

# Falmouth Public Participation Survey for Hazard Mitigation Planning




Launched: 8/30/2010  
 Closed: 11/3/2010

Visits: 168  
 Completes: 54

Public input was requested through this survey to identify vulnerabilities and prioritize actions to minimize damages from flooding and other natural hazards. The survey was available on the Town of Falmouth's website, <http://www.falmouthmass.us>, under "current topics" for two months. Copies of the survey were also available in Town Hall, local libraries and businesses, and distributed through email.

## 1. Where do you live in Falmouth?

*Surveys were completed by 54 citizens from all eight core areas of Falmouth. The survey was viewed 114 additional times without response submission. Falmouth Village is best represented with 17 responses (31%).*

North Falmouth		7	13%
Hatchville		2	4%
West Falmouth		10	19%
East Falmouth		11	20%
Waquoit		2	4%
Teaticket		1	2%
Falmouth Village		17	31%
Woods Hole		4	7%
Total		54	100%

## 2. Have you ever experienced or been impacted by a natural disaster in Falmouth? (if Yes, please describe in comments)

*The majority of respondents (67%) have experienced a natural disaster in Falmouth. Of the 37 open responses, Hurricane Bob is identified in 29. The community dealt with downed trees and loss of electricity during this event.*

Yes		35	67%
No		17	33%
Total		52	100%

### Responses:

- 1 Was here for hurricanes gloria and bob, in 1986 and 1991 respectively
- 2 Yes, local tree damage. I need to work during the storms.
- 3 Just heavy rain and high winds from storms.
- 4 Hurricane Bob. I was living near the flood zone at the time, but only had to deal with falling trees.

- 5 Lived in Woods Hole during hurricane Bob 1991.
- 6 Hurricane Bob
- 7 Hurricane Bob
- 8 Hurricane Bob --- no electricity, lots of displaced bees, throwing out food
- 9 It was during Hurricane Bob in 1991. Several very large tree branches fell in our yard. My mother, who was living in the house by herself, felt she had to get rid of them immediately, so she allowed someone with a chainsaw to do this, and he charged her \$300. for the service. Awful!
- 10 We had to evacuate our home near the ocean for Hurricane Bob (which left a lot of damage)and several storms over the years.
- 11 Hurricane Bob trees down and electric power and phone loss for 10 days
- 12 Flooding/storm surge.
- 13 Hurricane Bob. Lots of trees down, power out for 1 week, roads closed, no phones
- 14 Hurricane Gloria and Hurricane Bob
- 15 Hurricane Bob
- 16 During Hurricane Bob and Gloria lost power for several days.
- 17 Weather events from early fifties to date...Hurricane Carol to Pearl Harbor Day "bomb" storm.
- 18 Snow storm in January 200?? The storm that began very early Sat am & did not stop until very early Mon
- 19 Hurricane Bob
- 20 Hurricane Bob 1991
- 21 I lost power for two days at my home after Hurricane Bob hit and my work locale was closed for 5 days because of the power failure in Woods Hole. During the blizzard which dropped three feet of snow on Falmouth, I could not leave my house for two days, while my work location was closed for 5 days.
- 22 Hurricane Bob, if that counts (loss of power for ~5 days).
- 23 I lived in Hatchville during Hurricane Bob.
- 24 Hurricane bob, no name storm October 1991,
- 25 Damage to roof during noreaster
- 26 Hurricane Bob blew down one tree, a fence, and a copula off the garage roof.
- 27 Every hurricane since 1938. Several blizzards- no power
- 28 Hurricane Bob
- 29 Hurricane Bob
- 30 Our boat in Fiddler's Cove Marina sank partially in a hurricane about 10 years ago
- 31 Loss of electric and wind damage to trees from Hurricane Bob
- 32 Hurricane Bob, No-name Storm
- 33 Hurricane Bob
- 34 Lightning strike
- 35 Wind, loss of power, tree damage

36 I was here for Hurricane Bob, living in Woods Hole at the time.

37 Flooding, wind damage






### 3. How concerned are you about the possibility of Falmouth being impacted by a disaster?

*Most citizens of Falmouth who responded to this survey are either extremely (30%) or somewhat (54%) concerned about future natural disasters, while only 16% are not concerned about being impacted.*

