

## **Expression Of Interest – Potential Hydrometric Training Providers.**

Expressions of Interest [EOI] are sort to provide assistance with AHA and NSW OTEN to provide face to face training in a variety of hydrometric procedures as described in Appendix A - Units of Competency Skill Set. The learning material plus one OTEN trainer will be provided.

The AHA is not looking for a sole supplier as it is recognised that training will be undertaken across Australia and therefore local providers may be better suited than one single supplier.

### **Minimum respondent requirements**

In addition to any requirements contained in the main body of the EOI document, AHA requires that for a potential Training Provider to be successful in their application for the delivery of training material, the following minimum skills, knowledge and experience are required:

- 1) Organisational capability to meet delivery requirements as specified from time to time. These shall include but not be limited too;
  - Suitable training room facilities plus amenities
  - On site training aids [instrument workshop, nearby to a river, channel or suitable gauging location, flow tank, gauging structures]
  - Past experience in provision of training
  - Close to suitable accommodation for trainees
  - Close to public transportation [train, bus, airport etc]
  - Catering [either on site or near by]
  - Experience in the fields of training to be delivered;
  - Registered as a company with an ACN / ABN number
  - Understanding of AHA aims and objectives;
  - Membership to the AHA
  
- 2) The Training Provider must hold, maintain, and satisfy the AHA that they meet Legislative and statutory compliance, specifically with adequate insurance cover. At a minimum they should hold:
  - (a) a broad form liability policy of insurance that includes:
    - public liability insurance;
    - workers' compensation insurance in accordance with applicable legislation for all the Training Provider employees;
    - professional indemnity insurance . The professional indemnity insurance must:
      - cover the Training Provider liability to the AHA in respect of the services and any products supplied ancillary to the services;
      - be maintained by the Training Provider for the period specified; and
      - include a description of the risk covered by the policy; and
      - such any other insurances that may be deemed necessary.
  
  - (b) All policies of insurance must be effected with an insurer Rated A- or better by AM Best or an equivalent rating organization.
  
  - (c) supply proof that all insurance policies required by the AHA; if required, arrange for its insurer to complete and sign a "Confirmation of Insurances Obtained Form", and provide this to the AHA within 30 days of the request.

(d) Where the Training Provider is insured under a foreign parent company's or holding company's insurance policy, that insurance policy must clearly indicate that it applies to and extends coverage to the Training Provider in accordance with clause 2.

3) Pricing Proposal Minimal Requirements

- Daily rate
- Daily facilities hire
- Catering costs [if applicable]
- Transport costs [if required to transport students to gauging facilities, example minibus etc]

It is expected that prospective service providers will provide sufficient details of their knowledge and experience in their response to enable AHA to effectively evaluate the response. Please see Appendix B - Application to Register as Preferred Training Provider

## Appendix A - Units of Competency Skill Set

Hydrography Certificate IV Review			
NWP508A		Collect, measure and process hydrometric stream discharge Gaugings	
		(Combined 340A & 438A)	
Unit Descriptor		This unit of competency describes the outcomes required to collect and process hydrometric stream gauging data. An understanding of risk assessment and of factors affecting the accuracy and precision of the area velocity-method are essential to performance.	
Module	Assessment evidence		
1	Flow Gauging	1.1 Describe the <b>purpose</b> of flow gauging 1.2 Describe stream discharge and <b>factors affecting variability</b> 1.3 Describe <b>metering types</b> 1.4 Describe <b>metering equipment</b> 1.5 Describe the <b>Area / Velocity method</b> for determining discharge and the various methods for obtaining the mean velocity in a vertical using a single point meter. 1.6 Identify standards which apply to <b>discharge measurement</b> 1.7 Describe <b>alternative methods</b> for calculating discharges 1.8 Describe the characteristics of a <b>suitable gauging section</b> for different types of metering equipment 1.9 Describe how to select a vertical for measurement of velocity using a single point meter 1.10 Describe how to account for varying stage readings during gauging 1.11 Describe the types of errors that can occur in discharge measurements in natural streams 1.12 Describe <b>Occupational, Safety and Health considerations</b>	
2	Perform Area Velocity Measurements	(a) <b>Single Point Meters</b> 2.1 Selects and <b>prepares current metering equipment</b> 2.2 Selects and prepares suitable gauging section 2.3 Selects the discharge <b>measurement method</b> 2.4 <b>Positions current meter</b> in channel  2.5 Measures the depth and determines the depth settings 2.6 Measures the point velocities and calculates the mean vertical velocity for the <b>various methods</b> 2.7 Measures the oblique flow angle for a cable suspended meter.	

