



Water Resource Supervisor

Electives: Watershed/ Springshed/ Groundwater

QP Code: AGR/Q6605

Version: 2.0

NSQF Level: 5.5

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AGR/Q6605: Water Resource Supervisor

Brief Job Description

A Water Resource Supervisor is responsible for building the technical capacities of water resource assistants, community mobilizers, para geo-hydrologists and facilitators, data management and analysis, project monitoring and reporting and water budgeting. The person also supervises the planning and implementation of watershed/ springshed/ groundwater resource projects.

Personal Attributes

The individual must have attention to detail, problem-solving, team management, and organizational skills. The person should be able to work in coordination with multiple stakeholders. Excellent written and verbal communication skills are also critical in this job role.

Applicable National Occupational Standards (NOS)

Compulsory NOS:

1. [AGR/N6645: Build technical capacities of water resource assistants, community mobilizers, para geo-hydrologists, and facilitators](#)
2. [AGR/N6638: Carry out data management and analysis](#)
3. [AGR/N6639: Support in regular field-level project monitoring and reporting](#)
4. [AGR/N6640: Carry out water budgeting for the target area](#)
5. [AGR/N9903: Maintain health and safety at the workplace](#)
6. [DGT/VSQ/N0103: Employability Skills \(90 Hours\)](#)

Electives(mandatory to select at least one):

Elective 1: Watershed

Specialization in Watershed

1. [AGR/N6641: Supervise watershed planning and implementation](#)

Elective 2: Springshed

Specialization in Springshed

1. [AGR/N6642: Supervise springshed planning and implementation](#)

Elective 3: Groundwater

Specialization in Groundwater

1. [AGR/N6643: Supervise the planning and implementation of groundwater resource development](#)

Qualification Pack (QP) Parameters

Sector	Agriculture
Sub-Sector	
Occupation	Watershed Management
Country	India
NSQF Level	5.5
Credits	22
Aligned to NCO/ISCO/ISIC Code	NCO-2015/NIL
Minimum Educational Qualification & Experience	Completed 3 year UG degree OR Pursuing 3rd year of UG (and continuous education) OR Completed 2nd year diploma after 12th OR 12th grade Pass (plus 2 years of vocational education and training) with 1 Year of experience in the relevant field OR Completed 3-year diploma (after 10th) with 2 Years of experience in the relevant field OR 12th grade Pass with 3 Years of experience in the relevant field OR Previous relevant Qualification of NSQF Level (5) (with 1.5 years of relevant experience) OR Previous relevant Qualification of NSQF Level (4.5) with 3 Years of experience in the relevant field
Minimum Level of Education for Training in School	Not Applicable
Pre-Requisite License or Training	NA
Minimum Job Entry Age	25 Years

Last Reviewed On	NA
Next Review Date	29/03/2026
Deactivation Date	18/02/2025
NSQC Approval Date	29/03/2023
Version	2.0
Reference code on NQR	QG-5.5-AG-00357-2023-V1-ASCI
NQR Version	1

AGR/N6645: Build technical capacities of water resource assistants, community mobilizers, para geo-hydrologists, and facilitators

Description

This OS unit is about building the technical capacities of the water resource assistants, community mobilizers, para geo-hydrologists, and facilitators.

Scope

The scope covers the following :

- Prepare for the training
- Deliver the technical training

Elements and Performance Criteria

Prepare for the training

To be competent, the user/individual on the job must be able to:

- PC1.** prepare the training modules and training calendar based on the need assessment
- PC2.** prepare the training material, e.g. presentations, posters, reference booklets, etc.
- PC3.** identify the appropriate tools and technologies for delivering the training
- PC4.** liaise with the relevant stakeholders, such as line department officials, universities, research organizations, etc., for resource mobilization
- PC5.** prepare and finalize the budget for the training and coordinate with the relevant authority to get approval, if required

Deliver the technical training

To be competent, the user/individual on the job must be able to:

- PC6.** conduct classroom/ virtual/ practical training for the facilitators and other stakeholders, such as government officials
- PC7.** ensure to take feedback from the learners after training to identify and plan improvements
- PC8.** prepare and compile the training reports and submit them to the relevant authority
- PC9.** ensure regular interaction with the learners virtually to resolve any issues experienced after the training

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the principles of pedagogy, including how to engage with the learners, ice-breakers, etc.
- KU2.** the role and background of learners
- KU3.** the relevant health and safety facilities required for the training, such as first aid box, fire extinguishers, etc.
- KU4.** the importance of selecting the appropriate training material according to the learners
- KU5.** different formats and templates for various forms and reports

- KU6.** the process of preparing the training modules and training calendar based on the need assessment
- KU7.** how to prepare the training material, e.g. presentations, posters, reference booklets, etc.
- KU8.** the importance of using the appropriate tools and technologies for delivering training
- KU9.** the importance of liaising with the relevant stakeholders, such as line department officials, universities, research organizations, etc., for resource mobilization
- KU10.** the process of preparing and finalizing the budget for the training and getting it approved by the relevant authority
- KU11.** how to conduct classroom/ virtual/ practical training
- KU12.** the importance and methods of taking feedback from learners after training to identify and plan improvements
- KU13.** how to prepare and compile the relevant training reports
- KU14.** the importance of regularly interacting with the learners to resolve any issues experienced after the training or give them required clarifications

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.** communicate clearly and politely with co-workers and clients
- GS3.** read the relevant literature to get information about the latest developments in the field of work
- GS4.** plan and prioritize tasks to ensure timely completion
- GS5.** coordinate with co-workers to achieve work objectives
- GS6.** listen attentively to understand the information/ instructions being shared by the speaker
- GS7.** identify possible disruptions to work and take appropriate preventive measures

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Prepare for the training</i>	16	22	-	15
PC1. prepare the training modules and training calendar based on the need assessment	-	-	-	-
PC2. prepare the training material, e.g. presentations, posters, reference booklets, etc.	-	-	-	-
PC3. identify the appropriate tools and technologies for delivering the training	-	-	-	-
PC4. liaise with the relevant stakeholders, such as line department officials, universities, research organizations, etc., for resource mobilization	-	-	-	-
PC5. prepare and finalize the budget for the training and coordinate with the relevant authority to get approval, if required	-	-	-	-
<i>Deliver the technical training</i>	14	18	-	15
PC6. conduct classroom/ virtual/ practical training for the facilitators and other stakeholders, such as government officials	-	-	-	-
PC7. ensure to take feedback from the learners after training to identify and plan improvements	-	-	-	-
PC8. prepare and compile the training reports and submit them to the relevant authority	-	-	-	-
PC9. ensure regular interaction with the learners virtually to resolve any issues experienced after the training	-	-	-	-
NOS Total	30	40	-	30

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N6645
NOS Name	Build technical capacities of water resource assistants, community mobilizers, para geo-hydrologists, and facilitators
Sector	Agriculture
Sub-Sector	Forestry, Environment and Renewable Energy Management
Occupation	Watershed Management
NSQF Level	5.5
Credits	2
Version	1.0
Last Reviewed Date	NA
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

AGR/N6638: Carry out data management and analysis

Description

This OS unit is about carrying out data management and analysis concerning water resource development and implementation. It also covers audit-related reporting and documentation requirements

Scope

The scope covers the following :

- Guide in data collection
- Analyse the collected data
- Carry out audit-related reporting and documentation

Elements and Performance Criteria

Guide in data collection

To be competent, the user/individual on the job must be able to:

