

Position Title: Physical Scientist
Working Title: Physical Scientist
Pay Plan – Series – Grade Level: GS - 1301 - 14
PD#/Job Code: WS9902
Fair Labor and Standards Act: Exempt
Position Sensitivity/Risk Level Designation: Moderate Risk
Bargaining Unit Status: 1538
Functional Code: 13-Development
Cybersecurity Code: 000-000-000
Organizational Level One: National Centers for Env. Pred.
Organizational Level Two: Environmental Modeling Center

I. INTRODUCTION

This position is located in the National Weather Service (NWS), National Centers for Environmental Prediction (NCEP) within the Environmental Modeling Center (EMC). EMC is responsible for operational implementation and maintenance of advanced techniques for numerical weather, water, ocean and sea ice, air quality, land surface, and subseasonal to seasonal forecasting. These numerical forecasts are the basis of the Nation's weather, water, and subseasonal to seasonal predictions provided to the public and private sectors.

Serves as a Developer in an assigned professional or scientific area, carrying out major development projects designed to conceptualize and/or improve technology, equipment, instrumentation, mathematical models or systems utilized in advancing a segment of the organizations mission. Establishes requirements, plans, experiments, standards, and participates in the development of products.

II. MAJOR DUTIES AND RESPONSIBILITIES

Scientific Development (50%):

Provides systematic application of scientific knowledge directed toward the creation of new or substantially improved forecast systems, mathematical models, physical processes, models, techniques, and procedures for NWS/NCEP operations. The work involves such activities as:

Manages specific developments being executed in-house;

Devise and evaluate concepts for design approaches, including: criteria, parameters, characteristics, and interrelationships;

Experiment, investigate, and test to produce new data, mathematical models, or methods to test concepts, formulate design criteria, and measure and predict physical phenomena and performance;

Establish requirements for technical objectives and characteristics; and

Develop standards and test plans to assure model reliability.

Program/Project Facilitation (30%):

Manages work, track progress of development projects and communicate progress to team leads.

Exercises ability in communication both orally and in writing to dictate scientific information for decision-making.

- Develops and presents for review new ideas for analysis and presentation of economic data.

Manages specific developments being executed in- house or under contract, providing project oversight, control, and general management in the meeting of established objectives.

- Reviews projects for compliance to established practices, identifies projects and their requirements as needed for high-priority programs, and identifies new program requirements through the assimilation of scientific data needed to meet mission objectives and goals.

- Contributes to the planning and prioritization of assignments and participates in and tracks scientific projects throughout the project Lifecycle.

Develops annualized programming information communicating projects and their progress.

- Identifies and validates significant problem areas requiring action while prioritizing assigned projects including project documentation, execution reporting, project tracking, project accounting, technical support procurement, Program Manager project coordination, and other related activities.

Application of Science (10%):

Utilizes knowledge of the sciences to complete assigned tasks and advise on the interpretation of new scientific data in an assigned area.

- Evaluates scientific data necessary to contribute to the development of projects; evaluates available criteria, determines feasibility and directs team in the modification of collection or testing procedures.
- Develops, maintains, and distributes standardized procedures for assigned methods or technology.
- Keeps informed of advances in the sciences and regulations, and guidelines as well as new program requirements and court decisions affecting assigned areas.

Advisory Services (10%):

May respond to inquiries from the general public and high-level officials from other agencies. Serves as a technical expert provides authoritative instruction and guidance to lower level specialists. Serves on committees and boards providing expertise to scientific development projects that impact external organizations.

- Negotiates with stakeholders and partners to secure funding necessary to meet project objectives.

Performs other duties as assigned.

III. FACTOR LEVELS

FACTOR 1: KNOWLEDGE REQUIRED - FL 1-8 -- 1550 POINTS

Mastery of theories, principles and practices of physical sciences sufficient to serve as an expert technical consultant.

Extensive knowledge of state-of-the-art automated systems.

Expert knowledge with the ability and skill to plan, schedule, and conduct projects and studies to evaluate and recommend ways to improve work operations in a program or support setting.

Ability to review, analyze, and evaluate automated and/or manual automated systems.

Ability to interpret complex data and provide appropriate analysis for management's use in decision making. Conceive, advise, and serve as an authoritative source of information, latest developments, and trends.

Ability to develop guidance, memoranda, procedures and policy as required.

FACTOR 2: SUPERVISORY CONTROLS - FL 2-5 -- 650 POINTS

Incumbent is recognized as a technical authority in the physical sciences specialty area. The employee is subject only to administrative and policy direction concerning overall project priorities and objectives.

The employee is typically delegated complete responsibility and authority to plan, design, schedule, and carry out major programs, projects or studies.

Analyses, evaluations, and recommendations developed by the employee are normally reviewed by management officials only for potential influence on broad agency policy objectives and program goals.

FACTOR 3: GUIDELINES - FL 3-5 -- 650 POINTS

Guidelines consist of broad policy statements and program directives concerning the program or issue being studied.

