



To: Bay Area UASI Approval Authority
From: Catherine Spaulding, Assistant General Manager
Date: May 12, 2016
Re: Item 7: Risk Management Program – Update on VHEMPs

Staff Recommendations:

None

Action or Discussion Items:

For discussion only

Discussion:

The NCRIC, the Management Team, and Haystax Technology recommend that we no longer input new VHEMPs into Cal COP. In the memo below, I explain the reasons for this new policy after providing some background information on relative risk, the definition of a VHEMP, and how the Bay Area has inputted VHEMPs in in the past.

What is relative risk?

Risk is defined as threat (likelihood of a given event) * vulnerability (likelihood of the worst consequences) * consequence (worst impact of a given event). Assets are assigned a default risk value when they are entered into the Risk Analysis Center (RAC) module of Cal COP. This value is assigned so that ultimately we can derive a picture of relative risk so that we can make strategic grant allocation decisions. Asset risk is approximately 30% of the overall formula that divides funding from amongst the four Bay Area UASI hubs.

What is a VHEMP?

VHEMP stands for vulnerability and human, economic, mission, and psychological consequence. A VHEMP is an in-depth review of an asset's vulnerability and consequences that overrides the asset's default risk value in Cal COP. It is an optional additional assessment a user can complete in order to get a more nuanced view of the vulnerability of an asset and potential consequences relative to a particular threat or hazard. For example – is the asset in a flood plain (flood hazard)? Have effective countermeasures been implemented such as bollards to protect critical infrastructure (VBIED threat)? This additional analysis can take anywhere from 2-8 hours to complete and relies on the subjective judgement of the person completing the analysis.

VHEMPs in the Bay Area UASI Asset Catalogue

In 2009, the Bay Area UASI created an asset catalogue in order to derive a relative risk picture. Today, there are over 15,000 assets in our catalogue. About 1,000 of these 15,000 assets have completed VHEMPs. Jurisdictional representative inputted VHEMPs for high risk high priority assets into the system back in 2009 with a few trailing assessments from that effort coming in during 2010 – 2012. They conducted the analysis in a workshop/group setting with technical assistance provided by the Management Team and the NCRIC to ensure a consistent approach.

In 2013, the NCRIC reviewed the asset catalogue to ensure all high risk assets were included and consistently analyzed. They found 60 more that needed to be completed, which they then undertook. That year, local jurisdictions also inputted about 475 assessments on low risk and low priority assets. Since 2014, jurisdictions have completed a few more VHEMPs, but only two have had a significant impact on regional risk. The NCRIC has recently reviewed these assessments and will update them to ensure a consistent approach as with the other high priority assets.

New VHEMP Policy

The NCRIC, the Management Team, and Haystax Technology recommend that we no longer input new VHEMPs into Cal COP. The reasons for this new policy are as follows:

- ***High risk high priority assessment input is complete*** – In 2013, NCRIC reviewed the asset catalogue to ensure all high risk high priority VHEMPs had been completed.
- ***No operational use*** – As far as we know, VHEMP information is not referenced or applied in any situation by the NCRIC or jurisdictions.
- ***Time intensive*** – VHEMPs take many hours to complete by jurisdictional subject matter experts and many hours to review by the NCRIC and Management Team to ensure consistency and accuracy of approach.
- ***Obsolete*** – Haystax now has a more refined risk algorithm that has enhanced the default risk values Cal COP assigns to assets. The VHEMP process, which refines the default values, was more relevant back in 2009 when the asset catalogue was first established.
- ***Unnecessary complexity*** – The default relative risk values Cal COP assigns to assets is adequate in order to get a relative regional asset risk picture. It can be frustrating and time-consuming for end users and policy makers to understand and complete VHEMPs.
- ***Subjectivity*** – The more in-depth risk a risk assessment is, the more subjective it can become, and the VHEMP process is no exception. Bay Area VHEMPs for high risk assets were conducted years ago in a workshop with technical assistance in order to ensure consistency. The level of effort to sustain such an approach is no longer justified.
- ***Consistency with other California UASIs*** – Similar to the Bay Area, other California UASIs completed VHEMPs years ago in a workshop setting. However, these other UASIs no longer add new VHEMPs.