

--Hydrographic Survey (GS-1301) Competency Model--

KNOWLEDGE AREAS

Bureau-specific mission, vision, goals, and values

Bureau-specific policies and procedures

Standards of ethical conduct for U.S. Government employees

Hydrographic theories, principles, and methods and/or related physical sciences

PROMOTE SAFE NAVIGATION

SKILL	DEFINITION
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Data Management	<i>Knowledge of the principles, procedures, and tools of data management, such as modeling techniques, data backup, data recovery, data dictionaries, data warehousing, data mining, data disposal, and data standardization processes.</i>
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ZP-1. Applies basic understanding of computer and storage technology for data handling, processing and archiving.

ZP-2. Maintains hydrographic datasets and facilitates data transfer.

ZP-3. Applies expert knowledge of data management and data archiving processes and techniques; trains field and office personnel on processes and techniques.

ZP-4. Manages data management resources and monitors processes.

Hydrographic Data Gathering	<i>Knowledge of the principles, procedures, and tools of hydrographic surveying (i.e., surveying to determine the depth of water, configuration and nature of the seafloor) to support nautical charting.</i>
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ZP-1. Assists launch Hydrographer In Charge; obtains knowledge of acquisition systems, boat safety, and follows simple Standard Operating Procedures (SOPs).

ZP-2. Applies complete understanding of hydrographic data; understands sonar theory and concepts and has completed NOAA basic hydrographic training.

ZP-3. Teaches concepts to Junior Officers, junior Physical Scientists and interns; leads hydrographic training classes; presents and publishes papers; has participated in most aspects of hydrographic surveys in the field.

ZP-4. Leads multi-platform projects or multiple projects simultaneously.

Hydrographic Data Processing	<i>Knowledge of the principles, procedures, and tools used for the processing and quality control of hydrographic survey data.</i>
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ZP-1. Follows simple SOPs.

ZP-2. Successfully completes all phases of data processing, from data acquisition through Bathymetric Attributed Grid creation.

ZP-3. Provides subject matter expertise on all areas of hydrographic data processing, including quality control; independently oversees data processing for complex projects; mentors junior personnel on sheet management.

ZP-4. Leads multi-platform projects or multiple projects simultaneously.

Project Planning *Knowledge of the principles, methods, and tools for planning projects to manage hydrographic survey resources.*

ZP-1. Assists initial project planning research; understands the project planning process.

ZP-2. Conducts project planning research using multiple sources; compiles supporting documentation; drafts project instructions; solicits feedback from user groups.

ZP-3. Provides subject matter expertise on all areas of hydrographic data processing, including quality control; independently oversees data processing for complex projects; mentors junior personnel on sheet management.

ZP-4. Leads multi-platform projects or multiple projects simultaneously.

SUPPORT CUSTOMERS

SKILL	DEFINITION
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Nautical Cartography	<i>Knowledge of the principles, methods, and tools used to graphically express the known physical features of the Earth, particularly for the construction of nautical charts used for marine navigation.</i>
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ZP-1. Applies specifications prescribed by the Nautical Chart Manual and Office Processing Manual.

ZP-2. Provides data products for chart compilation that meet prescribed specifications.

ZP-3. Compiles hydrographic survey data; evaluates hydrographic data for charting and provides written results.

ZP-4. Applies advanced cartography skills necessary to perform quality control and quality assurance reviews of compilation products.

Data Product Generation	<i>Knowledge of the principles, methods, and tools used to create hydrographic data products for use in updating nautical charts.</i>
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ZP-1. Assists more experienced compilers; follows simple SOPs; provides preliminary data products.

ZP-2. Independently completes Survey Acceptance Reviews (SARs) on in-house, contract and Outside Source Data surveys; creates H-cells for non-complex surveys; independently performs quality assurance; creates data products for non-complex projects.

ZP-3. Serves as office subject matter expert and resource for SAR/H-cell process; reviews SARs of junior personnel; reviews complex surveys; trains and mentors junior personnel; manages SARs in Team Lead's absence.

ZP-4. Manages work loads of personnel; creates more efficient processes; tracks survey progress; establishes goals.

Hydrographic System Readiness Review	<i>Knowledge of the principles, methods, and tools used to determine that a hydrographic surveying system (e.g., sonar, data acquisition computers and software, etc.) is properly operating and capable of acquiring survey data that meets standards.</i>
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- ZP-1. Assists field units with Hydrographic System Readiness Review (HSSR).
- ZP-2. Shares knowledge and participates on HSSR team; assists with field work, data processing and reporting.
- ZP-3. Leads HSSR team; independently conducts and documents a HSSR.
- ZP-4. Manages HSSR resources; improves HSSR processes.

