Assessment Requirements for AHCARB604 Measure and improve the performance of urban forests

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Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Performance Evidence

The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.

The candidate must provide evidence for and demonstrate:

- researching urban forest case studies and management reports
- reviewing best management practices in urban forest planning and management
- researching applications and functional tools measuring benefits of urban forests
- analysing social benefits of urban forests
- analysing psychological benefits of urban forests
- analysing environmental benefits of urban forests
- documenting evidence-based research into a preliminary report on benefits of urban forests
- conducting sampling analysis of an urban forest
- determining required sample size to assess total tree population
- determining accuracy of sample size
- calculating canopy cover, total carbon storage, annual carbon dioxide sequestration, rainfall interception, air pollution removal, energy savings benefit, environmental benefits and amenity benefits
- identifying base financial value for each functional benefit
- calculating financial values of functional and environmental benefits of current tree population
- determining benefits of heat island modification of urban areas
- documenting a preliminary report on total asset valuation of an urban forest
- analysing urban forest structure and functions
- describing urban tree population half-life, vacant planting ratio, species distribution and population diversity
- estimating life expectancy of tree population
- compiling results of urban forest analysis
- identifying urban forest issues within tree population sample area

- determining recommendations for tree species and diversity
- determining extent of current tree planting and replacement programs
- determining volume and rate of planting programs required for improvements to urban forest performance
- determining required modifications to planting practices
- determining targets for urban forest improvement
- documenting a report on urban forest performance that provides recommendations for improvement of urban forests.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- urban forest case studies
- urban forest management reports
- best management practices in urban forest planning and management
- applications and functional tools measuring benefits of urban forests
- social benefits of urban forests
- psychological benefits of urban forests
- environmental benefits of urban forests
- evidence-based research
- analysis of sampling of an urban forest
- requirements of sample sizes to assess total tree populations
- accuracy of sample size
- calculations of canopy cover, total carbon storage, annual carbon dioxide sequestration, rainfall interception, air pollution removal, energy savings benefit, environmental benefits and amenity benefits
- base financial value for functional benefits of urban forests
- calculations of financial values of functional and environmental benefits of tree populations
- benefits of heat island modification of urban areas
- total asset valuation of an urban forest
- urban forest structure and functions
- urban tree population half-life, vacant planting ratio, species distribution and population diversity
- life expectancy of tree population
- urban forest analysis
- identification of urban forest issues within tree population sample areas
- recommendations for tree species and diversity
- tree planting and replacement programs
- volume and rate of planting programs
- modifications to planting practices
- targets for urban forest improvement.

Assessment Conditions

Assessment must be demonstrated consistently over time in a suitable range of contexts and have a productivity-based outcome. No single assessment event or report is sufficient to achieve competency in this unit.

Assessment may be conducted in a simulated or real work environment, however determination of competency requires the application of work practices under work conditions.

The mandatory equipment and materials used to gather evidence for assessment include:

- equipment:
- computer
- word processing software
- statistical software
- internet connection
- measurement and data collection tools
- materials:
- report on urban forest performance

Assessors must satisfy current standards for RTOs in the assessment of arboriculture units of competency.

Assessment must be conducted only by persons who have:

- arboriculture vocational competencies at least to the level being assessed
- current arboriculture industry skills directly relevant to the unit of competency being assessed

Links

Companion Volume implementation guides are found in VETNet - https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72