

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

716



FROM: Information Technology Department

SUBMITTAL DATE:
December 23, 2003

SUBJECT: Reverse 9-1-1 System Recommendation

RECOMMENDED MOTION: That the Board of Supervisors direct the IT Department, Fire Department, and the Sheriff's Department to continue to research the issues on costs, funding sources, and potential liabilities related to the implementation of a "Reverse 9-1-1" system and provide final recommendations in a follow-up report from the Fire Department on mountain communities safety issues.

BACKGROUND: On November 18, 2003, the Board of Supervisors approved agenda item 3.1, Mountain Communities Fire Safety, which directed the Executive Office to work collaboratively with public safety departments and Information Technology to address five Mountain Communities fire safety issues. Among the issues included researching the feasibility and cost of implementing a "Reverse 9-1-1" system to be used for emergency evacuation notices.

A "Reverse 9-1-1" system is an emergency telephone notification system that can place thousands of simultaneous telephone calls with recorded action messages to the occupants of an area that is impacted by an emergency. The system uses the phone numbers from the Enhanced 9-1-1 database to ensure all the numbers from a given area are available, and permits each number to be directly tied to an address.

Mathew W. Frymire
Interim Chief Information Officer

FINANCIAL DATA	Current F.Y. Total Cost:	\$ 0	In Current Year Budget:	N/A
	Current F.Y. Net County Cost:	\$ 0	Budget Adjustment:	N/A
	Annual Net County Cost:	\$ N/A	For Fiscal Year:	N/A

SOURCE OF FUNDS:	Positions To Be Deleted Per A-30	<input type="checkbox"/>
	Requires 4/5 Vote	<input type="checkbox"/>

C.E.O. RECOMMENDATION:

APPROVE

County Executive Office Signature

Dept't Recomm.: Consent Policy
Per Exec. Ofc.: Consent Policy

Prev. Agn. Ref.: 3.20 of 12/2/03

District: All

Agenda Number:

**ATTACHMENTS FILED
WITH THE CLERK OF THE BOARD**

3.24

Form 11

Reverse 9-1-1 System Recommendation

December 23, 2003

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BACKGROUND Continued:

On December 2, 2003, the Board of Supervisors approved agenda item 3.20, Report on Mountain Communities Fire Safety Issues, regarding the five safety issues. The third issue referencing a "Reverse 9-1-1" system recommended Information Technology take a lead role in researching the feasibility of available technology and coordinate activities with the Sheriff's Department and Fire Department. The Board directed that Information Technology report back in 30 days with a recommendation on implementing a "Reverse 9-1-1" system. This report has been prepared to provide that recommendation based upon the limited scope defined, and the next steps required to address implementation of "Reverse 9-1-1".

Reverse 9-1-1 System Recommendation



January 13, 2004

Executive Summary

On November 18, 2003, the Board of Supervisors approved agenda item 3.1, Mountain Communities Fire Safety, which directed the Executive Office to work collaboratively with public safety departments and Information Technology to address five Mountain Communities fire safety issues. One of the issues included researching the feasibility and cost of a "Reverse 9-1-1" system to be used for emergency evacuation notices.

On December 2, 2003, the Board of Supervisors approved agenda item 3.20, Report on Mountain Communities Fire Safety Issues, regarding the five safety issues. The third issue referencing a "Reverse 9-1-1" system recommended Information Technology take a lead role in researching the feasibility of available technology and coordinate activities with the Sheriff's Department and County Fire Department. The Board directed that Information Technology report back in 30 days with a recommendation on implementing a "Reverse 9-1-1" system. This report has been prepared to provide action status and planned activity on the issue of an emergency notification system.

Completed Action

- The County Fire Department obtained the services of Tech/Knowledge Inc. to complete a report entitled, "*Emergency Telephone Notification Systems - Issues Paper*". The paper reviewed the technical, operational, and administrative issues associated with implementing such a system, and how it would fit into the larger picture of public safety notification. The document delves into the issues of system ownership versus using a service provider, and addresses benefits, costs, implementation, and maintenance. The paper serves as an excellent foundation to guide a recommendation. A copy of the report is attached.
- Information Technology met with the Sheriff's Department and County Fire's Office of Emergency Services to coordinate action and review progress to help ensure a collaborated and comprehensive review of options.
- The Office of Emergency Services in conjunction with IT is reviewing all available documentation, and are in process or have completed the following:
 - Working with the cities of La Quinta and Temecula to research their "Reverse 9-1-1" implementations to extrapolate lessons learned.
 - Acquired vendor material to further assess the features and functions of various emergency notification systems to relate the benefits and costs to our County.

Emergency Notification Issues

In the course of our research to date, the following issues will have to be addressed as part of making a final decision:

- The cost of service is directly related to the length of messages, the number of messages to be sent, and the time frame to complete the notification. On going cost will

be a function of population density in a notification area and the number of notification areas being defined. Cost models show that implementation and on-going costs can easily exceed \$450,000 over five years depending upon the selected source of service and the size and density of the notification area.

Purchasing the hardware and software to perform the services would require the upfront costs to purchase the system, ongoing support contracts and staff, and the on-going cost of telephone lines to be used in the event of a notification. To provide warnings in a short period of time, the County would need a system with significant capacity. There are numerous vendors that can provide the required hardware and software and include organizations such as Verizon Communications, Sigma Communications, and Dialogic Communications Corp. The PACE software product was reviewed, but the vendor markets it as a "school-to-parent communications" system that may not be suitable for emergency notification. If the County releases an RFP to purchase an emergency notification system, the PACE system will be evaluated on its merits as an emergency notification system should they elect to submit a proposal.

- Using a contracted service provider for support takes advantage of in-place systems, expertise, and shared resources for reduced cost. There are numerous vendors that can provide this service including SBC Communications, Community Alert Network, and Actual Software, Inc. By reviewing license agreements, vendor materials, and implementation briefing reports, we will have better understanding of all aspects of the service issues.
- Liability issues will have to be researched as telephone databases change at a rate of .5% daily. Because of the dynamics of the database, it is possible that not all residents in a selected area will be notified. Further, as in the case of fires, the boundaries change rapidly and notification could come too late. Understanding legal issues and risk mitigation needs additional research.
- The implementation of an emergency notification system is not only a financial and technological decision, but also one with important policy and operational impacts if the system is to be successful. Examples include when to activate the notification system, determination of what areas will be warned, system upkeep for current and accurate databases, handling messaging in a multi-lingual environment, and maximizing the investment in notification systems by using the system beyond a fire warning system in Riverside County.

Recommendation and Next Steps

If the requirements for the "Reverse 9-1-1" system are limited to emergency notifications in the mountain communities, the Information Technology Department would recommend that the system be outsourced to one of the numerous service providers. Service provider solutions utilize existing systems and communication facilities, they can be implemented quickly; and depending upon the number of activations, will provide the lowest cost of ownership.

The Sheriff Department, Fire Department, Office of Emergency Services, and IT will continue to review and research the issues identified above as we move towards a final definition of the requirements for the "Reverse 9-1-1" system. This research will increase understanding of the issues and scope of the services to be provided; which will enable the group to determine the level of effort required for implementation, on-going maintenance,

support issues, and associated costs. Once the research is completed and decisions have been made, updates will be provided in the Fire Department's report.

Department Representatives

Representatives from the four departments and agencies assigned to this project include:

- Sheriff's Department – Lt. Joe DeArmond
- County Fire Department – Capt. Michael Moore
- County Fire Department, Office of Emergency Services – Phillip Bardos
- Information Technology – Jeff Denning