

### Appendix D: Planning Process Documentation and Plan Maintenance

#### **Planning Process Documentation**

#### **Risk Factor Exercise**

The Risk Factor (RF) exercise was collectively done by the technical working groups as part of their working group meetings. The RF approach combines historical data, local knowledge, and consensus opinions to produce numerical values that allow identified hazards to be ranked against one another (the higher the RF value, the greater the hazard risk). RF values are obtained by assigning varying degrees of risk to five categories for each hazard: probability, impact, spatial extent, warning time, and duration. Each degree of risk is assigned a value ranging from 1 to 4 and a weighing factor for each category. To calculate the RF value for a given hazard, the assigned risk value for each category is multiplied by the weighting factor. The sum of all five categories equals the final RF value, as demonstrated in the example equation below:

RF Value = [(Probability x .30) + (Impact x .30) + (Spatial Extent x .20) + (Warning Time x .10) + (Duration x .10)]

#### The criteria utilized as part of the RF exercise are summarized below in Table D.1.

#### Table D.1. Risk Assessment Category

Risk Assessment Category	Level	Index	Weight Value	
PROBABILITY What is the likelihood of a hazard event	UNLIKELY	LESS THAN 1% ANNUAL PROBABILITY	1	30%
occurring in a given year?	POSSIBLE	BETWEEN 1 & 10% ANNUAL PROBABILITY	2	-
	LIKELY	BETWEEN 10 &100% ANNUAL PROBABILITY	3	-
	HIGHLY LIKELY	100% ANNUAL PROBABILTY	4	
IMPACT In terms of injuries, damage, or death, would you anticipate impacts to be minor, limited, critical, or catastrophic when a significant hazard event occurs?	MINOR	VERY FEW INJURIES, IF ANY. ONLY MINOR PROPERTY DAMAGE & MINIMAL DISRUPTION ON QUALITY OF LIFE. TEMPORARY SHUTDOWN OF CRITICAL FACILITIES.	1	30%
significant nazara event occurs:	LIMITED	MINOR INJURIES ONLY. MORE THAN 10% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE DAY.	2	-



# Appendix D

	RITICAL	MULTIPLE DEATHS/INJURIES POSSIBLE. MORE THAN 25% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR MORE THAN ONE WEEK.	3	
	CATASTROPHIC	HIGH NUMBER OF DEATHS/INJURIES POSSIBLE. MORE THAN 50% OF PROPERTY IN AFFECTED AREA DAMAGED OR DESTROYED. COMPLETE SHUTDOWN OF CRITICAL FACILITIES FOR 30 DAYS OR MORE.	4	
SPATIAL EXTENT	NEGLIGIBLE	Single Jurisdiction	1	20%
How large of an area could be impacted by a hazard event? Are impacts localized or regional?	SMALL	Multiple Jurisdictions	2	-
	MODERATE	Entire Region of State	3	-
	LARGE	Entire State	4	-
WARNING TIME Is there usually some lead time associated	MORE THAN 24 HRS	SELF DEFINED	1	10%
with the hazard event? Have warning	12 TO 24 HRS	SELF DEFINED	2	
measures been implemented?	6 TO 12 HRS	SELF DEFINED	3	-
	LESS THAN 6 HRS	SELF DEFINED	4	-
DURATION	LESS THAN 6	SELF DEFINED	1	10%
How long does the hazard event usually	HRS LESS THAN 24	SELF DEFINED	2	-
last?	HRS	SELF DEFINED	2	
	LESS THAN 1 WEEK	SELF DEFINED	3	
	MORE THAN 1 WEEK	SELF DEFINED	4	



As part of the RF exercise, significant events were defined as damaging events in populated areas (when applicable). Each TWG performed this exercise for only those hazards that the group was assigned. The results of the exercise are presented below in Figures D.2 and D.3.

_						Spatial		Warning		_		RF
Rank	Hazard	Probability		Impact		Extent		Time		Duration		Factor
1	Wildfire	3.87	1.16	2.93	0.88	3.03	0.61	2.27	0.23	3.75	0.37	3.25
2	Flood	4.00	1.20	2.72	0.82	2.80	0.56	2.52	0.25	3.63	0.36	3.19
	Cyber											
3	Disruptions	3.67	1.10	2.47	0.74	3.19	0.64	3.66	0.37	3.08	0.31	3.16
4	Severe Storms	4.00	1.20	2.65	0.80	2.25	0.45	2.43	0.24	2.00	0.20	2.89
5	Drought	2.99	0.90	2.74	0.82	2.86	0.57	1.33	0.13	4.00	0.40	2.82
	Hazardous											
6	Materials	3.45	1.03	2.39	0.72	2.00	0.40	3.68	0.37	2.55	0.26	2.78
7	Pandemic	1.92	0.58	2.92	0.88	3.58	0.72	1.14	0.11	3.97	0.40	2.68
8	Avalanche	3.59	1.08	2.32	0.70	1.79	0.36	2.24	0.22	2.06	0.21	2.56
9	Landslide	3.79	1.14	2.13	0.64	1.75	0.35	3.27	0.33	1.00	0.10	2.55
10	Earthquake	1.60	0.48	3.00	0.90	2.23	0.45	3.99	0.40	1.29	0.13	2.35
	Volcanic											
11	Eruptions	1.00	0.30	3.05	0.91	2.77	0.55	1.03	0.10	3.77	0.38	2.25
12	Radiological	1.11	0.33	1.96	0.59	2.04	0.41	3.81	0.38	3.88	0.39	2.10
14	Civil Disturbances	2.00	0.60	2.13	0.64	1.07	0.21	2.95	0.30	1.93	0.19	1.94