- PC1.** prepare the yearly calendar for data collection and set up a monitoring network
- PC2.** guide in identifying the sources and methods for the collection of primary and secondary data
- PC3.** support in preparing the appropriate formats and templates for data collection
- PC4.** liaise with different stakeholders for data collection
- PC5.** estimate the budget for data collection and coordinate with the relevant authority to get approval
- PC6.** verify the collected data for completeness and correctness and guide the functionaries in taking the appropriate corrective measures
- PC7.** guide the field functionaries in entering data in Management Information System (MIS)

Analyse the collected data

To be competent, the user/individual on the job must be able to:

- PC8.** prepare the composite map using the collected data and cadastral map, toposheets, PRA maps, etc.
- PC9.** carry out data curation, including analysis, interpretation, visualization, dissemination and demystification for communities
- PC10.** select an appropriate method and conduct an impact assessment, e.g. baseline vs endline, control vs test, case studies, change in the cropping pattern and irrigation method, etc.
- PC11.** analyse the annual water budget along with the interventions undertaken to identify the gaps and determine the further course of action
- PC12.** support in temporal and spatial analysis of the impact on land use pattern, water productivity and water use efficiency

Carry out audit-related reporting and documentation

To be competent, the user/individual on the job must be able to:

- PC13.** identify the audit-related documentation to be completed in an appropriate format
- PC14.** prepare all the documents within the stipulated time according to the organizational procedure, meeting the regulatory and compliance requirements

- PC15.** maintain the books of accounts, monitoring and tracking the use of funds
- PC16.** support in the preparation of the annual audit report as per the existing audit arrangements
- PC17.** ensure the documents are available to the relevant authorities for inspecting
- PC18.** coordinate with the relevant authority while processing the requests for information, following the applicable organizational procedures
- PC19.** maintain communication with the stakeholders and team members and apprise them of data availability (manually or electronically), audit reports, and other relevant issues
- PC20.** coordinate with the appropriate authority to resolve the data problems/incidents, reporting the relevant problems/ incidents promptly as per the organizational procedure

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** different types of available maps, their source, and how to read them
- KU2.** how to prepare composite maps
- KU3.** different methods of data analysis and the tools required
- KU4.** different methods of impact assessment
- KU5.** different formats and templates of water budgeting
- KU6.** how to draw relevant graphs
- KU7.** the use of relevant software tools and mobile applications
- KU8.** the process of preparing a yearly calendar for data collection and setting up a monitoring network
- KU9.** different sources and methods for the collection of primary and secondary data
- KU10.** the appropriate formats and templates used for data collection
- KU11.** the process of estimating the budget for data collection and taking approval from the relevant authority
- KU12.** the importance of verifying the collected data for completeness and correctness and ensuring appropriate corrective measures are taken by the field functionaries
- KU13.** how to manage data using Management Information System (MIS)
- KU14.** how to prepare a composite map using the cadastral map, toposheets, PRA maps, etc.
- KU15.** the process of data curation, including analysis, interpretation, visualization, dissemination and demystification for communities
- KU16.** the appropriate methods for conducting an impact assessment, e.g. baseline vs endline, control vs test, case studies, change in the cropping pattern and irrigation method, etc.
- KU17.** the importance of analysing the annual water budget along with the interventions undertaken to identify the gaps and determine the further course of action
- KU18.** the temporal and spatial analysis of the impact on land use pattern, water productivity and water use efficiency
- KU19.** the applicable audit-related reporting and documentation requirements

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.** communicate clearly and politely with co-workers and clients
- GS3.** read the relevant literature to get information about the latest developments in the field of work
- GS4.** plan and prioritize tasks to ensure timely completion
- GS5.** take quick decisions to deal with workplace emergencies/ accidents
- GS6.** listen attentively to understand the information/ instructions being shared by the speaker
- GS7.** identify possible disruptions to work and take appropriate preventive measures
- GS8.** coordinate with co-workers to achieve work objectives

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Guide in data collection</i>	11	14	-	11
PC1. prepare the yearly calendar for data collection and set up a monitoring network	-	-	-	-
PC2. guide in identifying the sources and methods for the collection of primary and secondary data	-	-	-	-
PC3. support in preparing the appropriate formats and templates for data collection	-	-	-	-
PC4. liaise with different stakeholders for data collection	-	-	-	-
PC5. estimate the budget for data collection and coordinate with the relevant authority to get approval	-	-	-	-
PC6. verify the collected data for completeness and correctness and guide the functionaries in taking the appropriate corrective measures	-	-	-	-
PC7. guide the field functionaries in entering data in Management Information System (MIS)	-	-	-	-
<i>Analyse the collected data</i>	8	10	-	8
PC8. prepare the composite map using the collected data and cadastral map, toposheets, PRA maps, etc.	-	-	-	-
PC9. carry out data curation, including analysis, interpretation, visualization, dissemination and demystification for communities	-	-	-	-
PC10. select an appropriate method and conduct an impact assessment, e.g. baseline vs endline, control vs test, case studies, change in the cropping pattern and irrigation method, etc.	-	-	-	-
PC11. analyse the annual water budget along with the interventions undertaken to identify the gaps and determine the further course of action	-	-	-	-
PC12. support in temporal and spatial analysis of the impact on land use pattern, water productivity and water use efficiency	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Carry out audit-related reporting and documentation</i>	11	16	-	11
PC13. identify the audit-related documentation to be completed in an appropriate format	-	-	-	-
PC14. prepare all the documents within the stipulated time according to the organizational procedure, meeting the regulatory and compliance requirements	-	-	-	-
PC15. maintain the books of accounts, monitoring and tracking the use of funds	-	-	-	-
PC16. support in the preparation of the annual audit report as per the existing audit arrangements	-	-	-	-
PC17. ensure the documents are available to the relevant authorities for inspecting	-	-	-	-
PC18. coordinate with the relevant authority while processing the requests for information, following the applicable organizational procedures	-	-	-	-
PC19. maintain communication with the stakeholders and team members and apprise them of data availability (manually or electronically), audit reports, and other relevant issues	-	-	-	-
PC20. coordinate with the appropriate authority to resolve the data problems/incidents, reporting the relevant problems/ incidents promptly as per the organizational procedure	-	-	-	-
NOS Total	30	40	-	30

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N6638
NOS Name	Carry out data management and analysis
Sector	Agriculture
Sub-Sector	Forestry, Environment and Renewable Energy Management
Occupation	Watershed Management
NSQF Level	5.5
Credits	3
Version	1.0
Last Reviewed Date	NA
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

AGR/N6639: Support in regular field-level project monitoring and reporting

Description

This OS unit is about supporting regular field-level project monitoring and reporting concerning the progress in water resource planning and implementation

Scope

The scope covers the following :

- Support in regular field-level project monitoring
- Support in regular field-level reporting of the progress

Elements and Performance Criteria

Support in regular field-level project monitoring

To be competent, the user/individual on the job must be able to:

- PC1.** conduct regular monitoring to ensure good quality implementation of physical structures
- PC2.** conduct regular monitoring of sensitization and Information, Education and Communication (IEC) activities
- PC3.** support in regular monitoring of physical and financial progress of the project
- PC4.** support in monitoring the functioning of governance institutions and adherence to bylaws concerning the water resource usage
- PC5.** support in monitoring the impact of interventions on underprivileged sections of the community
- PC6.** support in monitoring and analysing the performance of field functionaries
- PC7.** curate challenges from the field to help inform changes in program design, capacity building and other areas
- PC8.** use data, decision support tools, appropriate formats, templates and framework to conduct regular monitoring

