

WATER AND LAND MANAGEMENT INSTITUTE

Post Box No. 504, Kanchanwadi,

AURANGABAD – 431 005 Maharashtra – India

Quotations are invited by e-mail or by post for the measurement of conveyance losses in open channel flow by using ADV (Acoustic Doppler velocity meter) and prepare the report with real-time Data. The last date of submission for quotation is 20/12/2011. For details please visit WALMI website www.walmi.org

Administrative
Officer
WALMI, Aurangabad
Email ID : admn@walmi.org

**Terms & Conditions For The Quotation For The Measurement
Of Conveyance Losses**

- 1) It is proposed to take discharge measurement of the canals for the project as per the enclosed Group using area velocity method and prepare the site report with real time.
- 2) The cost should be inclusive of calculations of conveyance losses per million meter square of the wetted area.
- 3) It is mandatory to deploy 2 teams to measure the upstream and downstream discharge of the canal reach simultaneously, using a side looking aqua profiler type discharge measuring device. The description of such device is enclosed. Separately. (Proforma No. II & III)
- 4) One Acoustic flow meter/ data logger shall be provided with each team.
- 5) The Acoustic flow meter/ data logger will not be returned to the firm and should be handed over to institute and shall be the property of institute or the project authority as directed. The cost should be inclusive of the cost of the instrument.
- 6) The cost shall be inclusive of all taxes and levies etc. and no extra cost shall be given for this.
- 7) The cost shall be inclusive of cost of instrument as well as cost of labour, cost of conveyance etc. Necessary for execution of above work.
- 8) Portable Acoustic Doppler velocity meter shall be used for canal larger than 3 m. width. For canals less than 3.0 m width Q eye PSC portable velocity logger with eye level sensor from Hydro vision shall be used.
- 9) The received rate will be considered for estimate purpose only.
- 10) The interested firms should submit their offer in the Proforma No.1

- 11) Contractor will train the WALMI engineers for using the measurement devices and, Contractor must consider the costing in such a way that at the end of the work the used devices will be supplied to the department

PROFORMA NO. 1

Water and Land Management Institute, Aurangabad

List of the Group of Project where conveyance loss study is to be carried out

Group No.	List of Project	Cost of the work.
1.	<p>Scope and modalities of canal DATA discharge Data collection projects at following location. for above 3 mtr. hydro.</p> <ol style="list-style-type: none"> 1) Pench Projects - Nagpur Region. 2) WAN projects - Amravati Region. 3) Jayakwadi Project – Aurangabad Region. 4) Upper Wardha Project – Amravati Region 	
2.	<p>Scope and modalities of canal DATA discharge Data collection projects at following location. for above 3 mtr. hydro.</p> <ol style="list-style-type: none"> 1) Kukadi Project – Pune Region. 2) Neera Project - Pune Region. 3) Khadakwasla Project – Pune Region 4) Pravara Chanal – Nashik Region. 	
3.	<p>Scope and modalities of canal DATA discharge Data collection projects at following location. for below 3 mtr. hydro.</p> <ol style="list-style-type: none"> 1) Pakadiguddam Projects – Nagpur Region. 2) Chargaon Projects - Nagpur Region 3) Ner Project – Pune Region 4) And for all above location for the minor canal (Total 11 location) 	

Signature of Authorized

Representative of the Firm


PROFORMA – II

Scope of work

Data collection of discharge measurement at sites as per enclosed list, using Latest Pulsed Doppler velocity measurement device and, acoustic Doppler velocity Measurement device, which have minimum following specification

Specification of instruments for canal Below 3 mtr range.

1	QEM	Q-Eye M-II
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Portable flow monitor for open channels/pipes

Profiled velocity with pulsed ultrasonic signal

Evaluation by puls correlation technology

Combination sensor for velocity and water level

incl. 10 m Cable

Acoustic frequency: 1 MHz

Measuring range velocity: +/- 5,3 m/s

Accuracy: 1% of measured value, +/- 0.25 cm/s

Particle concentration > 50 ppm

Measuring range water level (US): 0,04 to 1,3 m

Accuracy ultrasonic: 1% +/- 0,003 m

Memory: internal 2 MB

Power supply: 10 Ah rechargeable NiMH or
16 Ah standard Alkaline battery (Mono/D-Size)

Communication via RS 232

Material enclosure: Polyamid

Protection IP69 to EN 60529

Dimensions (hxd): 290x160 mm

Weight: 8 kg

- 1 QEQVE Software Q-Vision (Evaluation)
- Integrates setting up and automated collection, reporting, viewing and analysis of data from sanitary sewers, combined sewer overflow, storm sewers, rainfall gauges, water quality samplers and pump stations.
- Platforms: Windows XP/Vista
- external level sensor**
- cable for PC
- sensor cable 15 M

PROFORMA – II

Specification instrument of canal for Above 3 mtr range

Item	Part-No.	Product/Description
1	APPM	<p>AquaProfiler M</p> <p>1-D Velocity sensor, range: 0 to +3 m/s</p> <p>Accuracy: 1% of measured value, +/- 0.25 cm/s</p> <p>Acoustic frequency: 6 MHz</p> <p>Integrated temperature sensor</p> <p>Range: -5°C to 50°C, accuracy: +/- 0,1°C</p> <p>Integrated hydrostatic water level</p> <p>Range hydrostatic: 0 to 4 m</p> <p>Accuracy hydrostatic: 0,1% of measured value</p> <p>Dimensions: $\varnothing = 30$ mm, Length = 150 mm</p> <p>3 m flexible cable from sensor to backpack</p> <p>Wading rod mounting bracket for sensor</p> <p>Rechargeable battery pack NiMH 4.000 mAh</p> <p>for up to 30 hours operation period, charger</p> <p>Backpack for all components</p> <p>Weight: 600 g</p>



1 HDA HDA Pro PC



Intel Atom Z530 1.6 GHz processor

2GB DDR2 RAM, 64GB SSD harddisk

WLAN, Bluetooth Interface, 1*RS232, 2*USB 2.0

Display: 7" TFT Widescreen 1024*600

with resistive touch screen

Hot swappable dual battery pack, 2.400 mAh each

each for up to 6 hours operation

Operating system Windows 7

incl. software AquaProfiler Mobile PC/Laptop

Operating temperature: -23°C to +60°C

Protection: IP65

Dimensions: 230*140*40 mm (L*W*D)

Weight: 1.100g inclusive battery