

Report on Costs and Benefits of Natural Hazard Mitigation



Over the last decade, the overall cost of disasters to the United States has grown significantly. From 1989 to 1993, the average annual losses from disasters were \$3.3 billion. Over the last 4 years, the average annual losses have increased to \$13 billion. On the Federal side alone, disasters have cost over \$20 billion over the last four years. The disaster losses are equally as staggering for the American public. Since 1993, over 1.4 million Americans have been impacted by Presidentially declared disasters, resulting in the loss of their homes, property, communities, jobs, and in some cases their lives. This figure does not include the hundreds of thousands of people impacted by natural hazard events that were managed entirely at the State and local levels, and involved the personal savings and private resources of property owners. Indeed, the impacts of major disasters on Americans go well beyond those damages that are directly sustained. Recovery from disasters requires resources to be diverted from other important public and private programs, and adversely impacts the productivity of economic systems. To many, the rising costs associated with natural disasters have become unacceptable. To address this growing problem, the Federal Emergency Management Agency (FEMA), under Director James L. Witt, has encouraged the emergency management community to become more proactive in reducing the potential for losses before an event occurs. This proactive strategy is commonly known as mitigation. Hazard mitigation is defined as sustained action taken to reduce or eliminate the long-term risk to people and property from hazards and their effects. This distinguishes mitigation from other major emergency management functions such as preparedness and training, response, and short-term recovery. This emphasis on mitigation led FEMA to

introduce a National Mitigation Strategy in December of 1995 to encourage a national focus on hazard mitigation. The strategy is based on the objective of strengthening the partnership among all levels of government and the private sector and to empower all Americans to fulfill their responsibilities for ensuring safer communities. The strategy was developed with input from State and local officials, as well as individuals and organizations with expertise in hazard mitigation. The strategy has two goals: to substantially increase the public awareness of natural hazard risk so that the public demands safer communities in which to live and work; and to significantly reduce the risk of loss of life, injury, economic costs, and destruction of natural and cultural resources that result from natural hazards. The reason for the emphasis on mitigation is clear. Experience at the Federal, State, and local levels during natural disasters, and a growing body of associated research, have demonstrated that the losses from such events (in terms of life, property, and community resources) can be substantially reduced when mitigation techniques and technologies are applied. This paper was prepared to illustrate the comparative benefits and costs associated with the implementation of a variety of mitigation measures by Federal, State, and local government, and private sector entities. To accomplish this, this paper will identify, through a series of case studies, the mitigation tools used to achieve cost-effective hazard mitigation benefits. The case studies are representative of the types of mitigation measures that are, or could be, performed elsewhere in the nation under similar conditions.

Hansen Family Farm
Japanese Black Trifele

We are happy to provide quality fresh fruits, vegetables, Grass-fed and Finished Beef, Naturally & Humanely raised Pork, Pastured Chickens, and Cage Free Eggs to Clackamas County sustainably on our small acreage.

We strive to provide vegetables that grow well in our climate ensuring the best tasting local food available. We prefer to grow old-fashioned and rare varieties of vegetables believing that they are the best to offer but do also grow a very select, few varieties of hybrids, but they are counted on one hand! Much of what we grow, we save the seed of every year and re-offer it to members of the Seed Savers Exchange.

We thank all of you, the “locavores”, food enthusiasts, market goers, and home chefs for making our goal of fresh, local, fruits and veggies sustainably a reality.

Latest News....

Phil and Christie Hansen

2015 is off to a great start! We are looking forward to what this year has to offer!

All our efforts are gearing up to get the growing season started...from ordering/starting/transplanting seeds, planning rotation crops for the fields, cleaning the greenhouses and field equipment, and clearing the fields! There is not a dull day here on the farm!

Planning for garden start varieties is in full swing also. This year we will be offering many of our favorite heirlooms, open-pollinated, and hybrid varieties that we have grown for the past 10+ years as well as many new-to-us varieties. We are diligent to not purchase, offer or grow GMO seeds or food.

Our mix of garden starts includes many different varieties of tomatoes, cucumbers, peppers, ground cherries, pumpkins, melons, flowers and other great things for your garden! Most, if not all, varieties are tried and true for our Pacific Northwest valley climate. Check out the Garden Start page for a printable list of varieties available. Or go directly to a specific list at our Tomato, Pepper, and Other garden start pages.

We grew over 100 heirloom/open-pollinated Pepper varieties and 125+ varieties of heirloom/open-pollinated Tomatoes in 2014! Not counting the numerous other garden necessities like heirloom flowers, cucumbers, summer and winter squash, herbs, and melons amongst other rare and hard to find vegetables! In 2015 we will continue with the tradition we've started and will be planting and growing almost all the varieties that have been started so that even if you don't buy a plant you have a chance to taste a range of different flavors!

