

## POSITION DESCRIPTION

This position description serves as the official classification document of record for this position. Please complete the information as accurately as you can as the position description is used to determine the proper classification of the position.

<b>2. Employee's Name (Last, First, M.I.)</b>	<b>8. Department/Agency</b> DNR-NATURAL RESOURCES
<b>3. Employee Identification Number</b>	<b>9. Bureau (Institution, Board, or Commission)</b>
<b>4. Civil Service Position Code Description</b> Equipment Technician-SS	<b>10. Division</b> Fisheries
<b>5. Working Title (What the agency calls the position)</b> Southern Hatcheries Automation Staff Specialist	<b>11. Section</b> Fish Production
<b>6. Name and Position Code Description of Direct Supervisor</b> SAMPSON, DANIEL A; NATURAL RESOURCE MANAGER-3	<b>12. Unit</b> Supplemental- Electronics and Automation
<b>7. Name and Position Code Description of Second Level Supervisor</b> SWITZER, AARON D; STATE ADMINISTRATIVE MANAGER-1	<b>13. Work Location (City and Address)/Hours of Work</b> Either Platte River, Harrietta or Wolf Lake State Fish Hatchery, based on selected candidate / Monday-Friday, 7:30 a.m. to 4:00 p.m.

**14. General Summary of Function/Purpose of Position**

This position serves as an automation staff specialist with sole responsibility for analyzing and supporting operations of the southern fish hatcheries' Supervisory Control and Data Acquisition (SCADA) systems and associated software.

This position performs analysis of system performance, researching, designing, testing, evaluating, maintaining and programming modifications, replacements, and enhancements of the Programmable Logic Controller (PLC) based OPTO Epic Groov SCADA alarm systems and associated critical software that keep fish alive during emergencies at DNR state fish hatcheries and weirs, plus other Fisheries units as needed. This position performs analysis and system programming updates as required for the Fisheries Production Section, Research Section or Field Management Sections. This position works with the northern automation staff specialist and routinely collaborates with other hatchery staff.

In addition, this position provides analysis of solar array performance and electrical generation data compared to hatchery electrical consumption data for three high-profile hatchery solar projects in southern Michigan to explore and recommend methods for optimizing energy efficiencies.

15. Please describe the assigned duties, percent of time spent performing each duty, and what is done to complete each duty.

List the duties from most important to least important. The total percentage of all duties performed must equal 100 percent.

**Duty 1**

**General Summary:**

**Percentage: 70**

Serves as a recognized expert providing analysis and operations support for the critical fish hatchery automated alarming system programs to minimize risks that may harm and/or prevent massive fish mortalities. Analyze system performance to minimize risk, assist with prioritization of local, regional, and statewide alarming projects, developing standard operation procedures, and provide instruction and training to staff for specialized systems.

**Individual tasks related to the duty:**

- Perform analysis, research, design, development, and programming of the highly complex SCADA automated alarming software to ensure critical power, oxygen, and water flows are continuously monitored, in order to keep hundreds of thousands of fish alive.
- Perform computerized diagnostic programs/schedules to identify and minimize risk.
- Analyze risks, troubleshoot and diagnose software problems.
- Executes periodic system testing and tests new systems prior to installation.
- Reviews prior alarm incidents and determines improvements for future alarm response.
- Establish best practices for emergency response.
- Collaborate with engineers, maintenance staff, and hatchery managers on upgrades and capital outlay projects to ensure facilities are appropriately alarmed, monitored and continuously working with the existing systems.
- Provide SCADA user support and annual training for hatchery staff, to ensure emergencies are effectively addressed before the emergency causes hundreds of thousands of fish to die.
- Research new alarm system technologies to determine if new technologies may be implemented with the goal of reducing catastrophic fish losses.
- Research and apply concepts and processes used in other industries to the systems, programming and processes used in fish production facilities.
- Participate in Fish Production Section meetings to provide updates, training, and to introduce new ideas for improvements.
- Develop, write, and maintain standard operation procedures and training manuals for SCADA systems.
- Assist with the development and implementation of policies and procedures, as requested, such as the On-call and Call-back policy

**Duty 2**

**General Summary:**

**Percentage: 15**

Analyze hatchery solar array electricity generation and efficiency data and analyze against hatchery performance data to assist Production Manager with improving energy efficiency projects.