		2.8	Measures the <b><i>drift angle</i></b> for a cable suspended meter.
		2.9	Checks and confirms the <b><i>meter's operation</i></b> at the conclusion of the metering
		(b)	<b>Profiling Acoustic Doppler</b>
		2.10	Select the appropriate Doppler unit
		2.11	Prepares the Doppler
		2.12	Determines the profiling methodology
		2.13	Determines the transverse cruising velocity
		2.14	The <b><i>Doppler is deployed</i></b> and the metering is undertaken
		2.15	Evaluation of results
<b>3</b>	<b>Calculate and Adjust Discharge</b>	(a)	<b>Single Point Meters</b>
		3.1	The area and discharge corresponding to each sub section is calculated
		3.2	The discharge using the mid-section method is calculated
		3.3	The discharge using the mean-section method is calculated
		3.4	The unadjusted total discharge is calculated
		(b)	<b>Profiling Acoustic Doppler</b>
		3.5	The unadjusted average total discharge is calculated
		(c)	<b>All types</b>
		3.6	The rate of stage change is identified and the weighted mean stage height calculated and recorded
		3.7	The channel storage effects are calculated and the discharge or stage are adjusted
		3.8	The adjusted total discharge is calculated.
<b>4</b>	<b>Complete Documentation</b>	4.1	The discharge measurement is plotted and compared on the field copy of the rating curve
		4.2	Equipment is dismantled, cleaned and secured
		4.3	The <b><i>percentage deviation</i></b> is calculated
		4.4	The gauging quality is graded and recorded along with other appropriate comments
		4.5	<b><i>Relevant supporting information</i></b> is gathered from the site and documentation is accurately completed in accordance with organisational procedures.
		4.6	Gauging is entered into ratings database in accordance with <b><i>organisational procedures</i></b>

## Hydrography Certificate IV Review

NWP501A

**Install, operate and maintain hydrometric instruments and equipment**

**Unit Descriptor**

This unit of competency describes the outcomes required in managing hydrologic instrumentation deployed to measure time series data.

	Module		Assessment evidence
1	Select an instrument	1.1 1.2 1.3 1.4 1.5 1.6	Define <b>variable being measured</b> Describe <b>operational principle for each instrument</b> Describe <b>relationships between variables</b> Describe pros and cons of an instrument Describe accuracy and resolution of an instrument Describe <b>Occupational, Safety and Health considerations</b>
2	Deploy an instrument	2.1 2.2 2.3 2.4	<b>Assemble and test</b> Describe correct placement Install and commission <b>instruments</b> at gauging station and rainfall station Describe <b>Occupational, Safety and Health considerations</b>
3	Record instrument data	3.1 3.2 3.3 3.4	Explain the requirements for a <b>suitable recording medium</b> Operate a data logger <b>Assemble system</b> Ensure system is operational
4	Maintain instrument	4.1 4.2 4.3 4.4 4.5 4.6	<b>Clean instrument</b> Replace <b>consumables</b> Clean enclosure Protect from <b>external factors</b> Install <b>lightning protection</b> OSH
5	Fault find system	5.1 5.2	Ensure check values are correct Observe external factors

		5.3	Isolate problem area
		5.4	Repair/replace faulty component
		5.5	Complete documentation
<b>6</b>	<b>Telemeter data</b>	6.1	Select appropriate <b>type of telemetry system</b>
		6.2	Install <b>telemetry system</b>
		6.3	Ensure telemetry is operational
		6.4	Data are transferred by telemetry from field site to office server

## Hydrography Certificate IV Review

RTD3507A

Undertake Sampling and Testing of Water

Unit Descriptor

This unit of competency describes the outcomes required to collect, transport and manage insitu water quality measurements and discrete water samples collected from streams, waterways, drains and groundwater aquifers.