Support in regular field-level reporting of the progress

To be competent, the user/individual on the job must be able to:

- PC9.** prepare and submit training, sensitization and IEC activity reports in the prescribed formats
- PC10.** assist in preparing the progress and impact reports as per the project requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the use of relevant templates and formats for monitoring and reporting project progress
- KU2.** different ways of conducting IEC activities and the materials used
- KU3.** project milestones, budget and applicable Key Performance Indicators (KPIs)
- KU4.** technical specifications of different water conservation structures

- KU5.** different institutions and mechanisms of governance
- KU6.** different frameworks for assessing the performance of field functionaries and ways of encouraging them
- KU7.** the use of relevant monitoring and reporting software tools and mobile applications, such as Management Information System (MIS) and Geographic Information System (GIS)-based tools, etc.
- KU8.** the importance of regular monitoring to ensure good quality implementation of physical structures
- KU9.** the process of monitoring the sensitization and Information, Education and Communication (IEC) activities
- KU10.** the process of monitoring the physical and financial progress of the project
- KU11.** the importance and process of monitoring the functioning of governance institutions and adherence to bylaws concerning the water resource usage
- KU12.** the importance of monitoring the impact of interventions on underprivileged sections of the community
- KU13.** how to monitor and analyse the performance of field functionaries
- KU14.** how to curate challenges from the field to help inform changes in program design, capacity building and other areas
- KU15.** the use of relevant data, decision support tools, appropriate formats, templates and frameworks for monitoring
- KU16.** prepare and submit training, sensitization and IEC activities in the prescribed formats
- KU17.** the process of preparing progress and impact reports as per the project requirements

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.** communicate clearly and politely with co-workers and clients
- GS3.** read the relevant literature to get information about the latest developments in the field of work
- GS4.** plan and prioritize tasks to ensure timely completion
- GS5.** listen attentively to understand the information/ instructions being shared by the speaker
- GS6.** coordinate with co-workers to achieve work objectives
- GS7.** evaluate all possible solutions to a problem to select the best one
- GS8.** identify possible disruptions to work and take appropriate preventive measures
- GS9.** take quick decisions to deal with workplace emergencies/ accidents

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Support in regular field-level project monitoring</i>	24	32	-	24
PC1. conduct regular monitoring to ensure good quality implementation of physical structures	-	-	-	-
PC2. conduct regular monitoring of sensitization and Information, Education and Communication (IEC) activities	-	-	-	-
PC3. support in regular monitoring of physical and financial progress of the project	-	-	-	-
PC4. support in monitoring the functioning of governance institutions and adherence to bylaws concerning the water resource usage	-	-	-	-
PC5. support in monitoring the impact of interventions on underprivileged sections of the community	-	-	-	-
PC6. support in monitoring and analysing the performance of field functionaries	-	-	-	-
PC7. curate challenges from the field to help inform changes in program design, capacity building and other areas	-	-	-	-
PC8. use data, decision support tools, appropriate formats, templates and framework to conduct regular monitoring	-	-	-	-
<i>Support in regular field-level reporting of the progress</i>	6	8	-	6
PC9. prepare and submit training, sensitization and IEC activity reports in the prescribed formats	-	-	-	-
PC10. assist in preparing the progress and impact reports as per the project requirements	-	-	-	-
NOS Total	30	40	-	30

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N6639
NOS Name	Support in regular field-level project monitoring and reporting
Sector	Agriculture
Sub-Sector	Forestry, Environment and Renewable Energy Management
Occupation	Watershed Management
NSQF Level	5.5
Credits	3
Version	1.0
Last Reviewed Date	NA
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

AGR/N6640: Carry out water budgeting for the target area

Description

This OS unit is about preparing the water budget based on the availability and utilization of water in the target area. It also includes the promotion of effective supply and demand-side water management interventions.

Scope

The scope covers the following :

- Ensure data collection for water budgeting
- Carry out water budgeting and support in presenting the findings
- Ensure follow-up and development of a plan

Elements and Performance Criteria

Ensure data collection for water budgeting

To be competent, the user/individual on the job must be able to:

- PC1.** prepare the seasonal calendar for data collection
- PC2.** guide in data collection and preparing the appropriate formats and templates
- PC3.** verify the collected data for completeness and correctness

Carry out water budgeting and support in presenting the findings

To be competent, the user/individual on the job must be able to:

- PC4.** prepare the necessary metrics related to water resource development to track the performance at the required level of the institution in consultation with senior officials
- PC5.** support in sensitizing the community about water governance and budgeting
- PC6.** compile and organise the data for analysis
- PC7.** prepare a pictogram on water budgeting
- PC8.** ensure and support in presenting the findings to the community in a timely manner

Ensure follow-up and develop a plan

To be competent, the user/individual on the job must be able to:

- PC9.** conduct regular review meetings with field functionaries
- PC10.** ensure the compilation of community feedback on the findings of water budgeting
- PC11.** guide the field functionaries to prepare a plan based on findings and community feedback
- PC12.** ensure the development of a plan
- PC13.** support the quality assurance of the program across all the activities for the optimal utilization of resources
- PC14.** check the implementation and effectiveness of the action plan, and make additional recommendations as required

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the water and water-related issues, i.e. accessibility, availability, quality, social issues, traditional knowledge and practices holistically
- KU2.** different government projects and programs regarding water resource development and management
- KU3.** the significance of water budgeting in the planning of water resource planning and development interventions
- KU4.** the importance of discussing water budgeting results with the village community for the preparation of a water use plan
- KU5.** the relevant quality management processes
- KU6.** different water management techniques
- KU7.** standard procedures for water budgeting
- KU8.** the basics of hydraulics such as pressure, flow and hydrological cycle
- KU9.** the basics and norms of the calculation of water requirement for drinking, domestic and crop-water
- KU10.** different types of pumps, piping networks, PVC fittings and their applications
- KU11.** how to prepare the seasonal calendar for data collection
- KU12.** the process of collecting data and preparing the appropriate formats and templates
- KU13.** the importance and process of verifying the collected data for completeness and correctness
- KU14.** the importance of sensitizing the community about water governance and budgeting
- KU15.** how to compile and organise the relevant data for analysis
- KU16.** how to prepare a pictogram on water budgeting
- KU17.** the importance of presenting the water budgeting findings to the community in a timely manner
- KU18.** the importance of conducting regular review meetings with field functionaries
- KU19.** the importance of taking community feedback on the findings of water budgeting
- KU20.** the process of preparing a plan based on the water budgeting findings and community feedback
- KU21.** the relevant metrics to track the performance of water resource development programs
- KU22.** the importance of checking the implementation and effectiveness of the action plan

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.** communicate clearly and politely with co-workers and clients
- GS3.** read the relevant literature to get information about the latest developments in the field of work
- GS4.** plan and prioritize tasks to ensure timely completion
- GS5.** listen attentively to understand the information/ instructions being shared by the speaker
- GS6.** coordinate with co-workers to achieve work objectives
- GS7.** evaluate all possible solutions to a problem to select the best one
- GS8.** identify possible disruptions to work and take appropriate preventive measures