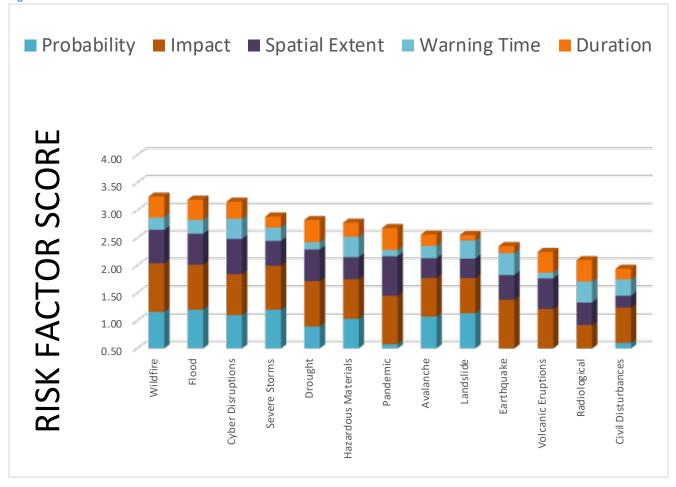
Figure D.2. Weighted Results of Risk Assessment

The overall results were a bit surprising to the TWGs in some ways and rather expected in others. The end RF Values placed some of the major hazards facing the State, such as wildfire, flood, and drought, high on the scale. This was expected and matches the data and results that resulted from the risk and vulnerability assessments. But earthquake, one of the State's top 3 hazards, placed near the bottom of the rankings. The human-caused hazards fell all across the board, with cyber disruptions coming in near the top.

The discussions generated by the exercise proved to be more beneficial to the groups than the resulting end values. Most of the TWGs chose to revisit the exercise multiple times over the course of the Plan update. Lessons learned from the activity pointed out the fact that this type of exercise presents the particular group's perception of each hazard. It is difficult to equate a worst-case scenario across all of the varying types of hazards faced by the State, especially when comparing natural versus humancaused/technological hazards. The large size of Idaho also makes it a challenge when defining the spatial extent of a hazard.



#### Figure D.3. Risk Factor Exercise Result



#### Consequence Analysis Exercise

The Consequence Analysis Exercise was performed by the technical working groups and focused on three scenario events – one each for flood, earthquake and wildfire, the three major hazards identified in the plan. The results of these exercises can be found in Chapter 3, under the Vulnerability Analysis and Loss Estimation subsection for each hazard.

#### Summary

The following table provides a high-level summary of the Consequence Analysis Evaluation. The average consequence ranking across all six (6) systems was calculated for each hazard scenario, across both the short-term and long-term.

What first stands out is that overall the short-term consequences are generally believed to be greater than the long term, for every scenario evaluated. It should be cautioned, however, that these are averages across all systems and individual system results may not always follow this trend.

STATE OF IDAHO HAZARD MITIGATION PLAN 2018

Hazard Scenario	Short-Term	Long-Term
Avalanche	3.23	1.01
Civil Disturbance	3.00	1.31
Cyber Disruption	3.24	1.96
Dam/Levee/Canal Failure	4.71	3.50
Drought	2.73	2.33
Earthquake	4.25	3.70
Flooding	4.37	2.97
Hazardous Materials	3.50	2.00
Landslide	3.91	2.41
Lightning	2.43	0.64
Pandemic	2.81	1.20
Radiological	3.56	2.53
Severe Storm	3.51	2.57
Volcanic Eruption	3.46	1.80
Wildfire	4.24	3.61
Wind/Tornado	3.49	1.40

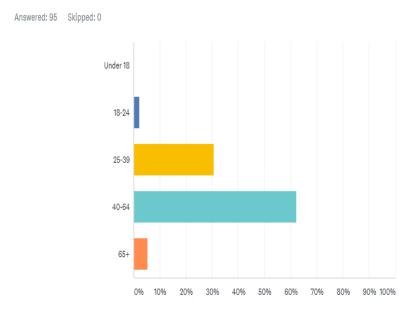
#### Public Outreach Documents

#### **Hazard Survey**

The Hazard Survey results were taken and aggregated into themes, which were then used to help determine best mitigation action items going forward. The aggregation chart can be found in Figure D.4. of the Survey Results and Public Comments section below.

What is the name of your community and ZIP code? Answered: 95 Skipped: 0	
RESPONSES (95) TEXT ANALYSIS TAGS (0)	
Add Tags 🔻 Filter by Tag 💌	Search responses Q
Showing 95 responses	
Post Falls 83854 5/4/2018 5:07 PM	View respondent's answers Add Tags -
83843 5/3/2018 7:37 AM	View respondent's answers Add Tags 🔻
Eagle 83616 5/2/2018 2:26 PM	View respondent's answers Add Tags 🕶
83655 5/2/2018 12:03 PM	View respondent's answers 🛛 Add Tags 🔻
83544 5/2/2018 10:38 AM	View respondent's answers 🛛 Add Tags 👻
Weiser 83672	v

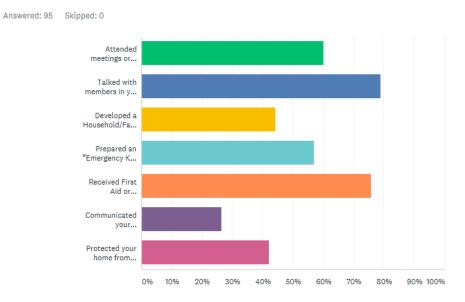
### What is your age?



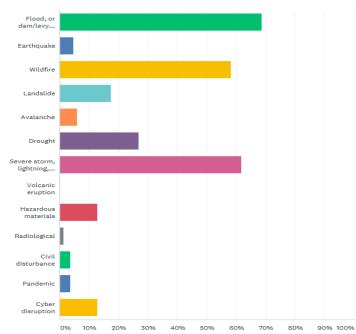




# Which of the following preparedness activities have you done in your household? Mark all that apply.



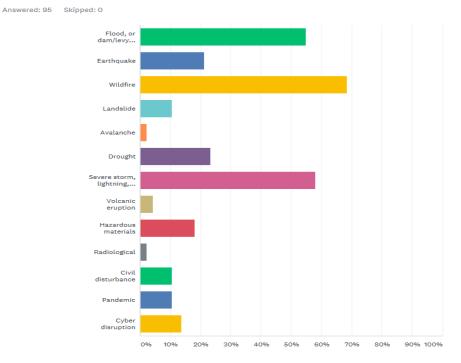
# Indicate which types of disasters have affected your community since 2012. Mark all that apply.



