Purchasing: Director

Departmental Concurrence

SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA 855

FROM: Bob Doyle, Sheriff-Coroner-PA

SUBMITTAL DATE: 01/05/05

SUBJECT: Sole Source Purchase of an Underwater Side Scan Sonar System for the Sheriff's Department

RECOMMENDED MOTION: Move that the Board of Supervisors:
1. Approve the sole source purchase of an underwater side scan sonar system from Marine Sonic Technology, Ltd. for the amount of $36,090, without securing competitive bids, in accordance with Ordinance 459.4.

2. Authorize the Purchasing Agent to award the contract on behalf of the County.

BACKGROUND: As reported to the Board on November 23, 2004 (3.28), in FY 2004-05 the Sheriff's Department will use grant funds to continue training the underwater dive team. The side scan sonar system, proposed for purchase, will be used to train divers in search and rescue operations. Because of water depth, visibility, temperature and environmental conditions at many Riverside County bodies of water, hand and line searches are both difficult and hazardous. A side scan sonar system will assist in locating objects underwater and significantly reduce the time divers are underwater.

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for Bob Doyle, Sheriff-Coroner-PA

FINANCIAL DATA				
	Current F.Y. Total Cost:	$36,090	In Current Year Budget:	Yes
	Current F.Y. Net County Cost:	$0	Budget Adjustment:	No
	Annual Net County Cost:	$0	For Fiscal Year:	FY 2004-05

SOURCE OF FUNDS: Federal grant funds

Positions To Be Deleted Per A-30 ☐

Requires 4/5 Vote ☐

C.E.O. RECOMMENDATION:

APPROVE

County Executive Office Signature Sally A. Deaman

Dep't Recomm.: ☐ Consent ☒ Policy

Per Exec. Ofc.: ☐ Consent ☒ Policy

Prev. Agn. Ref.: 11/23/04 3.28 | **District: All** | **Agenda Number:** 3.37

Members of the Riverside Sheriff's Department Underwater Dive Team reviewed portable side scan sonar systems for use in public safety dive operations. The two industry leaders manufacturing economical sonar detectors are Marine Sonic and Edgetech. The Edgetech system is $600 less in unit price than the Marine Sonic product. However, after a member of the Sheriff's dive team, who is also a Systems Administrator in the Sheriff's Technical Services Bureau, spent a day with the State Parks Department and the Long Beach Fire Department personnel operating the Edgetech system at Lake Perris, he rated the Marine Sonic system superior for the following reasons.

The Marine Sonic sonar operates at a 600 Khz. frequency, while EdgeTech operates at a dual frequency of 100/500 Khz. The 600 kHz range of the Marine Sonic produces sharper images in the target size range that will frequently be required. The EdgeTech simply does not have the image clarity that the County Dive Team needs to locate smaller targets. That could result in missed targets or in having to go back over areas to determine a targets true shape.

The Marine Sonic's system is much easier to use. Its processor unit and laptop together weigh 36 pounds less than that of EdgeTech. In addition, the Marine Sonic is fully contained in a waterproof case, while EdgeTech's units are all separate and connected with cables; its cable connections are not waterproof. The Dive Team will be operating the unit from an 18' foot boat and space is at a premium. The Marine Sonic single box takes up much less space and there are fewer cables on the boat deck to trip over.

Price Reasonableness: The Sheriff's Department recommends a sole source purchase of the Marine Sonic product because it provides superior image scanning capabilities and ease of use, with an increased cost of only $600. In addition, Marine Sonic has certified, in writing, that we are receiving the lowest possible price offered to local government agencies.

Date: December 27, 2004

From: Riverside County Sheriff's Department

To: Board of Supervisors

Via: Purchasing Agent

Subject: Sole Source Procurement; Request for

The information below is provided in support of my Department requesting approval for a sole source. Outside of a duly declared emergency, the time to develop a statement of work or specifications is not in itself justification for sole source.

Supply/Service being requested:

Marine Sonic Technology Centurion Splash Proof Sea Scan PC System DGPS; underwater side scan sonar.

Supplier being requested:

Marine Sonics Technology, Ltd.
5508 George Washington Memorial Highway
White Marsh VA 23183

(804) 693-9602, fax (804) 693-6785

Alternative suppliers that can or might be able to provide supply/service:

None. The Marine Sonic side scan sonar system is only distributed through factory representatives.

