

# ROSS VALLEY FIRE DEPARTMENT STAFF REPORT

Meeting of April 12, 2017

To: Board of Directors

From: Battalion Chief Dan Mahoney

Subject: Budget breakdown for dedicated Ross Valley Fire Department weather stations at Station 20, Station 21, creek camera for Station 18, increased system reliability and maintenance costs.

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## RECOMMENDATION:

For the Board to receive report, discuss and provide direction to staff.

## BACKGROUND:

Staff was given direction at the February board meeting to provide a detailed breakdown of costs to purchase, install and maintain a weather station at Station 20 and Station 21. A request was also made to include a newly installed creek camera at Station 18. Reliability has been an issue in the past with our current system. The breakdown also identifies increased reliability to the system.

## DISCUSSION:

The RVFD creek level monitoring and notification system consists of internet connected creek gauges and weather stations strategically located at Stations 18, 19, 20, and 21. To continue service at current levels, some critical hardware upgrades are necessary. Based on feedback from the community and Board of Directors, options for service improvements are included, below.

Current hardware status is:

### Station 18

- County Creek Gauge (functioning)
- USGS Creek gauge (functioning)
- Camera (none exists, needed)

### Station 19

- RVFD Creek Gauge (functioning)
- Creek Gauge Server (requires replacement)
- Weather station (requires replacement)

AGENDA ITEM # 4  
Date 4/12/17

#### Station 20

- RVFD Creek Gauge (functioning)
- Weather Station (needed, none exists)

#### Station 21

- RVFD Creek Gauge (functioning)
- Creek Gauge Server (requires replacement)
- Weather station (requires replacement)

County of Marin Flood Control Zone 9 Engineer Felix Meneau confirmed in a teleconference March 23 that the County of DWR/FERP Grant includes funding to replace or add weather stations at Fire Stations 19, 20, and 21 in 2017. These weather stations will utilize the County's "Alert 2" technology for communications, and a web based interface will allow embedding of real-time data on [www.rossvalleyfire.org](http://www.rossvalleyfire.org) for public viewing.

### **FISCAL IMPACT:**

#### **Weather Stations**

##### Option 1

County of Marin provides and installs 3 new "Alert 2" stations at 19, 20, and 21 through DWR/FERP grant.

- Total Cost - \$0

##### Option 2

RVFD purchases and installs 3 new Davis Instruments "Vantage Vue" cellular weather stations and installs them at 19, 20, and 21.

- Weather Station: \$2,000 (each)
- Data for weather station: \$500 per year (each)
- Installation: \$1100 per station
- Total cost for new weather stations at 19, 20, 21: \$10,800 (startup cost)

#### Creek Gauge Costs

Existing cost- Creek Gauge Maintenance (Eyasco): \$2,686 for annual service, \$675 mid-season Alert system testing and configuration for Station 19, 20, 21. \$3,361(total)

Critical- Server and UPS upgrades at Stations 19 and 21: \$4,500 Hardware, \$3,000 Labor. \$7,500 (total)

Critical- Web Hosting: Server scaling to increases in web traffic related to weather and floods (2016-2017 10 days at \$225 per day): \$2,250 (total)

Optional- Dedicated internet service for camera at 800 San Anselmo Ave. \$840 (total)

### Camera

Cameras: Video hosting and storage for cameras: \$600 (yearly)

- Optional: New camera at Station 18. Hardware \$1,200, Installation \$600. \$1,800

### Staff Time

- 2015-2016 Rainfall Season, 59 hours: \$4,425
- 2016-2017 Rainfall Season, 163 Hours to date: \$12,225
- 2017-2018 Rainfall Season - \$8,325 (based on 2 year average)