

Figure 13: Landsat Thematic Mapped Image

9.6 Mitigation Plan

The mitigation plan goals and action items are derived from review of regional and national hazards mitigation plans and planning literature, guidance from the Washington County Natural Hazards Mitigation Plan Steering Committee, and interviews with Washington County stakeholders. The goals for the Washington County Natural Hazards Mitigation Action Plan are broad based to include all of the identified hazards addressed in the plan. Goals for this mitigation plan addressed four categories:

- Life, Property and Natural Systems
- Public Awareness and Partnerships
- Emergency Services and Implementation

9.6.1 Volcanic eruption mitigation action items

The volcanic eruption mitigation action items provide direction on specific activities that cities, organizations, and residents in Washington County can undertake to reduce risk and prevent loss from volcanic eruption events. There are three short and two long term volcano hazard action items described. Each action item is followed by ideas for implementations, which can be used by the steering committee and local decision makers in pursuing strategies for implementation.

10. Case Study (Mount St. Helens Montana, USA, 1980, May 18)

Mount St. Helens had been dormant for 123 years when it suddenly erupted at 8:32 a.m. Ash-filled steam and gas blasted out horizontally from the mountain at up to 670 miles per hour, snapping off six million trees and scattering them like toothpicks over a 130,000-acre area. The event occurred in near silence. Muted by the ash, dust, and fir needles in the air, the sound waves only carried thirty feet. The explosion of the volcano was as large as 500 small atomic bombs, but luckily there were very few deaths. The death toll was 34, with 27 others missing. 10,000 animals are estimated to have been killed, along with 15,000 acres of destroyed forestland. Damage was estimated to exceed \$800 million. (Figure: 14)

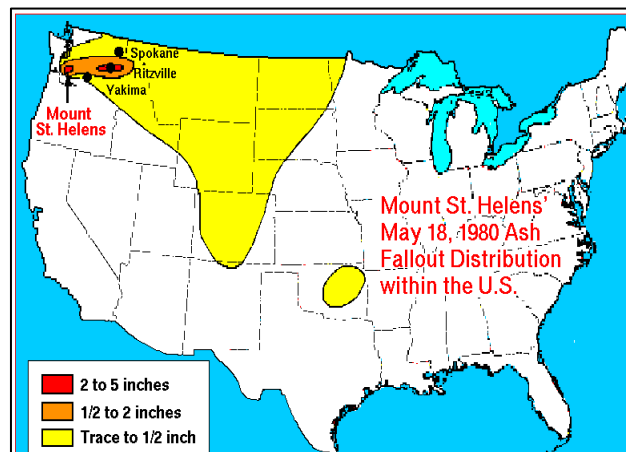


Figure 14: Mount St. Helens Montana, USA, 1980, May 18

11. Conclusion

Volcanic eruption is a major problem in many countries. Remote Sensing and GIS is most important tools to support the decision making process. Volcanic eruption can lead to a diversity process such as explosion, pyroclastic flow, lahars, lava flows and ashfall for the mapping of volcanic landforms and deposits. The convention interpretation of stereo aerial photograph is most used technique. (Figure: 12) The stereo image does not only give a good view of the different lithologies and the geomorphologic characteristics of the volcanic terrain, but it can also be used for a delineating possible paths of different kinds of lava flows. Remote sensing is the ability of the visible and infrared radiation to discriminate between fresh rock and vegetated surfaces. This is useful because vegetation quickly develops on all areas except those disturbed by the volcano or other causes.

References

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Author Profile



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