GS9. take quick decisions to deal with workplace emergencies/ accidents

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Ensure data collection for water budgeting</i>	6	9	-	6
PC1. prepare the seasonal calendar for data collection	-	-	-	-
PC2. guide in data collection and preparing the appropriate formats and templates	-	-	-	-
PC3. verify the collected data for completeness and correctness	-	-	-	-
<i>Carry out water budgeting and support in presenting the findings</i>	11	15	-	11
PC4. prepare the necessary metrics related to water resource development to track the performance at the required level of the institution in consultation with senior officials	-	-	-	-
PC5. support in sensitizing the community about water governance and budgeting	-	-	-	-
PC6. compile and organise the data for analysis	-	-	-	-
PC7. prepare a pictogram on water budgeting	-	-	-	-
PC8. ensure and support in presenting the findings to the community in a timely manner	-	-	-	-
<i>Ensure follow-up and develop a plan</i>	13	16	-	13
PC9. conduct regular review meetings with field functionaries	-	-	-	-
PC10. ensure the compilation of community feedback on the findings of water budgeting	-	-	-	-
PC11. guide the field functionaries to prepare a plan based on findings and community feedback	-	-	-	-
PC12. ensure the development of a plan	-	-	-	-
PC13. support the quality assurance of the program across all the activities for the optimal utilization of resources	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. check the implementation and effectiveness of the action plan, and make additional recommendations as required	-	-	-	-
NOS Total	30	40	-	30

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N6640
NOS Name	Carry out water budgeting for the target area
Sector	Agriculture
Sub-Sector	Forestry, Environment and Renewable Energy Management
Occupation	Watershed Management
NSQF Level	5.5
Credits	3
Version	1.0
Last Reviewed Date	NA
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

AGR/N9903: Maintain health and safety at the workplace

Description

This OS is about maintaining health and safety of self and other co-workers at the workplace

Scope

The scope covers the following :

- Maintain personal hygiene
- Maintain clean and safe workplace
- Administer appropriate emergency procedures

Elements and Performance Criteria

Maintain personal hygiene

To be competent, the user/individual on the job must be able to:

- PC1.** wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals
- PC2.** wash the worn clothes with soap and sun dry before use next time
- PC3.** ensure the face is covered with mask or three layers of cloth-piece
- PC4.** follow the workplace sanitization norms including distancing from sick people

Maintain clean and safe workplace

To be competent, the user/individual on the job must be able to:

- PC5.** carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor
- PC6.** wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy
- PC7.** follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards
- PC8.** assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices
- PC9.** sanitize equipment, tools and machinery before and after use
- PC10.** use equipment and materials safely and correctly and return the same to designated storage after use
- PC11.** dispose waste safely and correctly in the designated area
- PC12.** recognize risks to bystanders and take required action to reduce the risks
- PC13.** work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed
- PC14.** report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger
- PC15.** follow government / workplace advisories incase of outbreak of any disease/disaster

Administer appropriate emergency procedures

To be competent, the user/individual on the job must be able to:

- PC16.** follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements
- PC17.** use emergency equipment in accordance with manufacturer's specifications and workplace requirements
- PC18.** provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques
- PC19.** recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate
- PC20.** report details of first aid administered in accordance with workplace procedures

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** relevant legislation, standards, policies, and procedures at work
- KU2.** relevant health and safety requirements applicable to the work environment
- KU3.** own job role and responsibilities and sources of information pertaining to work
- KU4.** who to approach for support in order to obtain work related information, clarifications and support
- KU5.** importance of following health, hygiene, safety and quality standards and the impact of not following the standards on consumers and the business
- KU6.** personal hygiene and fitness requirement
- KU7.** importance of sanitization of the workplace
- KU8.** types of Personal Protective Equipment (PPE) required at the workplace and their importance
- KU9.** the correct and safe way to use materials and equipment required for the work
- KU10.** the importance of good housekeeping at the workplace
- KU11.** safe waste disposal methods
- KU12.** methods for minimizing environmental damage during work
- KU13.** the risks to health and safety including contagious diseases and the measures to be taken to control those risks in the area of work
- KU14.** workplace procedures and requirements for the prevention and treatment of workplace injuries/illnesses.
- KU15.** basic emergency first aid procedure
- KU16.** local emergency services
- KU17.** why accidents, incidents and problems should be reported and the appropriate actions to be taken

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** record the data as per the requirement
- GS2.** report problems to the appropriate personnel in a timely manner
- GS3.** read instruction manual for hand tool and equipments

- GS4.** communicate clearly and effectively with co-workers, and other stakeholders
- GS5.** comprehend information shared by senior people and experts
- GS6.** make decisions pertaining to personal hygiene and safety
- GS7.** schedule daily activities and draw up priorities
- GS8.** manage relationships with co-workers, manager and other stakeholders
- GS9.** assess situation and identify appropriate control measures

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Maintain personal hygiene</i>	10	5	-	10
PC1. wash hands, legs and face with soap/alcohol based sanitizer at reasonable intervals	-	-	-	-
PC2. wash the worn clothes with soap and sun dry before use next time	-	-	-	-
PC3. ensure the face is covered with mask or three layers of cloth-piece	-	-	-	-
PC4. follow the workplace sanitization norms including distancing from sick people	-	-	-	-
<i>Maintain clean and safe workplace</i>	15	15	-	15
PC5. carry out basic safety checks before operation of all tools, implements, and machinery and report identified hazards to the supervisor	-	-	-	-
PC6. wear appropriate Personal Protective Equipment (PPE) while performing work in accordance with the workplace policy	-	-	-	-
PC7. follow the instructions mentioned on the labels of chemicals/pesticides/fumigants etc to avoid hazards	-	-	-	-
PC8. assess risks prior to performing manual handling jobs, and work according to currently recommended safe practices	-	-	-	-
PC9. sanitize equipment, tools and machinery before and after use	-	-	-	-
PC10. use equipment and materials safely and correctly and return the same to designated storage after use	-	-	-	-
PC11. dispose waste safely and correctly in the designated area	-	-	-	-
PC12. recognize risks to bystanders and take required action to reduce the risks	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. work in a manner which minimizes environmental damage, ensuring all procedures and instructions for controlling risks are followed	-	-	-	-
PC14. report any accidents, incidents or problems without delay to an appropriate person and take necessary immediate action to reduce further danger	-	-	-	-
PC15. follow government / workplace advisories in case of outbreak of any disease/disaster	-	-	-	-
<i>Administer appropriate emergency procedures</i>	15	5	-	10
PC16. follow procedures for dealing with accidents, fires and emergencies, including communicating location and directions to the location of emergency, as per the workplace requirements	-	-	-	-
PC17. use emergency equipment in accordance with manufacturer's specifications and workplace requirements	-	-	-	-
PC18. provide treatment appropriate to the patient's injuries in accordance with recognized first aid techniques	-	-	-	-
PC19. recover (if practical), clean, inspect/test, refurbish, replace and store the first aid equipment as appropriate	-	-	-	-
PC20. report details of first aid administered in accordance with workplace procedures	-	-	-	-
NOS Total	40	25	-	35

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N9903
NOS Name	Maintain health and safety at the workplace
Sector	Agriculture
Sub-Sector	Generic
Occupation	Generic
NSQF Level	4
Credits	1
Version	4.0
Last Reviewed Date	22/10/2024
Next Review Date	22/10/2027
NSQC Clearance Date	22/10/2024

DGT/VSQ/N0103: Employability Skills (90 Hours)

Description

This unit is about employability skills, Constitutional values, becoming a professional in the 21st Century, digital, financial, and legal literacy, diversity and Inclusion, English and communication skills, customer service, entrepreneurship, and apprenticeship, getting ready for jobs and career development.