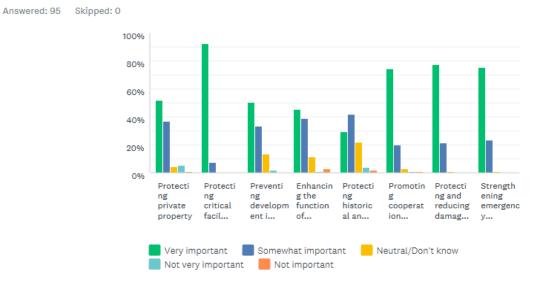
Answered: 86 Skipped: 9



Rank the top three hazards that you feel pose the most serious threat to your community. Please only rank the top THREE.

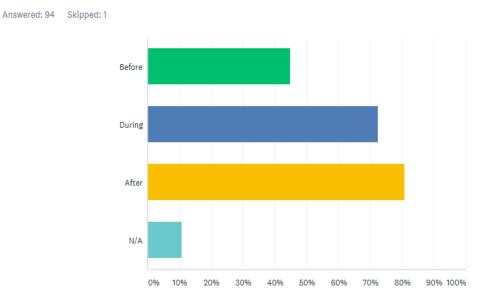


Natural hazards can have a significant impact on a community, but planning for these events can help lessen the impacts. The following statements will help determine citizen priorities for planning. Please tell us how important each one is to you.

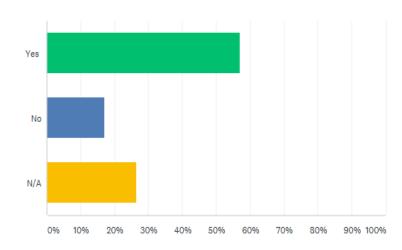




### Do you expect the government to help you before, during, or after a disaster? Mark all that apply



### Does the state support your communities ability to prepare for a disaster?



Answered: 95 Skipped: 0

In your opinion, what could the State of Idaho do to help your community reduce or eliminate risk of future hazard damages in your community?

Answered: 64 Skipped: 31



Any additional comments or concerns? (i.e. community response capability and equipment, ingress/egress routes, multiple disaster impacts to community and environment, surrounding vegetation or lack of, etc.)

Answered: 32 Skipped: 63

#### **Draft Plan Survey**

The Draft Plan Survey questions are below, and the results are in the following Survey Results and Public Comments section.

2018 Idaho Ha	zard Mitigation Pl	an DRAFT Feedb	pack	
⊕ PAGE TITLE				
1. What is the name of you	r community and 2	Zip Code?		
2.14/6-6.5				
2. What is your age?				
3. Where did you hear abo	ut this survey from	1?		
4. What feedback do you	nave for Chapter 1:	Hazard Summary	and Mitigation St	trategy? Click
here to visit <u>Chapter 1</u>				
Positive Feedback				
Areas for Improvement				
Other				



5. What feedback do you have for Chapter 2: State of Idaho Profile? Click here to visit Chapter 2
Positive Feedback
Areas for Improvement
Other
6. What feedback do you have for Chapter 3: Hazards in Idaho? Click here to visit <u>Chapter 3</u>
Positive Feedback
Areas for Improvment
Other
7. What feedback do you have for Chapter 3.1: Risk Assessment, Wildfire? Click here to visit <u>Chapter 3.1</u>
Positive Feedback
Areas for Improvement
Other
8. What feedback do you have for Chapter 3.2: Risk Assessment, Flood? Click here to visit <u>Chapter 3.2</u>
Positive Feedback
Areas for Improvement
Other
9. What feedback do you have for Chapter 3.3: Risk Assessment, Severe Storm? Click here to
visit <u>Chapter 3.3</u>
Positive Feedback
Areas for Improvement
Other
10. What feedback do you have for Chapter 3.4: Risk Assessment, Avalanche? Click here to visit <u>Chapter 3.4</u>
Positive Feedback
Areas for Improvement
Other
11. What feedback do you have for Chapter 3.5: Risk Assessment, Drought? Click here to visit <u>Chapter 3.5</u>
Positive Feedback
Areas for Improvement
Other
12. What feedback do you have for Chapter 3.6: Risk Assessment, Earthquake? Click here to visit <u>Chapter 3.6</u>
Positive Feedback



13. What feedback do y <u>Chapter 3.7</u>	ou have for Chapter 3.7: Risk Assessment, Landslide? Click here to visit
Positive Feedback	
Areas for Improvement	
Other	
14 What foodback do y	ou have for Chapter 3.8: Risk Assessment, Volcanic Eruptions? Click
here to visit <u>Chapter 3.8</u>	
Positive Feedback	2
Areas for Improvement	
Other	
15. What feedback do y	ou have for Chapter 3.9: Risk Assessment, Civil Disturbances? Click here
to visit <u>Chapter 3.9</u>	
Positive Feedback	
Areas for Improvement	
Other	
6. What feedback do yc o visit <u>Chapter 3.10</u>	u have for Chapter 3.10: Risk Assessment, Cyber Disruption? Click here
Positive Feedback	
reas for Improvement	
)ther	
7. What feedback do yo 3.11	u have for Chapter 3.11 Hazardous Materials? Click here to visit <u>Chapter</u>
ositive Feedback	
reas for Improvement	
Dther	
8. What feedback do yc <u>Chapter 3.12</u>	u have for Chapter 3.12: Risk Assessment, Pandemic? Click here to visit
ositive Feedback	
reas for Improvement	
Dther	
9. What feedback do vo	u have for Chapter 3.13: Risk Assessment, Radiological? Click here to
visit <u>Chapter 3.13</u>	a nate to: shapter one new recessing it, radiological: electricite to
Positive Feedback	



