

***ARIZONA RIVER RIPARIAN FIREFIGHTER SAFETY & MITIGATION BRIEFING CARD***

There are hazards associated with stump holes and hidden cavities that all personnel must be made aware of prior to work. IC/Supervisors must conduct assessments to determine if it is necessary to expose firefighters to these risks.

* + Duff layer can be deep and hold heat for long periods. Salt cedar burns very h**ot.**
  + There can be layers of woody debris or duff hidden below the sand or in the banks due to flooding or dozer work, these are almost impossible to detect as they burn very slowly and give off no smoke.
  + If duff or debris is burning below the sand/silt (under the surface) it can create cavities that can give way at any time, the layer below is extremely hot due to the insulating effects of the sand.
  + Surface material can give way at any time due to the undermining from burned out roots and stump holes below, heat is retained in burning material and the sand and silt.

FIREFIGHTERS HAVE BEEN SERIOUSLY BURNED IN THESE STUMPHOLES

* + Water should be used with care, if a stump hole collapses the hot material and sand will produce a superheated burst of steam causing burns and / or eye injuries safety glasses must be used**.**
  + "Hydro-mining" with a straight stream in debris piles or stump holes can produce an explosive blast of steam, dirt and hot debris – avoid straight stream use.
  + **Look up – Look Down – Look Around**
    - If stump holes are collapsing on their own or while being worked inform your supervisor / IC; evaluate tactics and objectives, adjust tactics accordingly.
    - Ensure subordinates/adjoining forces are briefed on the hazards and conditions as they change.
    - Salt cedar – whether burned or unburned - can be a hazard - evaluate your surroundings.
    - Continually evaluate and discuss hazards, tactics and other environmental factors with your crew and adjoining forces
    - Maintain a constant check on the **SITUATIONAL AWARENESS** of assigned resources.

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***ARIZONA RIVER RIPARIAN FIREFIGHTER SAFETY & MITIGATION BRIEFING CARD***

There are hazards associated with machine berms and increased nighttime fire activity that all personnel must be made aware of prior to work. IC/Supervisors must conduct assessments to determine if it is necessary to expose firefighters to these risks.

**FIREFIGHTERS HAVE BEEN SERIOUSLY BURNED IN MACHINE OR NATURAL BERMS**

You can expect to see an increase in berms used as holding features during river fires

* Berms have an increased potential for collapsing due to hidden cavities, firefighters should avoid using berms as travel routes by foot and avoid working berms from the top or high point
* Berms have the ability to hold and sustain heat for long periods of time
* Water should be used with extreme care “Hydro mining” with a straight stream on berms can produce an explosive blast of steam causing burns and eye injuries, safety glasses must be used, and avoid straight stream water use
* Consider if suppression activities tied to berms is critical to establishing containment or control of wildfires, consider monitoring berms as a tactic to mitigate firefighter berm exposure

**RIVER FIRES AT NIGHT HAVE SPECIAL CONSIDERATIONS**

* River fires can have an increase of thermal belts creating increased fire behavior at night
* Salt cedar as well as other riparian species can produce an abundance of ember washout resulting in increased spot fires at night