Scope

The scope covers the following :

- Introduction to Employability Skills
- Constitutional values - Citizenship
- Becoming a Professional in the 21st Century
- Basic English Skills
- Career Development & Goal Setting
- Communication Skills
- Diversity & Inclusion
- Financial and Legal Literacy
- Essential Digital Skills
- Entrepreneurship
- Customer Service
- Getting ready for Apprenticeship & Jobs

Elements and Performance Criteria

Introduction to Employability Skills

To be competent, the user/individual on the job must be able to:

- PC1.** understand the significance of employability skills in meeting the current job market requirement and future of work
- PC2.** identify and explore learning and employability relevant portals
- PC3.** research about the different industries, job market trends, latest skills required and the available opportunities

Constitutional values - Citizenship

To be competent, the user/individual on the job must be able to:

- PC4.** recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.
- PC5.** follow environmentally sustainable practices

Becoming a Professional in the 21st Century

To be competent, the user/individual on the job must be able to:

- PC6.** recognize the significance of 21st Century Skills for employment
- PC7.** practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life

PC8. adopt a continuous learning mindset for personal and professional development

Basic English Skills

To be competent, the user/individual on the job must be able to:

PC9. use basic English for everyday conversation in different contexts, in person and over the telephone

PC10. read and understand routine information, notes, instructions, mails, letters etc. written in English

PC11. write short messages, notes, letters, e-mails etc. in English

Career Development & Goal Setting

To be competent, the user/individual on the job must be able to:

PC12. identify career goals based on the skills, interests, knowledge, and personal attributes

PC13. prepare a career development plan with short- and long-term goals

Communication Skills

To be competent, the user/individual on the job must be able to:

PC14. follow verbal and non-verbal communication etiquette while communicating in professional and public settings

PC15. use active listening techniques for effective communication

PC16. communicate in writing using appropriate style and format based on formal or informal requirements

PC17. work collaboratively with others in a team

Diversity & Inclusion

To be competent, the user/individual on the job must be able to:

PC18. communicate and behave appropriately with all genders and PwD

PC19. escalate any issues related to sexual harassment at workplace according to POSH Act

Financial and Legal Literacy

To be competent, the user/individual on the job must be able to:

PC20. identify and select reliable institutions for various financial products and services such as bank account, debit and credit cards, loans, insurance etc.

PC21. carry out offline and online financial transactions, safely and securely, using various methods and check the entries in the passbook

PC22. identify common components of salary and compute income, expenses, taxes, investments etc

PC23. identify relevant rights and laws and use legal aids to fight against legal exploitation

Essential Digital Skills

To be competent, the user/individual on the job must be able to:

PC24. operate digital devices and use their features and applications securely and safely

PC25. carry out basic internet operations by connecting to the internet safely and securely, using the mobile data or other available networks through Bluetooth, Wi-Fi, etc.

PC26. display responsible online behaviour while using various social media platforms

PC27. create a personal email account, send and process received messages as per requirement

PC28. carry out basic procedures in documents, spreadsheets and presentations using respective and appropriate applications

PC29. utilize virtual collaboration tools to work effectively

Entrepreneurship

To be competent, the user/individual on the job must be able to:

- PC30.** identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research
- PC31.** develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion
- PC32.** identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity

Customer Service

To be competent, the user/individual on the job must be able to:

- PC33.** identify different types of customers and ways to communicate with them
- PC34.** identify and respond to customer requests and needs in a professional manner
- PC35.** use appropriate tools to collect customer feedback
- PC36.** follow appropriate hygiene and grooming standards

Getting ready for apprenticeship & Jobs

To be competent, the user/individual on the job must be able to:

- PC37.** create a professional Curriculum vitae (Résumé)
- PC38.** search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively
- PC39.** apply to identified job openings using offline /online methods as per requirement
- PC40.** answer questions politely, with clarity and confidence, during recruitment and selection
- PC41.** identify apprenticeship opportunities and register for it as per guidelines and requirements

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** need for employability skills and different learning and employability related portals
- KU2.** various constitutional and personal values
- KU3.** different environmentally sustainable practices and their importance
- KU4.** Twenty first (21st) century skills and their importance
- KU5.** how to use English language for effective verbal (face to face and telephonic) and written communication in formal and informal set up
- KU6.** importance of career development and setting long- and short-term goals
- KU7.** about effective communication
- KU8.** POSH Act
- KU9.** Gender sensitivity and inclusivity
- KU10.** different types of financial institutes, products, and services
- KU11.** components of salary and how to compute income and expenditure
- KU12.** importance of maintaining safety and security in offline and online financial transactions
- KU13.** different legal rights and laws
- KU14.** different types of digital devices and the procedure to operate them safely and securely
- KU15.** how to create and operate an e- mail account

- KU16.** use applications such as word processors, spreadsheets etc.
- KU17.** how to identify business opportunities
- KU18.** types and needs of customers
- KU19.** how to apply for a job and prepare for an interview
- KU20.** apprenticeship scheme and the process of registering on apprenticeship portal

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** read and write different types of documents/instructions/correspondence in English and other languages
- GS2.** communicate effectively using appropriate language in formal and informal settings
- GS3.** behave politely and appropriately with all to maintain effective work relationship
- GS4.** how to work in a virtual mode, using various technological platforms
- GS5.** perform calculations efficiently
- GS6.** solve problems effectively
- GS7.** pay attention to details
- GS8.** manage time efficiently
- GS9.** maintain hygiene and sanitization to avoid infection

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. understand the significance of employability skills in meeting the current job market requirement and future of work	-	-	-	-
PC2. identify and explore learning and employability relevant portals	-	-	-	-
PC3. research about the different industries, job market trends, latest skills required and the available opportunities	-	-	-	-
<i>Constitutional values – Citizenship</i>	1	1	-	-
PC4. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC5. follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	1	3	-	-
PC6. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC7. practice the 21st Century Skills such as Self-Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
PC8. adopt a continuous learning mindset for personal and professional development	-	-	-	-
<i>Basic English Skills</i>	3	4	-	-
PC9. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC10. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC11. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-
PC12. identify career goals based on the skills, interests, knowledge, and personal attributes	-	-	-	-
PC13. prepare a career development plan with short- and long-term goals	-	-	-	-
<i>Communication Skills</i>	2	2	-	-
PC14. follow verbal and non-verbal communication etiquette while communicating in professional and public settings	-	-	-	-
PC15. use active listening techniques for effective communication	-	-	-	-
PC16. communicate in writing using appropriate style and format based on formal or informal requirements	-	-	-	-
PC17. work collaboratively with others in a team	-	-	-	-
<i>Diversity & Inclusion</i>	1	1	-	-
PC18. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC19. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
<i>Financial and Legal Literacy</i>	2	3	-	-
PC20. identify and select reliable institutions for various financial products and services such as bank account, debit and credit cards, loans, insurance etc.	-	-	-	-
PC21. carry out offline and online financial transactions, safely and securely, using various methods and check the entries in the passbook	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC22. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC23. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
<i>Essential Digital Skills</i>	3	5	-	-
PC24. operate digital devices and use their features and applications securely and safely	-	-	-	-
PC25. carry out basic internet operations by connecting to the internet safely and securely, using the mobile data or other available networks through Bluetooth, Wi-Fi, etc.	-	-	-	-
PC26. display responsible online behaviour while using various social media platforms	-	-	-	-
PC27. create a personal email account, send and process received messages as per requirement	-	-	-	-
PC28. carry out basic procedures in documents, spreadsheets and presentations using respective and appropriate applications	-	-	-	-
PC29. utilize virtual collaboration tools to work effectively	-	-	-	-
<i>Entrepreneurship</i>	2	3	-	-
PC30. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-
PC31. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC32. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
<i>Customer Service</i>	1	2	-	-
PC33. identify different types of customers and ways to communicate with them	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC34. identify and respond to customer requests and needs in a professional manner	-	-	-	-
PC35. use appropriate tools to collect customer feedback	-	-	-	-
PC36. follow appropriate hygiene and grooming standards	-	-	-	-
<i>Getting ready for apprenticeship & Jobs</i>	2	3	-	-
PC37. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC38. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC39. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC40. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC41. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	20	30	-	-