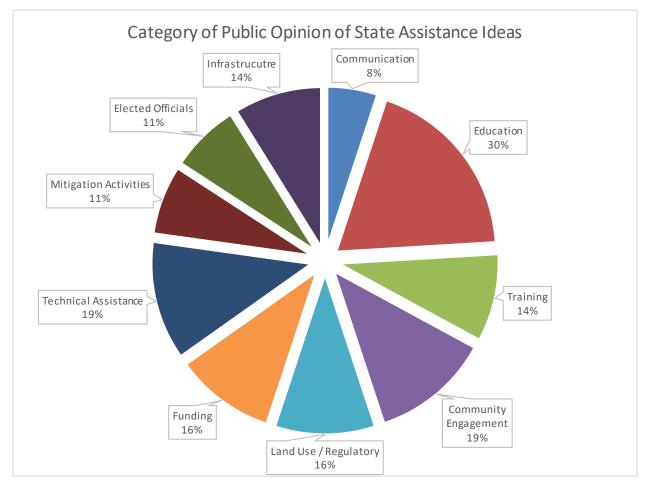
20. What feedback do you have for Chapter 4: Policie	es, Programs, and Capabilities? Click here	e
to visit <u>Chapter 4</u>		
Positive Feedback		
Areas for Improvement		
Other		

#### Survey Results and Public Comments

#### **Hazard Survey**

The Hazard Survey public comments were taken and analyzed into main themes, and then tallied for the number of times the themes were addressed. The comments and results are displayed in Figure D.4 below. Figure D.5 contains the list of comments that were aggregated to create the analysis table.







#### Figure D.5. List of Public Comments

In your opinion, what could the State of Idaho do to help your community reduce or eliminate risk of future hazard damages in your community? Answered 64 64 31