Incumbent is expected to conceive, initiate, and monitor policies, programs and projects dealing with the most challenging problems in physical sciences.

As technical authority, employee is responsible for developing and interpreting policies, as well as instructions, standards, and methods used by operational personnel.

The employee uses judgment and discretion in interpreting and revising existing policy/regulatory guidance for use by others.

FACTOR 4: COMPLEXITY - FL 4-5 -- 325 POINTS

The work consists of a variety of assignments which require different processes and methods that are applied to a broad range of activities and analysis of interrelated issues of effectiveness, efficiency, and productivity of substantive mission-oriented programs.

Decisions about how to proceed in planning, organizing and conducting programs are complicated by conflicting program goals and objectives and as continuing changes in program. Incumbent originates new methods and reviews work in areas where there is little theory to guide efforts.

Provides technological expertise and evaluation of accomplishments in physical sciences and explores the impact of scientific breakthroughs on organization's programs.

Options, recommendations, and conclusions developed by the employee consider and give appropriate

weight to uncertainties about the data and other variables which affect long-range program performance. The incumbent is charged with generating new ideas, establishing criteria and developing new information to improve a program's overall effectiveness.

FACTOR 5: SCOPE AND EFFECT - FL 5-5 -- 325 POINTS

The work involves identifying and developing ways to resolve problems or cope with issues which directly affect the accomplishment of the assigned program's goals and objectives.

Work products are complete decision packages and staff studies, and typically contain findings/recommendations of major significance which serve as the basis for new administrative systems, legislation, regulations, or programs.

FACTORS 6&7: PERSONAL CONTACTS AND PURPOSE OF CONTACTS - FL 3C -- 180 POINTS

Contacts are with persons outside the bureau and with high level program officials in a moderately structured setting.

The purpose of contacts is to influence managers or other officials to accept and implement findings and recommendations on organizational improvement or program effectiveness. The employee may encounter resistance due to organizational conflict, competing objectives, or resource problems.

FACTOR 8: PHYSICAL DEMANDS - FL 8-1 -- 5 POINTS

No unusual physical exertion is required.

FACTOR 9: WORK ENVIRONMENT - FL 9-1 -- 5 POINTS

The work is performed in an office setting.

TOTAL POINTS: 3690

POINTS RANGE: 3605 – 4050

GRADE LEVEL: GS-14

FLSA CRITERIA

5 CFR 551.208 – Learned Professional Exemption Criteria

FLSA BASIS

The incumbent's primary duties are in the performance of work which requires knowledge of an advanced type in a field of science or learning customarily acquired by a prolonged course of specialized intellectual instruction and includes work requiring the consistent exercise of discretion and judgment. (Scientists, Engineers, Mathematicians, Attorneys, Physicians, Architects, and Accountants at the independent level as just some of the typical examples of exempt professionals)

IV. UNIQUE POSITION REQUIREMENTS

Moderate Risk - Mid-level management duties or assignments; assists agency rule-makers or policy decision makers for significant government programs in an influential way; responsible for independent or semi-independent action with moderate impact on efficiency and integrity of the service; significant public contact about important government programs.

FACTOR EVALUATION SYSTEM
POSITION EVALUATION STATEMENT

Organization:

National Oceanic and Atmospheric Administration - NWC, National Centers for Environmental Prediction (NCEP), Environmental Modeling Center (EMC)

References:

OPM, Professional Work in the Physical Science Group, GS-1300 HRCD-4 December 1997; OPM Primary Standard TS-134 July 1995, TS-107 August 1991 Revised: August 2009

Title (Parenthetical)/Working Title:
Physical Scientist

Pay Play-Series-Grade:
GS-1301-14

Series Determination:

This series includes positions that involve professional work in the physical sciences when there is no other more appropriate series, that is, the positions are not classifiable elsewhere. This series also includes work in a combination of physical science fields, with no one predominant. Serves as a Developer in an assigned professional or scientific area, carrying out major development projects designed to conceptualize and/or improve technology, equipment, instrumentation, mathematical models or systems utilized in advancing a segment of the organizations mission. Establishes requirements, plans, experiments, standards, and participates in the development of products.

Therefore, this positions correct title and series is, Physical Scientist, 1301.

Background Information:

This is part of the R & D project. A new PD was created.