Extent of market search conducted:

Members of the Riverside Sheriff's Department Underwater Dive Team reviewed portable side scan sonar systems applicable to public safety dive operations. The two industry leaders that produce economical side scan sonar systems are EdgeTech, at $32,500, and Marine Sonic, at $33,100; a difference of $600.

In addition to the recommendation of San Bernardino Sheriff's Dive Team Sergeant Jeff Morgan, our Mr. Tom Carr of the Riverside Sheriff's Technical Services Bureau reviewed both systems. After examination of both systems we concluded that Marine Sonic best suits our needs.

The EdgeTech system is somewhat cumbersome to use. The processor unit, laptop computer, G.P.S. unit and voltage inverter are all separate from each other, requiring cabling connections between all of the units. The laptop and the connections to it are not waterproof. The Marine Sonic Centurion system has the laptop and processor in a single splash proof container. The entire Marine Sonic unit weighs 12 pounds, the EdgeTech processor alone weighs 28 pounds and you have to add an inverter and laptop to that, another 20 pounds. We will be operating the unit from an 18' foot boat

and space is a premium. The Marine Sonic single box takes up much less space and there are fewer cables on the deck to trip over.

The laptop for EdgeTech was a Panasonic Toughbook. When used, it had to reboot several times for unknown reasons. This resulted in delays with the equipment setup and during the search mode.

The images produced by the EdgeTech system were readable but in comparing them with Marine Sonic Centurion system the Marine Sonic produces a much more detailed image. The EdgeTech had to go over a lot of targets from different angles to determine what they were. Marine Sonic images are clear and easier to identify.

The towfish of the EdgeTech is dual frequency 100/500 kHz. However, EdgeTech notations indicate the actual frequency is 390 kHz, rounded up to 500, making it even less suitable for our needs. The Marine Sonic is single frequency at true 600kHz. The 100 kHz frequency is for very large targets like shipwrecks and would not be useful for a target the size of a human body. It would be so small you probably would not see it on the screen. The 600 kHz range of the Marine Sonic will produce sharper images in the target size range that we need.

The EdgeTech towfish weighs 55 pounds. The Marine sonic is 33 pounds, 22 pounds, or 40% less. Since the towfish must be continually raised and lowered by hand while operating the weight difference becomes very significant for the handlers. The water drag traveling at 3 MPH magnifies the weight problem.

The Marine Sonic unit comes with two tow cables, 30 meter and 100 meter. The EdgeTech comes with a single tow cable, 100 meters. Having a shorter cable available would be useful. Less cable cluttering the deck during shallow searches. Cables are at risk for damage by boat props/entanglements, having a backup would be an asset.

EdgeTech training did not provide clear training with the G.P.S. tracking feature of their unit. To track the search pattern an external handheld G.P.S. was necessary. In comparing the software tracking features on both company websites the Marine Sonic tracking software is easier to use and understand. It shows very clearly the tracks used during the search making it simple to identify missed areas.

The operations manual for the Marine Sonic unit and the software appears to be very easy to use. The user interfaces of the Marine Sonic software seem simpler to understand than the interface of the EdgeTech software.

The cost of the systems is within $600, but the most important priority is the image detail. The EdgeTech simply does not have the image clarity that we need to locate smaller targets. That could result in missed targets or in having to go back over areas to determine a targets true shape. Marine Sonic Centurion is the preferred side scan sonar system for the Sheriff's Underwater Search and Recovery Dive Team.

Unique features of the supply/service being requested from this supplier, which no alternative supplier can provide:

Included above. In addition, Marine Sonic Technology also provides training at its factory and 24-hour telephone support.

Reasons why my Department requires these unique features and what benefit will accrue to the County:

Inland lakes and large bodies of water produce poor visibility and hazardous environment for Sheriff Department divers when recovering drowning victims, vehicles, vessels or criminal evidence. Teaching our divers to use side scan sonar will significantly reduce the time a diver spends underwater searching. The US Navy and public safety divers have shown that side-scan sonar searches are much more efficient than traditional hand or line searches. Less time underwater, exposed to the hazards of inland bodies of water is safer for our employees. Side scan sonar will sustain search operations when divers are unable to continue. The Marine Sonic system is best suited for operating on smaller vessels/boats that we have in our fleet.

Does moving forward on this product or service further obligate the County to future similar contractual arrangements?

Only if repairs or maintenance is required after the warranty expires.

Department Head Signature

1-14-05

Date

Purchasing Department Comments:

Approve **Approve with Condition/s** **Disapprove**

Billy B Corbett

Purchasing Agent

1-13-05

Date