C	
Skipped	

Skipped			Response Categories									
						Community	Land Use /		Technical	Mitigation	Elected	
lespondents	Response Date	Responses	Communication	Education	Training			Funding				Infrastructure
	May 04 2018 05:07 PM	Including public more, better communication	1									
	May 03 2018 07:37 AM May 02 2018 12:03 PM	Training for find responders. Help County leaders understand how to involve small towns and others into preparedness efforts.			1	1					1	
	May 02 2018 10:08 AM	Provide realistic training for the volunteer fire department's in mass casualty and hazmat mitigation.			1							
		Restart and revemp the program that provided incentives to fire ready property owners properties in order to prevent										
5	May 02 2018 09:57 AM	deviatiting free				1						
		It would be nice if the fire departments could use private properties as training areas: help land owners clear out										
	May 02 2018 09:47 AM May 02 2018 08:20 AM	overgrowth while ensuring safe burning and providing training to firefighters. Not sure			1							
1	May 02 2010 00:20 MM	Path local governments to more actively pursue emergency management. Kootenal county doesn't have a functioning										
8	Apr 30 2018 12:26 PM	CERT program while Bonner County which is far less populated does. Why?				1					1	
	Apr 27 2018 10:24 AM	State grants for local CERT programs				1		1				
10	Apr 26 2018 06:28 PM	Remap food zoneal					1					
	Apr 26 2018 04:33 PM	CERT training mandatory for a member of each household. Awareness week - focus on current and future plans to improve safety in case of emergency.										
	Apr 24 2018 09:27 AM	Do more fuels reduction on public and private lands in order to reduce the threat of wild fre.										
13	Apr 20 2018 03:07 PM	Public service announcements that interrupt all stations.	1									
14	Apr 16 2018 10:43 AM	Support communities in becoming self-sufficient and resilient.				1						
		Promote sustainable development. Do not allow the population to outgrow the infrastructure and resources. Is: do not										
	Apr 11 2018 01:46 PM Apr 09 2018 03:13 PM	issue building and development permits until austainability is ensured. Help fund mitigation projects.					1					
	Apr 09 2018 03:09 PM	Help push planning on all levels in all toxing districts.										
	Apr 09 2018 03:03 PM	More funding for diseaser miligation						1			•	
	Apr 09 2018 02:55 PM	More education, provide 72 hour kits										
	Apr 05 2018 02:36 PM	Not sure, we operate a public water supply system serving about 500 homes.							1	)		
	Apr 05 2018 02:31 PM	Come look and tell us what we should do		1					1	1		
22	Apr 04 2018 11:07 AM	Help prepare for the possibilities of this infrastructure being damaged Not allow structures to be built in the food plane.		1	1				1	1		
		Not allow structures to be built in the flood plane Stop the Koolenai River 'reatonation' from putting more side dams and flow reatrictors such as huge logs protructing										
		into the waterway which restricts flow when needed most. 0										
		Do more preventative logging in forested lands to lessen wild fire ranges. Use the forest instead of letting it all burn.0										
		Improved secondary access/egress/travel routes when the highway (Hwy 95) is impassable. D					_					
	Mar 30 2018 03:39 PM	Publicly existing many law energy with and having supervisions					1					
	Mar 29 2018 12:07 AM Mar 20 2018 01:17 PM	Publicize eduting resources for community and family preparedness. Active shocter response		1								
	Mar 15 2018 03:25 PM	Strengthen land use policies										
	Mar 13 2018 07:32 PM	Focus on real issues impacting our lives										
		Provide training, not only for first responders, but for citizens as well. Posting tips on Facebook is a great way to reach										
		people, I've seen lots of them. Having a few classes would be an additional help showing us about assembling										
		emergency kits (what kinds of foods, supplies, first aid) or how to shelter in place. This would put knowledge and										
		action together so maybe people would be more likely to do it. Local classes for finit aid and CPR for citizens. Create a citizen committee from those who take local classes to help finit responders with smaller duties freeing them for the										
		more important tasks. Reading about diseater prep is great, but actually going to a class and actively discuss										
		situations reinforces what needs to be done. Get the public involved and trained. Maybe some FEMA classes for the										
	Mar 07 2018 09:26 PM	public? I would really like to be involved in these types of things.	1	1	1	1			1	r.		
	Mar 07 2018 12:10 PM Feb 16 2018 05:11 PM	Promote community events that encourage citizens to prepare for emergencies and give them the knowledge of same.		1		1						
	Feb 13 2018 08:56 AM	Less focus on cumbersome processes and more emphasis on streamlined responsiveness. Release more funding to support AHMP and EOP Plans for agencies. Do more media campaigns							1			
-		Though it may not be the most deviatisting, I most fear free in urban and rural interface. I know that BFD cooperates										
	Feb 12 2018 12:07 PM	with BLM, etc., but I would like to see more funding for this.						1				
	Feb 08 2018 02:06 PM	educate the public on what may happen during a disaster.		1								
	Feb 06 2018 02:36 PM	Keep federal and state resources in rural areas.						1				
	Feb 06 2018 01:50 PM Feb 01 2018 01:48 PM	Education and exercise facilitation.								1		
	Feb 01 2018 11:33 AM	Offer workshops, talks, videos,			1				1			
	Feb 01 2018 09:41 AM	gun control/whety, education			-							
39	Jan 31 2018 08:14 PM	Having a physical presence in the community, not just through the Internet.							1	)		
		Provide education and outreach to high risk properties in the floodplain and in wildfire urban interface areas. Pass										
	Jan 30 2018 08:38 AM Jan 29 2018 08:40 AM	legislation to help counties/bites limit and/or control development in the WUIs.					1					
	Jan 25 2018 05:04 PM	Hazard Awareness Courses to the Communities. Continue to grow the counties participation in disaster prep and planning										
	Jan 24 2018 09:52 AM	Control development, build infrastructure, and impose impact fees to mitigate these hazards.					1					
44	Jan 23 2018 11:00 AM	More community meetings, offer emergency supplies.				1		1				
45	Jan 23 2018 08:46 AM	Invest in disaster preparedness, that includes cyber and physical disasters.										
		Maintain infrastructure of communities up to date (utilities, water, drains, roads, etc). Educate public as to risks,										
	Jan 22 2018 08:20 PM Jan 22 2018 07:22 PM	hazards and Prevention. better maintenance of state roads/hicherays		1								
-	and a sold of as PM	Deter maintenance or state roaduringmentys Considering Idaho has experienced a catastrophic dam failure, establishing and identifying evacuation or safety routes										
48	Jan 22 2018 03:40 PM	similar to how taurami safety routes are identified and marked on the Pacific coast.		1								
		Pass state-wide legislation to prohibit building and development in hazardous areas (e.g., food plain, steep slopes and										
	Jan 22 2018 03:34 PM	unatable slopes, unprotectable fire areas, etc.)					1					
50	Jan 21 2018 06:46 AM	Preventing development in hazard areas and Enhancing the function of natural features (streams, wetlands, etc.) Uninterpreted, exact acceptory more unined to mitingle leaves. Disc and express for the future. If a not if acception					1					
61	Jan 19 2018 03:40 PM	Unfortunately, spend more/pay more upfront to mitigate issues. Plan and prepare for the future. It's not if something hancens but when.										
	and the second statement of the	With ideho growing, we need to do more to prepare for the future with an eye for mitigating the hazards that will surely										
		come. Stronger land-use planning, greater infrastructure planning and improvements, and increased public awarenees										
	Jan 19 2018 03:15 PM	of how vulnerable we are.		1			1			1		
	Jan 19 2018 10:29 AM Jan 19 2018 10:25 AM	Whole community identification of mitigation projects. Dedicate state mitigation funding for projects.				1		-	1	1		
	Jan 18 2018 09:54 PM	Miloste existing hazarda						1		1		
	Jan 18 2018 11:51 AM	Education in the area of what all natural/man made threats have the potential to affect Meridian.										
	Jan 18 2018 11:46 AM	Continue training			1							
		Come up with a plan to deal with EMP issues, and in the event of a train detailment a plan to handle that as well ( oil,										
58	Jan 18 2018 11:43 AM	gas etc).							1	r.		
60	Jan 18 2018 09:27 AM	Don't make stupid rules and get out of the way. Tell people they need to take care of themselves that govt will NOT be there. People need to take responsibility for themselves. No namy state bloated useless departments.										
	AND 2010 UK27 AM	there. People need to take responsibility for themserves. No ranny state bloated useres departments. Make sure all county emergency management agencies are active and promoting emergency management to the										
60	Jan 17 2018 09:30 PM	community through accial media and both private and public events.	1			1					1	
61	Jan 16 2018 11:11 PM	Not sure										
62	Jan 16 2018 02:15 PM	I don't know										
63	Jan 08 2018 04:29 PM	Train decision-makers (agency heads) and politicians to make better decisions.									1	
	Jan 05 2018 09:42 AM	To my knowledge, there is no lacking on the part of the State. Any deficiencies are the fault of generally incompetent local officials.									_	
04	ALL OF SOLUTION COME AND	Iocal officials. Total Responses by Category	5	19		12	10	10	12		7	
		Percentage of Respondents Who Answered	15	30%	14%	19%	16%	16%	19%	115	11%	14%
							Land Use /		Technical	Mitigation		-
			Communication	Education	Training	Ergagement	Regulation	Funding	Assistance	Activities	Officials	Infrastructure



#### **Draft Plan Survey**

There were limited responses on the Draft Plan Survey, as only 2 respondents wrote comments. The comments were reviewed, and are displayed below.