FACTOR	CRITERIA	POINTS ASSIGNED	FLD	SUPPORTING COMMENTS
1	Knowledge Required	1550	8	Mastery of a theories, theories, principles and practices of physical sciences sufficient to serve as an expert technical consultant. Ability to interpret complex data and provide appropriate analysis for management's use in decision making. Conceive, advise, and serve as an authoritative source of information, latest developments, and trends.
2	Supervisory Controls	650	5	Incumbent is recognized as a technical authority in the physical sciences specialty area. The employee is subject only to administrative and policy

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				direction concerning overall project priorities and objectives. The employee is typically delegated complete responsibility and authority to plan, design, schedule, and carry out major programs, projects or studies. Analyses, evaluations, and recommendations developed by the employee are normally reviewed by management officials only for potential influence on broad agency policy objectives and program goals.
3	Guidelines	650	5	Guidelines consist of broad policy statements and program directives concerning the program or issue being studied. Incumbent is expected to conceive, initiate, and monitor policies, programs and projects dealing with the most challenging problems in physical sciences. As technical authority, employee is responsible for developing and interpreting policies, as well as instructions, standards, and methods used by operating personnel.
4	Complexity	325	5	The work consists of a variety of assignments which require different and unrelated processes and methods that are applied to a broad range of activities and analysis of interrelated issues of effectiveness, efficiency, and productivity of substantive mission-oriented programs. Incumbent originates new methods and reviews work in areas where there is little theory to guide efforts. Provides technological forecasting and evaluation of accomplishments in physical sciences and explores the impact of scientific breakthroughs on organization's programs.
5	Scope and Effect	325	5	The work involves identifying and developing ways to resolve problems or cope with issues which directly affect the accomplishment of the assigned program's goals and objectives. Work products are complete decision packages and staff studies, and typically contain findings/recommendations of major significance which serve as the basis for new administrative systems, legislation, regulations, or programs.
6&7	Personal Contacts and Purpose of Contacts	180	3C	Contacts are with persons outside the bureau and with high level program officials in a moderately structured setting. The purpose of contacts is to influence managers or other officials to

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				accept and implement findings and recommendations on organizational improvement or program effectiveness. The employee may encounter resistance due to organizational conflict, competing objectives, or resource problems.
8	Physical Demands	5	1	No unusual physical exertion is required.
9	Work Environment	5	1	The work is performed in an office setting.
<p>FLSA Determination:</p> <p>Professional Exemption:</p> <p style="padding-left: 40px;">Learned Professional, (See 5 CFR, 551.208) The positions' primary duties are in the performance of work which requires knowledge of an advanced type in a field of science or learning customarily acquired by a prolonged course of specialized intellectual instruction and includes work requiring the consistent exercise of discretion and judgment. (Scientists, Engineers, Mathematicians, Attorneys, Physicians, Architects, and Accountants at the independent level as just some of the typical examples of exempt professionals</p> <p>FLSA Conclusion:</p> <p style="padding-left: 40px;">Exempt</p>				
<p>Summary and Notes:</p> <p>This position fulfills the requirements for series 1301, and reaches the FES for GS-14 and is assigned the title Physical Scientist.</p>				
Total Points: 3690			Grade Conversion: GS – 14	
Classifier: Rebecca Pyle			Date: 09/08/2021	

Position Designation Record

Department DEPARTMENT OF COMMERCE CM
Agency DEPT OF COMMERCE-NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
Supplemental Duty
Position Title Physical Scientist
Position Description Serves as a Developer in an assigned professional or scientific area, carrying out major development projects designed to conceptualize and or improve technology, equipment, instrumentation, mathematical models or systems utilized in advancing a segment of the organizations mission. Establishes requirements, plans, experiments, standards, and participates in the development of products.
Series and Grade/Pay Band GS-1301-14
Position Description Number WS9902
Designator's Name & Title HR Classifier

Final Position Designation and Investigation

Sensitivity Level	Risk Level	Investigation	Form
Non-Sensitive	Moderate Risk	Tier 2	SF 85P

Label	Points
Total Initial Position Designation Points from Step 2	15
Adjusted Position Designation Points from Step 3	25

Summary

National Security

No national Security Duties

Suitability

Duties	Degree of Potential for Compromise or Damage
Government operations – rulemaking, policy, and major program responsibility (includes regulation or policy making, directing, implementing, advising and audits)	Moderate impact One or more of the following: <ul style="list-style-type: none">• Mid-level management duties or assignments• Assists agency rule-makers or policy decision-makers for significant public trust government programs in an influential way• Responsible for independent or semi-independent action with moderate impact on efficiency and integrity of the service

Duties	Degree of Potential for Compromise or Damage
	<ul style="list-style-type: none"> Significant public contact about important government programs impacting the public's trust

Adjustment for Scope of Program and Correlation to Extent of Impact

Program Scope and Impact	Impact
Adjustment for Scope of Program and Correlation to Extent of Impact	Multi-agency impact <ul style="list-style-type: none"> Program operations affect more than one agency. Misconduct or damage would have potential to impact multiple government agencies, and/or the individuals or private entities affected by those agencies.
Level of Supervision	Ability to act independently
Adjustment for level of supervision or other controls	Periodic, ongoing review - ability to act independently a lot of the time <ul style="list-style-type: none"> Ongoing spot review from a perspective of policy and organizational concerns by a superior with expertise in the technical aspects of the duties performed.

Designator's Name: HR Classifier

Designator's Signature: _____

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