Extremely concerned		16	30%	
Somewhat concerned		29	54%	
Not concerned		9	16%	
		Total	54	100%

### 4. What hazard is the highest threat to your neighborhood?








*Many consider high winds related to hurricanes, tornadoes, and other weather events the highest threat in their neighborhood. All respondents in Hatchville and Waquoit selected high winds, which are also a particularly high threat in West Falmouth and Woods Hole. Coastal flooding is a concern in all remaining areas.*

Flooding associated with heavy rain		3	5%
Coastal flooding due to storm surge		10	19%
Coastal inundation resulting from sea level rise		1	2%
Shoreline erosion		0	0%
High winds related to hurricanes, tornadoes, and other weather events		34	63%
Heavy snow		5	9%

Ice		0	0%
Wildfire		1	2%
Drought		0	0%
Extreme temperatures		0	0%
Earthquake		0	0%
Tsunami		0	0%
		<b>Total</b>	<b>54</b>
			<b>100%</b>

**5. What hazard is the second highest threat to your neighborhood?**






*Again there is agreement among the respondents from Hatchville, West Falmouth, and Waquoit who largely selected heavy snow as the second highest threat in their neighborhoods. Other responses are mixed; however, three hazards – extreme temperatures, earthquake, and tsunami – are not considered a primary or secondary threat by anyone.*

Flooding associated with heavy rain		4	7%
Coastal flooding due to storm surge		7	13%
Coastal inundation resulting from sea level rise		0	0%
Shoreline erosion		3	6%
High winds related to hurricanes, tornadoes, and other weather events		13	24%
Heavy snow		17	32%
Ice		4	7%
Wildfire		5	9%

Drought		1	2%
Extreme temperatures		0	0%
Earthquake		0	0%
Tsunami		0	0%
		<b>Total</b>	<b>54</b>
			<b>100%</b>

**6. What hazard is the highest threat to Falmouth?**

*Coastal flooding due to storm surge (35%) and high winds (33%) rank highest for Falmouth. This is reinforced by the neighborhood assessment. Coastal inundation resulting from sea level rise (21%), shoreline erosion (7%), and flooding associated with heavy rain (4%) are also considered highly threatening. Although heavy snow was regarded as the second highest threat by neighborhood, it was not selected as an overall threat to the community.*

Flooding associated with heavy rain		2	4%
Coastal flooding due to storm surge		19	35%
Coastal inundation resulting from sea level rise		11	21%
Shoreline erosion		4	7%
High winds related to hurricanes, tornadoes, and other weather events		18	33%
Heavy snow		0	0%
Ice		0	0%
Wildfire		0	0%
Drought		0	0%
Extreme temperatures		0	0%
Earthquake		0	0%

Tsunami		0	0%
	Total	54	100%

**7. Do you have flood insurance?**

*Only eight respondents (15%) have flood insurance and others are not sure (11%), while 24 (45%) reside outside the floodplain. Some expressed that premiums are too expensive (9%) and a few have protected their building (9%) or do not experience floods (7%).*

Yes		8	15%
Not sure		6	11%
No, I'm located outside floodplain		24	45%
No, my property never floods		4	7%
No, my building is elevated or otherwise protected		5	9%
No, the premium is too expensive		5	9%
No, other reason -- please specify		2	4%
	Total	54	100%

Responses:

- 1 My insurance does not cover flood and I am not in a flood zone.
- 2 Rent

**8. Have you taken action to make your home or neighborhood more resistant to flooding or other natural hazards? (if Yes, please explain in comments)**

*The majority of respondents (78%) stated that they have not taken action to lessen risk. Of those who have taken action, tree pruning or removal is popular. One individual has raised a hot water heater in a basement and moved other critical things out of the basement.*

Yes		11	22%
No		40	78%

Total 51 100%

Responses:

- 1 Removed trees too close to house.
- 2 Have plywood for windows; have removed hazardous trees near house
- 3 Small local drainage projects
- 4 Built in 2004 to building standards for our location
- 5 We put a new foundation on our home, raised our hot water heater above the ground in the basement. Moved anything that cannot be replaced out of the basement.(all was lost in Hurricane Bob)
- 6 We try to prune hazardous limbs, dead trees, and hazards to the power lines, and we maintain a private road to standards that will allow safe access for emergency vehicles
- 7 I wasn't so stupid as to buy in a floodplain and then expect the government to subsidize my losses.
- 8 I have window covers
- 9 I recently had my roof re-shingled. Prior to that my home insurance firm required me to remove tall trees adjacent to my home.
- 10 Remove weak trees that could fall on house.
- 11 Trees removed/ pruned
- 12 Regularly clean storm drains of leaves and snow in winter
- 13 Do not wait until the last minute
- 14 None since we are 70 ft above sea level