				What																	
				feedback																	
					What										What	What	What	What			
					feedback			What		What	What	What	What	What	feedback do		feedback do		What	What	What
				Chapter 1:					What					feedback do					feedback do		feedback do
						What								you have for	·	·	·	· ·	you have for		you have for
						feedback do		·		1	·	1	1	Chapter 3.7:					·	Chapter 3.13:	Chapter
	What is the					you have for			Chapter 3.2:			Risk			Assessment.		Assessment.				4: Policies.
	name of		Where did			Chapter 3:			Risk	Assessment.				Assessment.		Civil	Cvber	Materials?	Assessment,		Programs,
	vour			Strategy?		Hazards in			Assessment.		Avalanche?					Disturbances?					and
	community		1			Idaho? Click										Click here to			Click here to		Capabilities?
						here to visit			here to visit					visit Chapter			visit Chapter		visit Chapter		Click here to
Respondent ID	1 · · · ·	your age?		Chapter 1						Chapter 3.3										3.13	visit Chapter 4
		,				•															
	Open-	Open-	Open-																		
	Ended			Positive	Positive	Positive	Areas for	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive	Positive
	Response	Response	Response	Feedback	Feedback	Feedback	Improvment	Feedback	Feedback	Feedback	Feedback	Feedback	Feedback	Feedback	Feedback	Feedback	Feedback	Feedback	Feedback	Feedback	Feedback
					Verv	A lot of															Didn't really
1006857617	1 Ada 83705	57	Work		. 1	imformation		Scarv	Good	Good	Good	Good	Scary	Good	Good	Good	Good	Good	Good	Good	read it
100007011	10000700						Table 3.E is missing	500.7													i cuo n
							the Department of														
							Water Resources. It														
							is part owner in the														
							Uof I building in														
							Boise and leases out														
							5 additional														
1006474017							buildings.														
10004/401/	7						oundings.														



Question 6 had a correction listed in the comments, and this was corrected in the plan, in Chapter 3.0, Table 3.E. were limited responses on the Draft Plan Survey, as only 2 respondents wrote comments. The comments were reviewed, and are displayed below.

# Q6 What feedback do you have for Chapter 3: Hazards in Idaho? Click here to visit Chapter 3

....

	Answered: 2 Skipped	: 0		
ANSWER C	HOICES	RESPONSES		
Areas for Im	provment	50.00%		1
Other		0.00%		0
Positive Fee	dback	50.00%		1
#	POSITIVE FEEDBACK		DATE	
1	A lot of imformation		6/15/2018 8:27 AM	
#	AREAS FOR IMPROVMENT		DATE	
1	Table 3.E is missing the Department of Water Resources. It is part o Boise and leases out 5 additional buildings.	wner in the Uof I building in	6/13/2018 10:08 AM	
#	OTHER		DATE	
	There are no responses.			

#### **Plan Maintenance and Update Processes**

#### Plan Maintenance

Section 201.4(c) requires that the SHMP be reviewed, revised, and submitted for approval to the Regional Administrator of FEMA every five years. The regulations require a plan maintenance process that includes an established method and schedule for monitoring, evaluating, and updating the plan. The Idaho Office of Emergency Management – Mitigation Section is the agency primarily responsible for the plan maintenance, but it will utilize the review and comments from other entities as part of the maintenance process.

The Idaho SHMP is a living document and will be reviewed and potentially updated constantly. The plan will be revised if the conditions under which the plan was developed change, such as new or revised State policies, a major disaster, or the availability of funding. This section describes how the SHMP will be monitored, evaluated, and updated.

The SHMP Executive Committee will meet annually in the fall to evaluate the SHMP. Minutes from the 2014 thru 2018 meetings are included at the very end of Appendix G. The Executive Committee will evaluate the Plan based on the following criteria:

- How much progress has been made on mitigation actions and projects
- Implementation problems (technical, political, legal, and financial)



- Relevancy of goals, objectives, and actions and whether they need to be discontinued or changed
- Level of involvement by the public and other agencies
- Accuracy and precision of the risk assessments, availability of new data, and whether such data needs to be reflected in the plan immediately

After each major disaster in Idaho declared by the President, the IOEM Mitigation Section will incorporate an action for the disaster in the Mitigation Strategy, to evaluate and assess whether the SHMP addresses the reality resulting from the disaster (i.e., does the risk assessment need updated, are the goals/objectives/actions are still relevant). This evaluation will be provided to the Executive Committee.

#### Plan Update

Every five years, as required by 44 CFR § 201.4, the State Hazard Mitigation Officer (SHMO) is responsible for submitting the revised SHMP to the FEMA Regional Administrator and for facilitating the adoption of the plan by the State. The SHMO uses the FEMA Standard State Hazard Mitigation Plan Review Crosswalk as a tool for updates with a review panel and a secondary reviewer, and submits the revised Plan with the completed crosswalk to FEMA.

IOEM will revise the Plan more frequently if the conditions under which the Plan was developed materially change through new or revised State policy, a major disaster, or availability of funding. Future updates of the SHMP will involve the technical working groups and their recommendations.

The method to update the Plan is for planning committee members to utilize the on-line planning tool to edit sections as changes are needed. Recommended updates will be vetted through the Executive Committee and technical working groups (as applicable). Recommended updates will then be provided to the IOEM Mitigation Section for consideration. Upon acceptance, the IOEM Mitigation Section will develop the draft updates, circulate draft updates for review to the Executive Committee and technical working groups, incorporate review comments, provide the public with an opportunity to review and comment, and forward the draft plan for final State approval.

#### Local Plan Coordination and Linkage

As part of the SHMP update, local plans were assessed, focusing on three areas: risk assessment, mitigation strategy, and local capability. As part of this and previous updates, a database "rolling-up" local plan data was developed and the local plan data was analyzed to ensure that the State mitigation goals and objectives are compatible with local actions and to undertake a comparative analysis of the State risk assessment versus local risk assessments. This data will be continuously updated and incorporated into the 2023 SHMP.

**Population Data (Census Data). Residential Populations.** For the residential population analysis, 2010 Census data and forecasts through 2020 were used to determine the sensitivity and exposure of several



social populations. In particular, this study focused on the total population and included age, race, median age, female population, single mother houses, number of households, housing capital, and tenancy.