	Module		Learning Outcomes
1	Plan Water Sampling Program	1.1 Describe the <b>typical water quality</b> parameters in natural waters 1.2 Describe <b>typical water quality issues in urban and rural drains</b> 1.3 Describe how the typical physical, chemical and biological parameters indicate the quality / health of waterways. 1.4 Describe <b>sampling techniques</b> for typical water quality parameters in natural waters 1.5 Identify the preservation and transport requirements for typical water quality parameters. 1.6 Describes how to select <b>representative sampling points</b> . 1.7 Obtain site <b>entry authorisation</b> 1.8 Describe <b>Occupational, Safety and Health considerations</b>	
2	Confirm Program Requirements	2.1 Confirm the <b>purpose of the water sampling program</b> 2.2 Identify the sampling points and develop a <b>sampling strategy</b>	
3	Prepare for sampling	3.2 Identify the <b>sampling method</b> required 3.3 Selects representative sampling point 3.4 Prepares sampling equipment in accordance with <b>organisational standards</b> 3.5 Identify laboratories and confirm their <b>accreditation, standards and chain of custody procedures</b> 3.6 Prepare chain of custody documentation for recording the sample 3.7 Secures and transports sampling equipment in accordance with enterprise instructions	
4	Collect Samples	4.1 Manages <b>site hazards</b> 4.2 <b>Samples</b> are collected for laboratory analysis in accordance with organisational standards 4.3 <b>Insitu readings</b> are taken in accordance with	

		4.4	organisational standards Samples are preserved, secured and transported in accordance with organisational standards
		4.5	Relevant supporting information is gathered from the site and documentation is accurately completed in accordance with organisational procedures.

<b>5</b>	<b>Maintain Equipment</b>		
		5.1	Decontaminate equipment and sample containers.
		5.2	Decontaminate PPE
		5.3	Check calibration of equipment

<b>6</b>	<b>Complete Documentation</b>		
		6.1	Chain of custody documentation is completed in accordance with organisational standards
		6.2	Downloads measurements from insitu recording equipment onto database
		6.3	Records, verifies and report <b>results</b>
		6.4	Update operating procedures as required

## OCCUPATIONAL HEALTH AND SAFETY

The laws protecting the Health and Safety of people at work apply to students who attend training, either part time or full time. These laws emphasise the need to take reasonable steps to eliminate or control risk at work.

The suitable learning facility has the responsibility for the control, and where possible, the elimination of health and safety risk at the place of training.

The OHS Act 2000 and OHS Regulation 2001 require that trainers and students take reasonable steps to control and monitor risk in the classroom, workshop or workplace.

## Appendix B - APPLICATION TO REGISTER AS PREFERRED TRAINING PROVIDER

Your application shall contain:

Applicants' Name & Position:  
Name of Training Organisation:  
ABN  
Contact details for organisation:

Is your organisation a registered training organisation:  
Yes                      No

What categories of training are you applying for?  
Please specify the type of training in accordance with the Certificate IV Hydrography requirements.

**Note:** Training Providers can apply to be a preferred training provider in one or more of the categories:

Has your organisation the experience in training clients that fall into the categories you have specified, please specify.

What is your organisation's training history i  
Note: Short paragraph only. Additional Information can be attached as an appendix.

What is your organisation's link with industry/employers is:  
Note: Short paragraph only. Additional Information can be attached as an appendix.

Disclaimer

The Australian Hydrographers Association reserves the right to accept or not accept any application for registration. The Providers chosen to be placed on the Register, and subsequently chosen for delivery of courses, will not always be the cheapest provider. One or more Providers could be registered to cover a particular training area in order to maximize opportunities for trainees. Registration is no guarantee of the offer of work as the delivery of training is also subject to organisational training requirements and budgets. The Australian Hydrographers Association also reserves the right to invite persons or organizations, at any time, to respond to this application or to seek further information, at any time, from any applicant.

I have read the accompanying Application Overview and aforementioned Disclaimer.

Print Name:

Signed    Date:

Two Referees that can attest to my organisation's delivery of quality training are:

1)      Name: Organisation:  
        Ph:

2)      Name: Organisation  
        Ph: