FTP) sites</li> <li>• Create backup copies of incident spatial data within the incident data structure</li> </ul>                                                                                  | C, E, F, I, J, T |                     |                             |
| <p>12. Provide the Documentation Unit or other appropriate personnel with written documentation, digital data, and products developed during the incident, as requested.</p>                                                                                                                                                                                                                                       | C, E, F, I, J, T |                     |                             |



### 3. 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 time frame.

#### 3a. Behavior: Maintain GIS products and hardware software applications

| TASK                                                                                                                                                                                                                                                                                                          | CODE    | EVALUATION RECORD # | EVALUATOR INITIALS AND DATE |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------|-----------------------------|
| 13. Create, maintain, and update GIS databases.                                                                                                                                                                                                                                                               | E, F, I |                     |                             |
| 14. Ensure that data is accurate and from authoritative sources.                                                                                                                                                                                                                                              | E, F, I |                     |                             |
| 15. Import/export GIS data: <ul style="list-style-type: none"> <li>• Various coordinate systems, Geographic to United States National Grid (USNG)</li> <li>• Data</li> <li>• Projections</li> </ul>                                                                                                           | E, F, I |                     |                             |
| 16. Operate and maintain desktop and wide-format printers.                                                                                                                                                                                                                                                    | E, F, I |                     |                             |
| 17. Operate specialized applications or GIS software for disaster support: <ul style="list-style-type: none"> <li>• Adobe products</li> <li>• ArcGIS Desktop</li> <li>• ArcGIS Spatial Analyst</li> <li>• Google Earth</li> <li>• Microsoft Office Suite</li> <li>• Information Management Systems</li> </ul> | E, F, I |                     |                             |

#### 3b. Behavior: Gather, analyze, and validate information pertinent to the incident or event and make recommendations for setting priorities

| TASK                                                                                                                                                                          | CODE    | EVALUATION RECORD # | EVALUATOR INITIALS AND DATE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------|-----------------------------|
| 18. Download data from various GPS units and incorporate the data into the incident GIS.                                                                                      | E, F, I |                     |                             |
| 19. Identify, obtain, and catalog data (digital and paper): <ul style="list-style-type: none"> <li>• Base</li> <li>• Incident</li> <li>• Local</li> <li>• Metadata</li> </ul> | E, F, I |                     |                             |
| 20. Review maps and data for accuracy and report inaccuracies to Situation Unit Leader.                                                                                       | E, F, I |                     |                             |
| 21. Support incident modeling and mapping requests.                                                                                                                           | E, F, I |                     |                             |

**3c. Behavior: Utilize information to produce outputs**

| TASK                                                                                                                                                                                                                                                                                                                                                                          | CODE    | EVALUATION RECORD # | EVALUATOR INITIALS AND DATE |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|---------------------|-----------------------------|
| <b>22.</b> Perform advanced geoprocessing and analytical tasks: <ul style="list-style-type: none"> <li>• Surface and spatial analysis</li> <li>• Advanced SQL queries</li> <li>• Network analysis and optimization</li> <li>• ModelBuilder, heat maps, and data interpolation</li> </ul>                                                                                      | E, F, I |                     |                             |
| <b>23.</b> Assist in digitizing and georeferencing data within GIS software: <ul style="list-style-type: none"> <li>• Vector</li> <li>• Raster</li> </ul>                                                                                                                                                                                                                     | E, F, I |                     |                             |
| <b>24.</b> Coordinate with GIS Supervisor, Situation Unit Leader, Situational Awareness Unit Leader, or appropriate personnel to prepare incident maps and displays by collecting and interpreting information: <ul style="list-style-type: none"> <li>• Photos</li> <li>• Graphics/images</li> <li>• Other documents</li> <li>• Operations and planning personnel</li> </ul> | E, F, I |                     |                             |
| <b>25.</b> Help produce and update digital maps within established guidelines and time frames using ICS symbols: <ul style="list-style-type: none"> <li>• Incident Action Plan (IAP) map</li> <li>• Incident briefing map</li> <li>• Situation/planning map</li> <li>• Transportation map</li> <li>• Fire progression map</li> </ul>                                          | E, F, I |                     |                             |