While the number of total residents within the hazard zone is important to consider, studies have suggested that demographic characteristics can affect an individual's sensitivity to a hazard event (Morrow, 1999). One demographic that can affect an individual's sensitivity is age. Younger and elderly populations often require special assistance when evacuating hazardous areas. Younger populations, defined here as 5 years of age or younger, often need more assistance and direction when evacuating. Younger populations also do not have the same understanding about hazardous situations as older populations, and thus often do not know how to react. Older populations, defined as over 65 years in age, often require more assistance during evacuations due to possible mobility and health issues. These populations may also need to be evacuated to facilities with specific medical equipment or other special needs facilities.

Gender can also influence an individual's sensitivity to hazard events. Research suggests that women, in general, tend to be more likely to respond to and be prepared for hazard warnings but are more likely to suffer from posttraumatic stress due to hazard events (Wood et al., 2007). Women are also more likely to be single parents and often have lower incomes, which can make recovering from a hazard event more difficult (Morrow, 1999; Wood et al., 2007).

Tenancy is another socioeconomic factor that can affect an individual's sensitivity and exposure to hazards. Certain studies have shown that renters have less of a tendency to prepare for hazard events than homeowners. This behavior could be due to renters having lower incomes, fewer resources to recover, or a lack of concern for a property they do not personally own and care for. Homeowners are more likely to want to protect and preserve what they do own (Wood et al., 2000).

## **Appendix D**

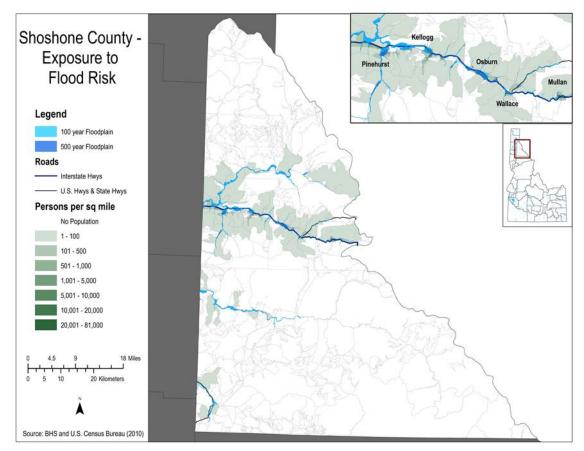


Figure D.6. 100 and 500-year flooding extent overlayed with population density in Shoshone County, ID

#### Businesses and Critical Facilities (InfoUSA data)

**Economic Assets.** When discussing short term and long term recovery, the tax parcel base is often utilized as a monetary way to fund recovery after hazard events. For this reason, understanding the percentage of the tax parcel base within the hazard extents can help gage the resilience of a community or county and its ability to recover from these hazards (Wood et al., 2007; Frazier et al., 2010). The sensitivity and exposure of businesses and employees is also important for understanding the sensitivity of economic assets within the hazard extents (Wood et al., 2007; Frazier et al., 2010). Understanding the percentage of employees that are in hazard zones can be used to determine potential economic fragility, while sales volume can be used to determine how much revenue might be lost if normal business is interrupted by a hazard event (Wood et al., 2007; Frazier et al., 2010). High percentages of employees in the hazard extents can signify an area that might suffer economic fragility should a hazard occur. For example, if a fire were to wipe out most of the businesses in the area, a high level of unemployment could occur overnight. As a result of these lost or damaged businesses, sales in that area would decrease because people are forced to shop elsewhere and a number of people could become unemployed. Therefore, understanding how hazards might affect the business and employee



base can help identify communities or areas that might have economic recovery issues (Wood et al., 2007; Frazier et al., 2010).

#### **Dependent Population Facilities**

Dependent population facilities include medical facilities, emergency services facilities, adult residential care centers, schools, child day care centers, correctional facilities, and religious organizations. These populations are important to take into account because moving these populations can often be difficult, as they require specific needs when evacuated from hazardous areas (Wood et al., 2007; Frazier et al., 2010). Elderly and child populations take more time to move because they require more assistance to do so. In addition, if emergency service facilities are in hazardous areas, then they are more likely to be incapacitated in a hazard event. As a result, there would be fewer emergency services available to people in need and less backup for those within those faculties themselves.

#### **Critical and Essential Facilities**

Critical and essential facilities are facilities that help keep the health, safety, and economy of the population intact. If these types of facilities are threatened or damaged by a hazard event, long-term recovery can often be delayed because the basic facilities that drive the economy, safety, and health of the community may no longer be available. Critical facilities include medical services, police and fire services, utilities, and emergency services. Essential facilities include banks, grocery stores, gas stations, and legislative bodies.

## **Appendix D**

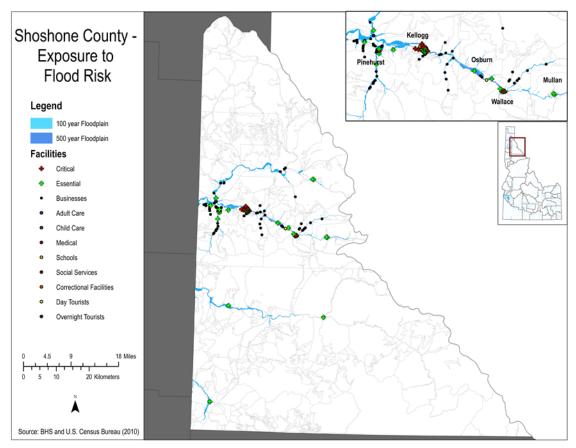


Figure D.7. 100 and 500-year flooding extent overlayed with critical and essential facilities, dependent population facilities, and businesses in Shoshone County, ID

#### References

Cutter, S., & Emrich, C. (2006). Moral Hazard, Social Catastrophe: The Changing Face of Vulnerability along the Hurricane Coasts. The Annals of the American Academy of Political and Social Science, 604, 1, 102-112.