**9. What can Falmouth do to reduce or eliminate the risk of future natural hazard damages?**

*Over half of all responses were split between some type of floodplain management and emergency preparedness. Tree maintenance was also offered as a reasonable action by many. Climate change and infrastructure planning rounded out the suggestions.*

Responses:

- 1 Improve infrastructure along the coast, restrict building along the coast, improve coastal armoring
- 2 Selective cutting of trees that are dead. Change road elevation.
- 3 Prepare for high winds and enforce building codes and permit laws
- 4 Impossible to eliminate all risks. Minimize expansion of public infrastructure in the flood zone. Adopt strict performance standards for construction or private and public structures in the flood zone. Implement beach nourishment programs. Educate homeowners in the flood zone as to what actions to take during storms.
- 5 Develop post-disaster plans to reduce/remove vulnerable infrastructure and limit post-storm rebuilding in high-hazard areas; and PLEASE don't sewer all the way down to the beach along the south shore. the time scale of the project is the time scale of sea-level rise. consider other alternatives near salt ponds and down the necks in areas of low elevation.
- 6 Clear dead brush trees from Wooded areas

- 7 Continue to raise awareness of emergency preparedness
- 8 Trim trees regularly, not the day of the hurricane; have homeowners take down vulnerable and questionable trees before a hurricane does it
- 9 ...
- 10 Prepare to evacuate us near the shoreline
- 11 Make GIS flood zone map available on the Falmouthmass.us web page
- 12 Preparation I guess- make sure our water supply is not jeopardized in a disaster. Have EMS and emergency services ready, places for people to evacuate, food and water, blankets and clothing for those who have to evacuate their homes.
- 13 Tree trimming to alleviate electric power interruptions
- 14 Make sure to have shelters for those who are at highest risk during predicted storms.
- 15 ...
- 16 Perhaps have plan for evacuations which include pets. Have an automatic phone call to homes or cell phones explaining what might be happening and where to tune or go in the event of disaster. Have neighborhood captains or designated "Rangers" to let neighbors know what is going on.
- 17 Being prepared and having a plan in place. Communication with town residence is very important. We cannot eliminate the risk of natural disasters, we can only be prepared.
- 18 Not allow building in vulnerable coastal areas!
- 19 Not go overboard with heavy handed bureaucratic BS. Example: after hurricane Carol, thanks to community effort, the Landfall Restaurant, in heavily impacted Woods Hole, was operating again the next day...rhetorical question: how many weeks or months would it take for Falmouth to get done with "necessary" inspections and other bullroar, before the Landfall was allowed to open again after a similar storm today? Regulation in Falmouth is seriously out of control. The Conservation Commission is on what can only be described as a power trip. Planning MUST use common sense, and accept the fact that citizens have good brains, and will use them to good effect in an emergency.
- 20 Have better plans in place for a variety of disasters. It always seems to extremely last minute as the resent Earl hurricane.
- 21 Make it clear to people in floodplains that their potential losses are between them and their insurance co, if they can find one.
- 22 Nothing much for wind except to bury more power ones. Have a better run-off system for floods.
- 23 Develop a plan for coastal adaptation/resilience to address future effects from climate disruption.
- 24 Plan for sea level rise by protecting natural resources & educating public.
- 25 Support Global warming efforts
- 26 Be more sensitive to environmental issues in future development start
- 27 Continue to protect the shoreline by restricting development along the coast.
- 28 Not sure
- 29 Advise its citizens of specific remedies that could be implemented now.
- 30 Restrict building in low-lying areas.
- 31 Less building on shores. Aggressive pruning along power lines.