**Individual tasks related to the duty:**

- Provide analytical support for electrical solar power generation and electrical consumption at the three high-profile southern hatcheries' solar arrays, including data collection, tracking and analysis to assist the Production Manager on the impact solar energy production has at the southern hatcheries.
- Collect and analyze hatchery performance data at the three southern hatcheries to assist in determining energy efficiency improvements.
- Provide recommendations to Production Manager for hatchery energy efficiency improvement prioritizations, including estimated investment cost, energy savings and return on investment (ROI) times.

**Duty 3**

**General Summary:**

**Percentage: 10**

Purchasing, planning, and budget related duties

**Individual tasks related to the duty:**

- Purchase supplies as needed.
- Code and submit invoices and other expenditures in a timely fashion so they are charged to the appropriate budget.
- Work with supervisor to develop budget request and timelines for large scale projects.
- Assist with utilizing the Unit budget, the Division's major maintenance and equipment funds, capital outlay funds, and other potential funding sources as appropriate, in consultation with supervisor.
- Work with DNR Buyers, Fish Production Section / Division support staff, supervisor, and Maintenance Mechanic Supervisors to complete requisitions (RQN's) for projects that are above the set levels identified by DNR Purchasing Grid for Commodities and Services.
- Consult and work with supervisor to develop the annual work plan for the Electronics and Automation Unit, based on knowledge of each hatchery and systems that support that facility, as well as projected needs based on maintenance history, energy efficiencies, new technology, and expected life of electrical components.

**Duty 4**

**General Summary:**

**Percentage: 5**

Other duties as assigned and special projects.

**Individual tasks related to the duty:**

Special projects as assigned by supervisor or Production Section Manager..

16. Describe the types of decisions made independently in this position and tell who or what is affected by those decisions.

For the assigned hatcheries, the position must make independent decisions on prioritizing duties for analyzing SCADA systems, developing and critically analyzing new designs for alarm systems, making updates and changes to the alarm system programming, research new systems and programming to increase reliability and decrease costs. The ability of fish hatcheries to reliably produce the requested number of fish and eggs depends on properly functioning alarm systems. Without proper monitoring and upgrades to the automated alarm systems, fish production staff would have to be present at the hatchery 24-hours a day to monitor critical life support systems to prevent significant fish losses from malfunctioning equipment.

**17. Describe the types of decisions that require the supervisor's review.**

- Purchases or expenditures more than \$500.
- Changes to established practices.
- Major changes to facilities and/or equipment designs and significant changes to the annual budgets and workplans are made in consultation with supervisor.
- Decisions in situations where clear guidance or policy does not exist or has not been stated.

**18. What kind of physical effort is used to perform this job? What environmental conditions in this position physically exposed to on the job? Indicate the amount of time and intensity of each activity and condition. Refer to instructions.**

This position entails routine office and computer work including use of general office equipment. Must be able to work outdoors or in outbuildings in all types of weather conditions if needed. Must also be able to work near equipment where noise, vibration, and auto-start machinery, around electricity, as well as in and around water with varying temperatures and qualities. Bending, squatting, pushing, kneeling, walking, prolonged standing and sitting (driving), is sometimes required. Travel is required to fish production facilities and other Fisheries Division locations, which may be on very short notice or for extended overnights when emergency situations exist. Due to emergencies, irregular hours are sometimes required including evenings, weekends, holidays.

**19. List the names and position code descriptions of each classified employee whom this position immediately supervises or oversees on a full-time, on-going basis.**

**Additional Subordinates**

**20. This position's responsibilities for the above-listed employees includes the following (check as many as apply):**

- |   |  |
|---|--|
| <input type="checkbox"/> Complete and sign service ratings. | <input type="checkbox"/> Assign work.                      |
| <input type="checkbox"/> Provide formal written counseling. | <input type="checkbox"/> Approve work.                     |
| <input type="checkbox"/> Approve leave requests.            | <input type="checkbox"/> Review work.                      |
| <input type="checkbox"/> Approve time and attendance.       | <input type="checkbox"/> Provide guidance on work methods. |
| <input type="checkbox"/> Orally reprimand.                  | <input type="checkbox"/> Train employees in the work.      |

**22. Do you agree with the responses for items 1 through 20? If not, which items do you disagree with and why?**

Yes

**23. What are the essential functions of this position?**

This position serves as an automation staff specialist for Fish Production Section's Supplemental Electronics and Automation unit, involved with analyzing and supporting operations of southern hatcheries' Supervisory Control and Data Acquisition (SCADA) systems and associated software.