Project Management *Knowledge of the principles, methods, or tools for developing, scheduling, coordinating, and managing hydrographic survey projects and resources, including monitoring and inspecting costs, work, and contractor performance.*

- ZP-1. Applies fundamentals and guiding principles of sound project management.
- ZP-2. Utilizes sound project management skills to define, manage and track a project.
- ZP-3. Manages multiple projects with independent deadlines; prioritizes tasks; communicates requirements; coordinates resources with other departments internal and external to OCS.
- ZP-4. Performs as Branch Chief or Team Lead; provides leadership and guidance to project managers; reviews project plans and analyzes results.

PROCESS IMPROVEMENT

SKILL	DEFINITION
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Change Management	<i>Brings about strategic change, both within and outside the organization, to meet organizational goals; establishes an organizational vision and implements it in a continuously changing environment.</i>
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| <ul style="list-style-type: none"> ZP-1. Accepts and communicates need for change. ZP-2. Defines and initiates change; implements change dictated from above; accepts changing requirements. ZP-3. Leads change; envisions the needs of the organization in the context of specific change; communicates message to management. ZP-4. Manages complex change; understands dynamics and practical course of action to implement change. | |
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Documentation	<i>Recognizes or uses correct English grammar, punctuation, and spelling; communicates information (for example, facts, ideas, or messages) in a succinct and organized manner; produces written information, including technical material that is appropriate for the intended audience.</i>
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| <ul style="list-style-type: none"> ZP-1. Follows SOPs; provides input on improving documentation. ZP-2. Writes shipboard and office SOPs for review by senior hydrographers; provides input to FPM and HSSD. ZP-3. Writes and/or improves all levels of documentation; reviews/edits documentation written by others. ZP-4. Improves on and approves final documentation. | |
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Hydrographic Systems Development, Test, Evaluation and Integration	<i>Knowledge of the principles, methods, and tools for analyzing and developing hydrographic systems test and evaluation procedures.</i>
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- ZP-1. Assists in the installation, setup, integration, configuration and testing and evaluation of hydrographic systems.
- ZP-2. Integrates and configures hydrographic systems; effectively participates in the hydrographic systems readiness review; participates in the testing and evaluation of new hydrographic systems and the development of new software and/or systems.
- ZP-3. Demonstrates technical expertise in hydrographic systems; develops specifications, test and evaluation plans; oversees transition to operations of new hydrographic systems.
- ZP-4. Serves as Branch Chief, Team Lead, or Project Manager for technology transition plans; recognized as technical expert.

Research & Development *Develops and implements a process or strategy to solve a scientific problem or further knowledge using rigorous scientific methods and/or novel approaches; considers available data resources, obtaining additional data when necessary and appropriate.*

- ZP-1. Demonstrates understanding of functions of the Hydrographic Systems Technology Program (HSTP) in the context of Hydrographic Survey Division hydrographic operations.
- ZP-2. Effectively provides suggestions to HSTP on how to improve processes.
- ZP-3. Initiates new technologies; leads efforts in cross-functional groups; foresees potential problems, suggests solutions and presents results.
- ZP-4. Manages resources; monitors processes across branches.

PROFESSIONALISM

SKILL	DEFINITION
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Communication	<i>Expresses information (for example, ideas or facts) to individuals or groups effectively, taking into account the audience and nature of the information (for example, technical, sensitive, controversial); makes clear and convincing oral presentations; listens to others, attends to nonverbal cues, and responds appropriately..</i>
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| ZP-1. | Provides thoughtful and deliberate feedback; appropriately responds to feedback received. |
| ZP-2. | Provides constructive feedback and thoughtful comments to junior employees to improve processes. |
| ZP-3. | Writes and presents clear and concise reports; fosters open communication. |
| ZP-4. | Fosters open communication across Branches and Division. |

Deployment	<i>Ability to deploy to NOAA or private contractor (to perform site visits) survey field units (i.e., survey ships and shore based small boat parties) for extended periods of time, up to 130 days per year.</i>
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| ZP-1. | Deploys to field units for up to 130 days per year. |
| ZP-2. | Deploys to field units for up to 130 days per year. |
| ZP-3. | Deploys to field units for up to 130 days per year; manages deployment schedules of junior personnel. |
| ZP-4. | Manages Branch resources and oversees deployment schedule. |

Performance Management

Works with supervisor to develop performance expectations, track progress, measure results and report results.

- ZP-1. Tracks yearly activities and provides detailed written accomplishments.
- ZP-2. Tracks yearly activities and provides detailed written accomplishments.
- ZP-3. Tracks yearly activities and provides detailed written accomplishments.
- ZP-4. Conducts performance reviews; provides feedback for improvement; formulates and executes [pay for performance?] budget.

Training

Helps others learn through formal or informal methods; identifies training needs; provides constructive feedback; coaches others on how to perform tasks; acts as a mentor.

- ZP-1. Understands concepts provided in Basic Hydrographic Training and Basic Safety Training.
- ZP-2. Understand concepts provided in Advanced Hydrographic Training and Advanced Caris software Training.
- ZP-3. Leads and/or coordinates all aspects of technical training; teaches training modules.
- ZP-4. Manages training resources; seeks out additional training for Branch personnel.