Frazier, T. G., Wood, N., Yarnal, B., & Bauer, D. H. (2010). Influence of potential sea level rise on societal vulnerability to hurricane storm-surge hazards, Sarasota County, Florida. Applied Geography, 30(4), 490-505. doi: 10.1016/j.apgeog.2010.05.005

Morrow, B. H. (1999). Identifying and mapping community vulnerability. Disasters, 23, 1, 1-18. Wood, N., Church, A., Frazier, T., & Yarnal, B. (2007). Variations in community exposure and sensitivity to tsunami hazards in the State of Hawai`i: U.S. Geological Survey Scientific Investigation Report 2007-5208, 42 p. [http://pubs.usgs.gov/sir/2007/5208/

Wu, S.-Y., Yarnal, B. M., & Fisher, A. (2002). Vulnerability of coastal communities to sea-level rise: A case study of Cape May County, New Jersey, USA. Emmitsburg, MD: National Emergency Training Center.

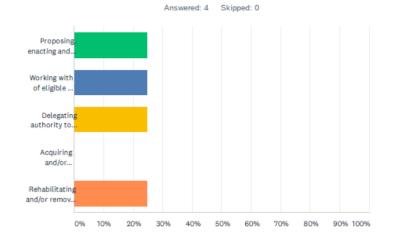


The Dam/Levee/Canal Technical Working Group completed a survey for additional mitigation actions to support the High Hazard Potential Dam Program.

Figure D.8. HHPD Mitigation Action Survey

Mitigation Actions for High Hazard Potential Dams

Q1 Requirement 44CFR 201.4(c)(3)(iii) and (iv) To meet State Mitigation Plan Review guide Element S9 (mitigation actions), does the plan prioritize mitigation actions to reduce vulnerabilities identified in the risk assessment? To meet this requirement with a specific focus on eligible high hazard potential dams, the plan must:Include actions to reduce vulnerabilities to/from eligible high hazard potential dams, such as: (please choose one or leave your own option in the comment section)



ANSWER CHOICES								
Proposing, enacting and/or delegating authority for local land use regulations, ordinances, and/or construction standards to protect life and property from eligible high hazard potential dams.								
Working with of eligible dam owners to create/update and share EAPs or dam incident annex to emergency operations plans (EOPs).								
Delegating authority to local governments to adopt and enforce land use ordinances in inundation zones.								
Acquiring and/or elevating structures both upstream and downstream of eligible high hazard potential dams.								
Rehabilitating and/or removing eligible high hazard potential dams.								
TOTAL								
#	OTHER (PLEASE SPECIFY) DATE							
1	Ensure downstream entities are made aware of HHPD risk status as it will impact their 7/29/20 mission/operations.							



The new HHPD mitigation actions were ranked and prioritized using the Staplee Method with social, technical, administrative, political, legal, economic, and environmental considerations.

									Mitigation Effectiveness							
Staplee Scoring	(Definitely	y YES = 3, №	laybe YES = 2, Pro	bably NO	= 1, Definit	tely NO = 0)			Avg							
Mitigation Action	Social	Technical	Administrative	Political	Legal	Economic	Environmental	Sub-Total Avg	g (5-10 additional points)	Total Score	Rank					
Propose land use regulations,																
ordinances, and/or construction																
standards																
to protect life and property from																
eligible high hazard potential dams.	6.5	11	7.5	6	5.5	5 12	11	11.9	7.1	. 19	3	1				
Working with of eligible dam owners to																
create/update and share EAPs or dam																
incident annex to emergency																
operations																
plans (EOPs).	11	10.5	11	11	. 11	11	10.5	15.2	5.4	20.6	1					
Delegating authority to local-																
governments to adopt and enforce land	-															
use ordinances in inundation zones.																
(Already covered by Id Code)																
Rehabilitating and/or removing																
eligible high hazard potential dams.	10	11.5	7	10	5.5	5 5	7	11.2	7.9	19.1	1	1				
Ensure downstream entities are made																
aware of HHPD risk status as it will																
impact their																
mission/operations.	9	7	10.5	11	. 12	2 12	4	13.1	5.2	18.3	. 4	•				
STAPLEE criteria:																
<ul> <li>Social: Is the proposed strate</li> </ul>	egy sociall	y acceptab	le to the commun	nity? Will f	the propos	ed action a	dversely affect a	segment of th	e population?							
<ul> <li>Technical: Will the proposed</li> </ul>	strategy w	vork? Will	it solve a probler	n independ	lently? Ho	w effective	is the action in a	avoiding or rec	ducing future losses?							
Administrative: Can the com	munity im	plement ar	nd maintain the a	ction? Is th	nere someo	one to coor	dinate and lead t	the effort? Car	n it be accomplished in a ti	mely manne	?					
<ul> <li>Political: Is the strategy politi</li> </ul>	tically acce	eptable? Is	there public sup	port both t	o impleme	nt and to m	aintain the proj	ect? Who are	the stakeholders?							
<ul> <li>Legal: Is the community auth</li> </ul>	horized to i	mplement	the proposed str	ategy? Is th	nere a clea	r legal basi	is or precedent fo	or this activity	? Are there any potential l	egal consequ	ences?					
<ul> <li>Economic: What are the cost</li> </ul>	ts and bene	efits of this	strategy? Does t	he cost see	m reasona	able for the	size of the probl	em and the lik	ely benefits? After implem	entation, wil	I the bene	its over tir	me be more	than the c	ost of the p	roject?
Environmental: Will the pro	ject have a	positive i	mpact on the env	ironment?	Will histo	ric structu	res be saved or p	rotected? Is t	he action consisten with co	ommunity en	vironment	al goals?				
Mitigation Effectiveness Weighting – The	e action ite	ms were a	dditionally given	a weighter	score bas	sed on the r	nitigation effecti	veness of each	h one							
Will the implemented action				grice												
Will the implemented action				ages?												

#### Figure D.9. HHPD Mitigation Actions Prioritization