National Occupational Standards (NOS) Parameters

NOS Code	DGT/VSQ/N0103
NOS Name	Employability Skills (90 Hours)
Sector	Cross Sectoral
Sub-Sector	Professional Skills
Occupation	Employability
NSQF Level	5
Credits	3
Version	1.0
Last Reviewed Date	18/02/2025
Next Review Date	18/02/2028
NSQC Clearance Date	18/02/2025

AGR/N6641: Supervise watershed planning and implementation

Description

This OS unit is about supervising watershed planning and implementation

Scope

The scope covers the following :

- Read and analyse the relevant maps
- Supervise watershed planning and preparation of DPR
- Supervise the implementation

Elements and Performance Criteria

Read and analyse the relevant maps

To be competent, the user/individual on the job must be able to:

- PC1.** read and analyse the toposheet, cadastral, spatial and other thematic maps
- PC2.** demarcate the watershed boundary on toposheet
- PC3.** calculate the watershed area on the toposheet

Supervise watershed planning and preparation of DPR

To be competent, the user/individual on the job must be able to:

- PC4.** use different maps in watershed planning
- PC5.** guide field functionaries in the field survey, site selection and cost estimation
- PC6.** ensure the availability of different types of data for the preparation of DPR
- PC7.** carry out a detailed technical survey, e.g. L-section, cross-section, and estimation of major water harvesting structures
- PC8.** facilitate and assist in assessing the quality of water
- PC9.** support in compilation and analysis of data for DPR preparation

Supervise the implementation

To be competent, the user/individual on the job must be able to:

- PC10.** summarize the DPR to the field functionaries
- PC11.** ensure the DPR is presented to the community and watershed committee
- PC12.** prepare the seasonal calendar for the implementation of watershed interventions
- PC13.** guide and assist the field functionaries in worksite management, i.e. layout marking, labour management, work allotment, measurements, etc.
- PC14.** support the field functionaries in maintaining different records, such as cashbook, ledger, stock register, attendance sheet, measurement book, etc.
- PC15.** support in the verification of completion of work and prepare the work completion report
- PC16.** support in the preparation of payment sheet and disbursement of wages

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the watershed concept, including the ridge area, ridge line, drainage line, etc.
- KU2.** the geological and hydrogeological mapping
- KU3.** the identification and delineation of recharge and discharge area
- KU4.** the process of compiling data and preparing a DPR
- KU5.** the significance of geohydrology in watershed planning
- KU6.** the procedures related to socio-technical concepts and practices in participatory and integrated watershed management
- KU7.** the relevant watershed planning exercises followed by the organization
- KU8.** the soil and water conservation technologies, social mobilization tools, research methodologies and the appropriate watershed planning tools
- KU9.** the basics of handling teams of different expertise
- KU10.** communication and linkage-building expertise
- KU11.** read and analyse the toposheet, cadastral, spatial and other thematic maps
- KU12.** how to demarcate the watershed boundary on toposheet
- KU13.** how to calculate the watershed area on the toposheet
- KU14.** the use of different types of maps in watershed planning
- KU15.** how to conduct a field survey, select a site and estimate the relevant costs for watershed planning and implementation
- KU16.** different types of data required for preparing a DPR
- KU17.** how to compile and analyse data for the preparation of DPR
- KU18.** how to carry out detailed technical surveys, such as L-section, cross-section, and estimate major water harvesting structures
- KU19.** the process of assessing the quality of water
- KU20.** the importance of explaining the DPR to the field functionaries
- KU21.** the importance of presenting the DPR to the community and watershed committee
- KU22.** how to prepare the seasonal calendar for the implementation of watershed interventions
- KU23.** the relevant worksite management practices, such as layout marking, labour management, work allotment, measurements, etc.
- KU24.** the different records to be maintained by field functionaries, such as cashbook, ledger, stock register, attendance sheet, measurement book, etc.
- KU25.** the process of verifying the completion of work and preparing the work completion report
- KU26.** how to prepare the payment sheet for the disbursement of wages to field workers

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.** communicate clearly and politely with co-workers and clients
- GS3.** read the relevant literature to get information about the latest developments in the field of work
- GS5.** plan and prioritize tasks to ensure timely completion
- GS5.** listen attentively to understand the information/ instructions being shared by the speaker

- GS6.** coordinate with co-workers to achieve work objectives
- GS7.** take quick decisions to deal with workplace emergencies/ accidents
- GS8.** identify possible disruptions to work and take appropriate preventive measures

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Read and analyse the relevant maps</i>	6	9	-	6
PC1. read and analyse the toposheet, cadastral, spatial and other thematic maps	-	-	-	-
PC2. demarcate the watershed boundary on toposheet	-	-	-	-
PC3. calculate the watershed area on the toposheet	-	-	-	-
<i>Supervise watershed planning and preparation of DPR</i>	10	13	-	10
PC4. use different maps in watershed planning	-	-	-	-
PC5. guide field functionaries in the field survey, site selection and cost estimation	-	-	-	-
PC6. ensure the availability of different types of data for the preparation of DPR	-	-	-	-
PC7. carry out a detailed technical survey, e.g. L-section, cross-section, and estimation of major water harvesting structures	-	-	-	-
PC8. facilitate and assist in assessing the quality of water	-	-	-	-
PC9. support in compilation and analysis of data for DPR preparation	-	-	-	-
<i>Supervise the implementation</i>	14	18	-	14
PC10. summarize the DPR to the field functionaries	-	-	-	-
PC11. ensure the DPR is presented to the community and watershed committee	-	-	-	-
PC12. prepare the seasonal calendar for the implementation of watershed interventions	-	-	-	-
PC13. guide and assist the field functionaries in worksite management, i.e. layout marking, labour management, work allotment, measurements, etc.	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC14. support the field functionaries in maintaining different records, such as cashbook, ledger, stock register, attendance sheet, measurement book, etc.	-	-	-	-
PC15. support in the verification of completion of work and prepare the work completion report	-	-	-	-
PC16. support in the preparation of payment sheet and disbursement of wages	-	-	-	-
NOS Total	30	40	-	30

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N6641
NOS Name	Supervise watershed planning and implementation
Sector	Agriculture
Sub-Sector	Forestry, Environment and Renewable Energy Management
Occupation	Watershed Management
NSQF Level	5.5
Credits	1
Version	1.0
Last Reviewed Date	NA
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

AGR/N6642: Supervise springshed planning and implementation

Description

This OS unit is about assisting in delineation, preparing the Detailed Project Report (DPR) and implementation of the springshed interventions.