[\[PDF\] Ketogenic Diet: 7 Day Low Carb Ketogenic Diet Meal Plan To Getting Lean And Burn Fat-Learn The Right Way To Lose Fat Fast With A Non Carb Keto Diet ... Cookbook, Ketogenic Diet For Weight Loss\)](#)

[\[PDF\] B. B. C. and Public Service Broadcasting \(Images of culture\)](#)

[\[PDF\] oil, power, & principle: irans oil nationalization & its Aftermath](#)

[\[PDF\] Still Broken: A Recruits Inside Account of Intelligence Failures, from Baghdad to the Pentagon](#)

[\[PDF\] Make More Money with Daily Affiliate Tasklists](#)

[\[PDF\] Tod Und Leben Nach Den Vorstellungen Der Babylonier \(German Edition\)](#)

[\[PDF\] Prehistoric Archaeology along the Zagros Flanks \(Oriental Institute Publications\)](#)

Cost Benefit Analysis Methodology - Garfield County Experience and research show that losses from natural disasters can be substantially reduced if mitigation measures are applied before the event. Using case Abstract: Mitigation decreases the losses from natural hazards by reducing our vulnerability This paper reports on a study that applied BCA method- benefit-cost ratio for FEMA mitigation grants is about 4:1, though the ratio varies from 1.5 **INCORPORATING NATURAL HAZARD ASSESSMENT AND** Emergency Management Agency Publication 331, Report on Costs and Benefits of Natural. Hazard Mitigation. This section is not intended to **Report on Costs and Benefits of Natural Hazard Mitigation: P Report on Costs and Benefits of Natural Hazard Mitigation - Google Books Result** Agency Acknowledgements The Report on the Costs and Benefits of Natural Hazards Mitigation was developed under the Hazard Mitigation **NATURAL HAZARD MITIGATION SAVES - National Institute of** Acknowledgements i. Protecting Business Operations: The Second Report on the Costs and Benefits of Natural Hazard Mitigation was developed by the. **Protecting Business Operations: Second Report on Costs and** Management Agency Publication 331, Report on Costs and Benefits of. Natural Hazard Mitigation. This section is not intended to provide a comprehensive **Appendix E Economic Analysis of Natural Hazard Mitigation Projects** Cover photo for the document: Report on Costs and Benefits of Natural Hazard Mitigation. This report reviews the types of benefits that can **none** The chapter goes on to show how the impact of natural hazards on selected at an equitable distribution of costs and benefits, and in doing so it links the quality of . In the field of landslide mitigation, a study in the State of New York (U.S.A.) .. Historical information, both written reports and oral accounts from long-term **International experience in disaster resilience** This document is a briefing on cost-benefit analyses (CBA) for disaster risk . As a prominent example, many politicians and reports quote the World Bank as foresight: aggregate analysis of natural hazard

mitigation benefits and costs. **Disaster Mitigation is Cost Effective - World Bank Group** Report on Costs and Benefits of Natural Hazard Mitigation [Federal Emergency Management Agency] on . *FREE* shipping on qualifying offers. **Report on Costs and Benefits of Natural Hazard Mitigation** NATURAL HAZARD MITIGATION SAVES: An Independent Study . this report and especially to Maria Vorel and Margaret Lawless of FEMA for their insight and . Both components employed common methodologies based on benefit-cost **chapter 1 - incorporating natural hazard management into** Report on Costs and Benefits of Natural Hazard Mitigation. Federal Emergency Management Agency (FEMA). 1997-03. URI: <http://123456789/> **Report on Costs and Benefits of Natural Hazard Mitigation - P** The Multihazard Mitigation Council (MMC), a council of the National Institute of Building . report presents the results of an independent study to assess the future . Both components employed common methodologies based on benefit-cost **Benefit-Cost Analysis of Disaster Mitigation - PreventionWeb** Natural disasters Risk management Ecosystems CBA DRR . These studies rarely report the costs and benefits of these DRR strategies in **Costs and Benefits of Natural Hazard Mitigation - RedVector** NATURAL HAZARD MITIGATION SAVES: An Independent Study . report presents the results of an independent study to assess the future savings from hazard . 1.3.1 Benefit-Cost Analysis of FEMA Mitigation Grants. **Report on Costs and Benefits of Natural Hazard Mitigation - PeriPeri U** This report employs two methods to determine the value in mitigation measures benefit/cost analysis and the cost-effectiveness analysis. **Report on the Costs and Benefits of Natural Hazards Mitigation** Mitigation decreases the losses from natural hazards by reducing our . The various categories of hazard mitigation benefits addressed in this report are: 1. **Protecting Business Operations Second Report on Costs and** Experience at the Federal, State, and local levels during natural disasters, along with a growing body of research, has demonstrated that the losses from such **NATURAL HAZARD MITIGATION SAVES: An Independent Study to** Experience and research show that losses from natural disasters can be substantially reduced if mitigation measures are applied before the event. Using case **Costs and Benefits of Natural Hazard Mitigation - RedVector** These reports demonstrate that FEMA's hazard mitigation activities for earthquake, Cost-benefit Analysis of Natural Disaster Risk Management in Developing **Benefit-Cost Analysis of FEMA Hazard Mitigation Grants** Report on Costs and Benefits of Natural Hazard Mitigation [P. Michael Laub] on . *FREE* shipping on qualifying offers. **Estimating environmental benefits of natural hazard mitigation with** **Report on Costs and Benefits of Natural Hazard Mitigation: Federal** This report reviews the types of benefits that can accrue to different segments of society from mitigative measures, the types of costs that can be **Appendix C - Economic Analysis of Natural Hazard Mitigation Projects** The 2005 Multi-hazard Mitigation Council Study* shows that money spent on reducing the mitigation (actions to reduce disaster losses) provides about \$4 in future benefits. Reduced cost of emergency response (e.g., ambulance service and police and *The two-volume study report is available for free download at: **A Natural Hazard Mitigation Project Saves Money - New Jersey** potential cases for the report and to discuss issues related with identify- ing the costs and benefits of natural hazard mitigation. The work group included:.