- 32 Help underwrite insurance costs (fairshare) Keep a close watch on water supply/ quality
- 33 Keep citizens informed or potential hazards by phone, email.
- 34 Bury electrical wires
- 35 Potable water treatment, wastewater treatment, tree care along roadways, bury utility lines
- 36 Keep trees trimmed to avoid electrical outages
- 37 Reduce our carbon footprint
- 38 I am concerned about forest fires in Beebe Woods and other forest areas
- 39 Preparation, awareness
- 40 Prevention- clean up and maintenance
- 41 Reduce coastal development/re-development
- 42 Complete and implement the Hazards Mitigation Plan, acknowledging sea level rise and the futility in the long term of protecting vulnerable shoreline infrastructure and property by coastal armoring.
- 43 Public awareness programs--community panels and forums, radio (WCAI). Begin improvement projects to prevent flooding of roads, mitigate damage from storm surge.
- 44 Be aware! Have proper plan in place! Everyone needs to be involved!
- 45 Put electric/telephone lines below ground
- 46 Prune trees to minimize wind damage. Create run-off areas to minimize flooding, as the town has done on Mill Rd.

**10. Select the level of importance of the categories of possible community actions.**

*Members of the community are highly receptive to all categories of action except structural projects and property protection, which received more moderate support.*

Top number is the count of respondents selecting the option.

Bottom % is percent of the total respondents selecting the option.








	High	Moderate	Low
Prevention (address future development)	39 73%	11 21%	3 6%
Property protection (modify existing buildings)	18 34%	30 57%	5 9%
Public education and awareness (promote individual actions)	36 67%	14 26%	4 7%
Natural resource protection (improve	35 67%	14 27%	3 6%

environmental quality)

Emergency services protection (ensure continuity)	35 65%	18 33%	1 2%
Structural projects (construction to control hazards)	21 40%	18 35%	13 25%

**11. What is the most effective way for you to receive information about how to make your home and neighborhood more resistant to natural hazards?**

*Information could be communicated through a variety of means. Respondents largely chose the internet as their preferred method. Newspaper and mail are also popular.*

Mail		20	high
Internet		28	high
Newspaper		22	high
Radio		7	low
Television		7	low
Public workshops/meetings		7	low
Other, please explain		3	low

Responses:

- 1 Phone
- 2 Broadcast public workshops/meetings
- 3 Door handouts

**12. Please share any other ideas, thoughts, or suggestions for the Town's hazard mitigation planning.**

*Responses focused on preparedness, long-term planning, and appropriate expenditure of public resources. Individuals also shared thoughts about disaster response including the importance of debris removal.*

Responses:

- 1 (1) Residents should try to have generators available. (2) Some non-perishable food and water on hand at all times to prevent panic shopping. (3) List of things of importance to family; ie, heirlooms, pictures, etc. for easy pack-up to evacuate.
- 2 Construction to control the hazard is a waste of money.

- 3 After Hurricane Bob our neighborhood looked like a war zone. It would have been nice if the town had a group of volunteers to help us clean up after the disaster. Our summer neighbors all had second homes to go to. We had to evacuate for 10 days and go to Boston. (we could not live in our home) Perhaps if there was a number we could have called for help with the clean up, it would have been better. Also, if there are places to go to in Falmouth, or rent while homes from a disaster are being repaired that would help so that we could still go to our jobs and children can still attend school. One more thought, the school bus tried to pick up our children after the hurricane and could not get down the street due to damages. The bus drivers need to know this ahead of time. Thank you
- 4 Do not become overly bureaucratic
- 5 Internet information to people would be fastest and most up-to-date. Also, today, many people can get information from their phones. In the event of a blackout or power/landline outage, cells can still get calls or information for the most part. Mail, newspaper and TV are too slow for immediate attention.
- 6 Read comments for question nine. Bureaucracy in Falmouth is stifling. Some of it is the State's fault...(building code excess), some is the Town's.
- 7 See remarks above about power lines and flooding.
- 8 Having moved to Cape Cod from southern Louisiana where we had numerous hurricanes, Falmouth is poorly prepared to address major storms. We need to be part of a regional solution to this threat.
- 9 Start focusing more on long-term mitigation and spending money on long-term planning
- 10 Be budget conscience with any decisions
- 11 Actual dress rehearsals
- 12 Add a section on the Town website that makes recommendations to property owners to make their properties more prepared for natural disaster. Give the residents somewhere to report areas that the Town needs to address, again similar to the Mill Rd. issue. There was no simple way to contact the Town about the flooding issue, and know something was being done. I think it took the Town nearly ten years to finally solve this problem.