Scope

The scope covers the following :

- Read and analyse the relevant maps
- Supervise springshed planning and preparation of DPR
- Supervise the implementation

Elements and Performance Criteria

Read and analyse the relevant maps

To be competent, the user/individual on the job must be able to:

- PC1.** read and analyse the toposheet, cadastral, spatial and other thematic maps
- PC2.** demarcate the springshed boundary
- PC3.** calculate the springshed area

Supervise springshed planning and preparation of DPR

To be competent, the user/individual on the job must be able to:

- PC4.** use different maps in springshed planning
- PC5.** guide field functionaries in baseflow measurement, survey, site selection and cost estimation
- PC6.** ensure the availability of different types of data for the preparation of DPR
- PC7.** carry out detailed technical surveys for spring chamber, catchment protection measures, diversion-based water distribution system, and estimation of different water conservation and distribution structures
- PC8.** facilitate and assist in assessing the quality of water
- PC9.** support in compilation and analysis of data for DPR preparation

Supervise the implementation

To be competent, the user/individual on the job must be able to:

- PC10.** summarize the DPR to the field functionaries
- PC11.** ensure the DPR is presented to the community and springshed committee
- PC12.** prepare the seasonal calendar for the implementation of springshed interventions
- PC13.** guide and assist the field functionaries in worksite management, i.e. layout marking, labour management, work allotment, measurements, etc.
- PC14.** support the field functionaries in maintaining different records, such as cashbook, ledger, stock register, attendance sheet, measurement book, etc.
- PC15.** support in the verification of completion of work and prepare the work completion report
- PC16.** support in the preparation of payment sheet and disbursement of wages

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** the watershed concept, including the ridge area, ridge line, drainage line, etc.
- KU2.** the geological and hydrogeological mapping
- KU3.** the identification and delineation of recharge and discharge area
- KU4.** the process of compiling data and preparing a DPR
- KU5.** the significance of geohydrology in watershed planning
- KU6.** the procedures related to socio-technical concepts and practices in participatory and integrated watershed management
- KU7.** the relevant watershed planning exercises followed by the organization
- KU8.** the soil and water conservation technologies, social mobilization tools, research methodologies and the appropriate watershed planning tools
- KU9.** the basics of handling teams of different expertise
- KU10.** communication and linkage-building expertise
- KU11.** how to read and analyse the toposheet, cadastral, spatial and other thematic maps
- KU12.** the process of demarcating the springshed boundary and calculating the springshed area
- KU13.** the use of different types of maps in springshed planning
- KU14.** how to conduct baseflow measurement, survey, site selection and cost estimation
- KU15.** different types of data required for the preparation of a DPR in a springshed project
- KU16.** how to carry out a detailed technical survey for spring chamber, catchment protection measures, diversion-based water distribution system, and estimation of different water conservation and distribution structures
- KU17.** how to summarize the DPR to the field functionaries
- KU18.** the importance of presenting the DPR to the community and springshed committee
- KU19.** the process of preparing the seasonal calendar for the implementation of springshed interventions
- KU20.** the relevant worksite management practices in springshed resource management, such as layout marking, labour management, work allotment, measurements, etc.
- KU21.** different types of records to be maintained in springshed resource management, such as cashbook, ledger, stock register, attendance sheet, measurement book, etc.
- KU22.** the process of verifying the completion of work and preparing the work completion report
- KU23.** the process of preparing the payment sheet and disbursing wages to field workers

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.** communicate clearly and politely with co-workers and clients
- GS3.** read the relevant literature to get information about the latest developments in the field of work
- GS4.** plan and prioritize tasks to ensure timely completion
- GS5.** listen attentively to understand the information/ instructions being shared by the speaker
- GS6.** coordinate with co-workers to achieve work objectives

- GS7.** take quick decisions to deal with workplace emergencies/ accidents
- GS8.** identify possible disruptions to work and take appropriate preventive measures

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Read and analyse the relevant maps</i>	6	9	-	6
PC1. read and analyse the toposheet, cadastral, spatial and other thematic maps	-	-	-	-
PC2. demarcate the springshed boundary	-	-	-	-
PC3. calculate the springshed area	-	-	-	-
<i>Supervise springshed planning and preparation of DPR</i>	10	13	-	10
PC4. use different maps in springshed planning	-	-	-	-
PC5. guide field functionaries in baseflow measurement, survey, site selection and cost estimation	-	-	-	-
PC6. ensure the availability of different types of data for the preparation of DPR	-	-	-	-
PC7. carry out detailed technical surveys for spring chamber, catchment protection measures, diversion-based water distribution system, and estimation of different water conservation and distribution structures	-	-	-	-
PC8. facilitate and assist in assessing the quality of water	-	-	-	-
PC9. support in compilation and analysis of data for DPR preparation	-	-	-	-
<i>Supervise the implementation</i>	14	18	-	14
PC10. summarize the DPR to the field functionaries	-	-	-	-
PC11. ensure the DPR is presented to the community and springshed committee	-	-	-	-
PC12. prepare the seasonal calendar for the implementation of springshed interventions	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC13. guide and assist the field functionaries in worksite management, i.e. layout marking, labour management, work allotment, measurements, etc.	-	-	-	-
PC14. support the field functionaries in maintaining different records, such as cashbook, ledger, stock register, attendance sheet, measurement book, etc.	-	-	-	-
PC15. support in the verification of completion of work and prepare the work completion report	-	-	-	-
PC16. support in the preparation of payment sheet and disbursement of wages	-	-	-	-
NOS Total	30	40	-	30

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N6642
NOS Name	Supervise springshed planning and implementation
Sector	Agriculture
Sub-Sector	Forestry, Environment and Renewable Energy Management
Occupation	Watershed Management
NSQF Level	5.5
Credits	1
Version	1.0
Last Reviewed Date	NA
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

AGR/N6643: Supervise the planning and implementation of groundwater resource development

Description

This OS unit is about supervising the planning and implementation of groundwater resource development.

Scope

The scope covers the following :

- Read and analyse the relevant maps
- Supervise the planning for groundwater resource development
- Supervise the preparation of DPR
- Supervise the implementation

Elements and Performance Criteria

Read and analyse the relevant maps

To be competent, the user/individual on the job must be able to:

PC1. read and analyse the aquifer, geological, cadastral, spatial and other thematic maps

PC2. analyse the water table contour lines

Supervise the planning for groundwater resource development

To be competent, the user/individual on the job must be able to:

PC3. use different maps in groundwater resource development planning

PC4. guide field functionaries in the survey, site selection and cost estimation

PC5. facilitate and assist in assessing the quality of water

PC6. plan and assist the field functionaries in carrying out well inventory

Supervise the preparation of DPR

To be competent, the user/individual on the job must be able to:

PC7. ensure the availability of different types of data for the preparation of DPR

PC8. carry out detailed technical surveys for recharge and discharge structures, catchment protection measures, water distribution/ sharing system, and estimation of different water conservation and distribution structures

PC9. guide in compilation and analysis of data for DPR preparation

Supervise the implementation

To be competent, the user/individual on the job must be able to:

PC10. summarize the DPR to the field functionaries

PC11. ensure the DPR is presented to the community and groundwater management committee or other relevant committees

PC12. prepare the seasonal calendar for the implementation of groundwater resource development interventions

PC13. guide and support the field functionaries in worksite management, i.e. layout marking, labour management, work allotment, measurements, etc.

