Title	**Describe and use a Global Positioning System (GPS) for a specified VFR aviation activity**		
Level	**3**	**Credits**	**3**

Purpose	People credited with this unit standard are able to demonstrate: knowledge of GPS for a specified aviation activity; use of GPS in VFR flight planning; and VFR-GPS assisted competency in flight.

Classification	Aviation > Aircraft Operation

Available grade	Achieved

Entry information	
Recommended skills and knowledge	Industry requirements are that the candidate must meet the eligibility requirements of the Civil Aviation Act 1990 and the Civil Aviation Rule Part 61 for a private pilot licence.

Explanatory notes

1 The flight covered by this unit standard must be demonstrated in accordance with the Civil Aviation Rules Part 91 and other relevant rules, published by the Civil Aviation Authority of New Zealand (CAA), PO Box 3555, Wellington 6140, and their subsequent amendments.

2 Definitions, abbreviations, and acronyms used in this unit standard are to be found in:
- a *Civil Aviation Rules Part 1* on the CAA website at https://www.caa.govt.nz, and
- b *Aeronautical Information Publication (AIP)* published by Aeronautical Information Management (AIM), PO Box 294, Wellington 6140 or on the AIM website at http://www.aip.net.nz.

3 All references to the CAA refer specifically to the Civil Aviation Authority of New Zealand.

4 Industry standards and recommended practices are those set in place by the CAA.

5 Industry texts may include but are not limited to – aircraft flight manuals, CAA Rules, CAA Advisory Circulars, manufacturers' handbooks, operator exposition.

6 For the purpose of this unit standard, *knowledge* refers to the knowledge, understanding, and application of the subject matter.

Outcomes and evidence requirements

Outcome 1

Demonstrate knowledge of GPS for a specified aviation activity.

Evidence requirements

1.1 Principles and components of GPS are described in accordance with industry texts.

Range includes but is not limited to – system architecture and control; aircraft GPS equipment; triangulation, range measurement, position fixing.

1.2 GPS navigation system performance is described in accordance with industry texts.

Range includes but is not limited to – Technical Standard Order (TSO) and non-TSO units; Receiver Autonomous Integrity Monitoring (RAIM); GPS errors and limitations.

1.3 GPS installation is described in accordance with industry texts and standards.

Range aerials include but are not limited to –, connections, mountings; power includes but is not limited to – sources, integrity, back-up.

1.4 GPS operational procedures are described in accordance with industry texts.

Range includes but is not limited to – mode knowledge, access; set up menus; alerts.

1.5 Simple GPS operations are described in accordance with industry texts.

Range includes but is not limited to – displays, ‘Go To’ mode, ‘Nearest’ mode, data entry, checks.

1.6 Complex GPS operations are described in accordance with industry texts and standards.

Range includes but is not limited to – route creation, pre-flight route verification, aviation database and updates;
user created database includes but is not limited to – airfields, way points, position autostore;
route selection and operation include but are not limited to – activate, invert, edit.

Outcome 2

Demonstrate use of GPS in VFR flight planning.

Evidence requirements

2.1 Integration of VFR flight planning and operations with GPS is demonstrated in accordance with industry texts and standards.

Range includes but is not limited to – standard VFR flight planning, flight route entry into GPS, standard flight plan cross-checks with GPS, in-flight VFR–GPS cross-checks.

Outcome 3

Demonstrate VFR-GPS assisted competency in flight.

Evidence requirements

3.1 Simple and complex GPS functions are demonstrated in flight in accordance with industry texts and standards.

Range includes but is not limited to – 'Go To' route operations, route selection and manipulation.

3.2 Route reversal on leg is demonstrated in accordance with industry texts and standards.

3.3 'Nearest' navaid is selected in accordance with industry texts and standards.

3.4 Visual navigation cross-check of data is completed in accordance with industry texts and standards.

3.5 Look-out and standard VFR operational procedures are demonstrated in accordance with industry texts and standards.

Planned review date	31 December 2021

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	18 June 2010	31 December 2018
Review	2	20 October 2016	N/A

Consent and Moderation Requirements (CMR) reference	0169

This CMR can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Please note
Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by

NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMR). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact ServiceIQ qualifications@serviceiq.org.nz if you wish to suggest changes to the content of this unit standard.