BayRICS Technical Advisory Committee
STAFF REPORT

DATE: Thursday July 17, 2014

TO: TAC Members

FROM: Barry Fraser, General Manager

SUBJECT: Item 8 - BayLoop Network Engineering and Termination Equipment Funding Scenarios

RECOMMENDATION:

Direct staff to present report and recommendations on BayLoop network equipment and engineering requirements to the BayRICS Board.

Background

BayLoop is a private microwave network connecting all Public Safety Answering Points (9-1-1 centers), Emergency Operations Centers (EOCs), selected key public safety facilities and numerous radio sites throughout the San Francisco Bay Area. Built largely with grant funding, BayLoop provides secure data and voice communications to public safety agencies and other cooperating agencies, with a portion of the overall BayLoop capacity designated for regional mission critical applications. BayLoop is owned and operated by the seven Counties (Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara and Solano) that have agreed to host BayLoop facilities (the BayLoop Counties). BayRICS currently provides service contracts for maintenance of specified equipment and network monitoring support for BayLoop Counties.

Since its activation, BayLoop's regional data capacity has been underutilized. BayRICS TAC and the BayLoop Counties have recently developed policies for management of this regional portion of BayLoop to encourage regional network usage. These policies define appropriate network use and security policies, as well as a process for requesting approval for network applications that would operate on BayLoop regional bandwidth.

Network Equipment and Engineering Needs

In April, San Mateo County submitted a network application request to use BayLoop regional capacity to operate the "WebEOC" application. Several other BayLoop Counties have expressed interest in using BayLoop to interconnect Emergency Operations Centers via WebEOC.

During the review of the WebEOC network request, it was determined that additional termination equipment and network engineering will be required before WebEOC (or

any other IP-based application) can run on the network. Staff has obtained a preliminary cost estimate of $292,807 for the hardware, software and engineering work required for up to five BayLoop Counties to interconnect their WebEOC servers.

Funding Scenarios

Staff developed the following three scenarios for meeting the costs of these network upgrades. Staff recommends Scenario 2 as the most flexible, cost-efficient and timely solution.

Scenario 1	Scenario 2	Scenario 3
BayRICS & Member Counties seek UASI/Other Funding for the full amount of $294,808 (in addition to ~$200,000/yr for ongoing network monitoring and maintenance): • Timing considerations: UASI 2015 grants not available until November 2015 • Funding for regional projects is highly competitive • Investigate UASI 2014 "Grant Dust" • Other Grant Opportunities?	BayRICS pays for network engineering and Member Counties pay for equipment, installation and spares for their County sites: • BayRICS contributes $41,196 from existing 2013 and 2014 UASI grants – work could be completed by November 2014. • Per-County portion: $42k-50k, however, Counties may have existing equipment or may find better pricing from other vendors. • County-by-County approach allows for quick deployment and ability to opt out if funds are not available.	BayRICS solicits additional information through RFI or similar process to find better solution/pricing: • Low cost solutions using alternate vendors may (or may not) be available • Timing considerations (could take several months); cost may not change significantly

Scenario 2 Project Cost Estimate

(Appears on Following Page)

Table 1: BayLoop Regional Data Network Upgrade Cost Estimates

County Share			
	Item	**Per-County Cost**	**Per-County without Options/Spares***
	Eclipse Intelligent Node Unit	$2,371	$2,371
	OC3 Cards	$3,999	$3,999
	Ethernet Cards	$3,368	$3,368
	Cisco ME 3600-X Switch	$12,829	$12,829
	Cisco ASA 5615-X Firewall	$6,695	$6,695
*	Optional Rack	$2,731	
*	Spares (total cost/5 Counties)	$5,167	
	Installation	$9,678	$9,678
	Net Total	$46,838	$38,940
	Tax and Freight	$3,884	$3,333
	Total per-County	$50,722	$42,273

BayRICS Share			
	Network/System Engineering & PM Costs	$41,196	$41,196

Total Project Costs			
	With 5 Counties Participating	$294,807	$252,563

Recommendation

Direct staff to present status report on BayLoop network equipment and engineering Funding Scenarios to the BayRICS Board, with recommendation that the Board implement Funding Scenario 2.