- PC14.** support the field functionaries in maintaining different records, such as the cashbook, ledger, stock register, attendance sheet, measurement book, etc.
- PC15.** support in the verification of completion of work and prepare the work completion report
- PC16.** support in the preparation of payment sheet and disbursement of wages

Knowledge and Understanding (KU)

The individual on the job needs to know and understand:

- KU1.** conjunctive use of water
- KU2.** how to read and analyse the aquifer, geological, cadastral, spatial and other thematic maps
- KU3.** how to analyse the water table contour lines
- KU4.** the use of different types of relevant maps in groundwater resource development planning
- KU5.** the process of conducting field surveys, selecting appropriate sites and estimating the costs for groundwater resource development
- KU6.** the process of assessing the quality of groundwater
- KU7.** how to carry out well inventory
- KU8.** different types of data required for the preparation of a DPR for groundwater resource development
- KU9.** the process of conducting technical surveys for recharge and discharge structures, catchment protection measures, water distribution/ sharing systems, and estimation of different water conservation and distribution structures
- KU10.** the process of compiling and analysing data for DPR preparation
- KU11.** the importance of presenting the explaining the DPR to the community, groundwater management committee or other relevant committees
- KU12.** how to prepare the seasonal calendar for the implementation of groundwater resource development interventions
- KU13.** the relevant worksite management practices, such as layout marking, labour management, work allotment, measurements, etc.
- KU14.** how to maintain different types of records, such as the cashbook, ledger, stock register, attendance sheet, measurement book, etc.
- KU15.** how to prepare the work completion report after verifying the completion of the work
- KU16.** the process of preparing the payment sheet and disbursing wages to field workers

Generic Skills (GS)

User/individual on the job needs to know how to:

- GS1.** maintain work-related notes and records
- GS2.** communicate clearly and politely with co-workers and clients
- GS3.** read the relevant literature to get information about the latest developments in the field of work
- GS4.** plan and prioritize tasks to ensure timely completion
- GS5.** listen attentively to understand the information/ instructions being shared by the speaker
- GS6.** coordinate with co-workers to achieve work objectives

- GS7.** take quick decisions to deal with workplace emergencies/ accidents
- GS8.** identify possible disruptions to work and take appropriate preventive measures

Assessment Criteria

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Read and analyse the relevant maps</i>	4	6	-	4
PC1. read and analyse the aquifer, geological, cadastral, spatial and other thematic maps	-	-	-	-
PC2. analyse the water table contour lines	-	-	-	-
<i>Supervise the planning for groundwater resource development</i>	7	9	-	7
PC3. use different maps in groundwater resource development planning	-	-	-	-
PC4. guide field functionaries in the survey, site selection and cost estimation	-	-	-	-
PC5. facilitate and assist in assessing the quality of water	-	-	-	-
PC6. plan and assist the field functionaries in carrying out well inventory	-	-	-	-
<i>Supervise the preparation of DPR</i>	6	8	-	6
PC7. ensure the availability of different types of data for the preparation of DPR	-	-	-	-
PC8. carry out detailed technical surveys for recharge and discharge structures, catchment protection measures, water distribution/ sharing system, and estimation of different water conservation and distribution structures	-	-	-	-
PC9. guide in compilation and analysis of data for DPR preparation	-	-	-	-
<i>Supervise the implementation</i>	13	17	-	13
PC10. summarize the DPR to the field functionaries	-	-	-	-
PC11. ensure the DPR is presented to the community and groundwater management committee or other relevant committees	-	-	-	-

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
PC12. prepare the seasonal calendar for the implementation of groundwater resource development interventions	-	-	-	-
PC13. guide and support the field functionaries in worksite management, i.e. layout marking, labour management, work allotment, measurements, etc.	-	-	-	-
PC14. support the field functionaries in maintaining different records, such as the cashbook, ledger, stock register, attendance sheet, measurement book, etc.	-	-	-	-
PC15. support in the verification of completion of work and prepare the work completion report	-	-	-	-
PC16. support in the preparation of payment sheet and disbursement of wages	-	-	-	-
NOS Total	30	40	-	30

National Occupational Standards (NOS) Parameters

NOS Code	AGR/N6643
NOS Name	Supervise the planning and implementation of groundwater resource development
Sector	Agriculture
Sub-Sector	Forestry, Environment and Renewable Energy Management
Occupation	Watershed Management
NSQF Level	5.5
Credits	1
Version	1.0
Last Reviewed Date	NA
Next Review Date	29/03/2026
NSQC Clearance Date	29/03/2023

Assessment Guidelines and Assessment Weightage

Assessment Guidelines

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/ training center based on these criteria.
5. In case of successfully passing only certain number of NOSs, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.
6. In case of unsuccessful completion, the trainee may seek reassessment on the Qualification Pack

Minimum Aggregate Passing % at QP Level : 70

(Please note: Every Trainee should score a minimum aggregate passing percentage as specified above, to successfully clear the Qualification Pack assessment.)

Assessment Weightage

Compulsory NOS

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N6645.Build technical capacities of water resource assistants, community mobilizers, para geo-hydrologists, and facilitators	30	40	0	30	100	15
AGR/N6638.Carry out data management and analysis	30	40	0	30	100	20
AGR/N6639.Support in regular field-level project monitoring and reporting	30	40	0	30	100	20
AGR/N6640.Carry out water budgeting for the target area	30	40	0	30	100	20
AGR/N9903.Maintain health and safety at the workplace	40	25	-	35	100	5
DGT/VSQ/N0103.Employability Skills (90 Hours)	20	30	-	-	50	5
Total	180	215	-	155	550	85

Elective: 1 Watershed

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N6641.Supervise watershed planning and implementation	30	40	0	30	100	15
Total	30	40	-	30	100	15

Elective: 2 Springshed

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N6642.Supervise springshed planning and implementation	30	40	0	30	100	15
Total	30	40	-	30	100	15

Elective: 3 Groundwater

National Occupational Standards	Theory Marks	Practical Marks	Project Marks	Viva Marks	Total Marks	Weightage
AGR/N6643.Supervise the planning and implementation of groundwater resource development	30	40	0	30	100	15
Total	30	40	-	30	100	15

Acronyms

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
PPE	Personal Protective Equipment
PPE	Personal Protective Equipment

Glossary

Sector	Sector is a conglomeration of different business operations having similar business and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Occupation	Occupation is a set of job roles, which perform similar/ related set of functions in an industry.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organisation.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the Knowledge and Understanding (KU) they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria (PC)	Performance Criteria (PC) are statements that together specify the standard of performance required when carrying out a task.
National Occupational Standards (NOS)	NOS are occupational standards which apply uniquely in the Indian context.
Qualifications Pack (QP)	QP comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A QP is assigned a unique qualifications pack code.
Unit Code	Unit code is a unique identifier for an Occupational Standard, which is denoted by an 'N'
Unit Title	Unit title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the appropriate OS they are looking for.
Scope	Scope is a set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on quality of performance required.
Knowledge and Understanding (KU)	Knowledge and Understanding (KU) are statements which together specify the technical, generic, professional and organisational specific knowledge that an individual needs in order to perform to the required standard.

Organisational Context	Organisational context includes the way the organisation is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/ Generic Skills (GS)	Core skills or Generic Skills (GS) are a group of skills that are the key to learning and working in today's world. These skills are typically needed in any work environment in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Electives	Electives are NOS/set of NOS that are identified by the sector as contributive to specialization in a job role. There may be multiple electives within a QP for each specialized job role. Trainees must select at least one elective for the successful completion of a QP with Electives.
Options	Options are NOS/set of NOS that are identified by the sector as additional skills. There may be multiple options within a QP. It is not mandatory to select any of the options to complete a QP with Options.