**24. Indicate specifically how the position's duties and responsibilities have changed since the position was last reviewed.**

Position has evolved to now serve as the sole staff specialist responsible for analyzing and supporting operations of the southern fish hatcheries' Supervisory Control and Data Acquisition (SCADA) systems and associated software.

**25. What is the function of the work area and how does this position fit into that function?**

The position provides assistance in the Fish Production's Supplemental Electronic and Automation Unit and supports the automation systems and software that are critical to monitor life support systems in State of Michigan fish production facilities. This staff specialist serves as one of two specialists performing analysis of system performance, researching, designing, testing, evaluating, maintaining and programming modifications, replacements, and enhancements of Programmable Logic Controller (PLC) based OPTO Epic Groov SCADA alarm systems and associated critical software that keep fish alive during emergencies at DNR state fish hatcheries and weirs, plus other Fisheries units as needed. This position's area of responsibility includes three hatcheries: Platte River, Harrietta and Wolf Lake State Fish Hatcheries. The position works closely with maintenance and fish culture staff at these hatcheries and their work is a critical link between facility operation and rearing fish for stocking, ensuring that staff are notified of alarms and can respond quickly to correct the emergency situations before fish die, which would create a significant financial loss. System failures could quickly result in significant fish losses, resulting in fewer fish available to stock for fisheries management programs, negatively impacting the economic value of Michigan fisheries and causing significant public relations problems for Fisheries Division, DNR and SOM.

**26. What are the minimum education and experience qualifications needed to perform the essential functions of this position.**

**EDUCATION:**

Possession of an associate's degree in electrical, electromechanical, electronics engineering, or electronics technology.

**EXPERIENCE:**

**Equipment Technician 12**

Four years of experience in the installation, maintenance, troubleshooting, and repair of electrical and electronic equipment equivalent to an Equipment Technician, including two years equivalent to an Equipment Technician E10 or one year equivalent to an Equipment Technician 11.

**Alternate Education and Experience**

**Equipment Technician 8 - 12**

Four years of experience in the installation, maintenance, troubleshooting, and repair of electrical and electronic equipment may be substituted for the education requirement. This is in addition to the experience requirements for the specific levels.

A certificate from a two year, post-secondary, technical program in electrical, electromechanical, or electronics technology may be substituted for the education requirement.

**KNOWLEDGE, SKILLS, AND ABILITIES:**

- Knowledge of the principles and practices of research and analysis.
- Knowledge of SCADA systems and certified training in OPTO Epic Groov.
- Knowledge in technical application support providers.
- Knowledge of script block programming and ladder logic.
- Knowledge of the principles of administrative management, including budgeting techniques, office procedures, and reporting.
- Knowledge of the tools of management, such as methods development, cost analysis, procedural manuals, training materials, operating controls, records and reports, and studies applicable in evaluating programs or services.
- Knowledge of operation and maintenance alarm monitoring and control systems.
- Knowledge of ethernet networks and fiber optics.
- Knowledge of safe work practices and procedures.
- Ability to design and test new alarm systems and software.
- Ability to troubleshoot computer, network, and software problems.
- Ability to provide training on automation systems and software.
- Ability to work and communicate effectively as part of a team.
- Ability to prepare requests for proposals and program agreements.
- Ability to organize, evaluate, and present information effectively.
- Ability to interpret laws, rules, codes and regulations relative to the work.
- Ability to formulate plans, procedures, and controls in a program or service area.
- Ability to learn and utilize computer processes.

**CERTIFICATES, LICENSES, REGISTRATIONS:**

- Valid Driver's License
- Preferred Certification in OPTO Epic Groov Premium training.
- Preferred Fit Leader or other leadership training certification.

**NOTE: Civil Service approval does not constitute agreement with or acceptance of the desired qualifications of this position.**

*I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.*

\_\_\_\_\_  
Supervisor

\_\_\_\_\_  
Date

**TO BE FILLED OUT BY APPOINTING AUTHORITY**

Indicate any exceptions or additions to the statements of employee or supervisors.

N/A

*I certify that the entries on these pages are accurate and complete.*

MAGDALENA THUMSER

1/17/2025

\_\_\_\_\_  
Appointing Authority

\_\_\_\_\_  
Date

*I certify that the information presented in this position description provides a complete and accurate depiction of the duties and responsibilities assigned to this position.*

\_\_\_\_\_  
Employee

\_\_\_\_\_  
Date