Township of Brick

Floodplain Management Plan

APPENDIX C
PUBLIC OUTREACH INFORMATION

COMPREHENSIVE FLOODPLAIN AND HAZARD MANAGEMENT, RECOVERY, AND RESILIENCY

In the wake of Hurricane Sandy, to foster a plan to increase the resiliency of the Township of Brick, the Township applied and received funds from the New Jersey Department of Community Affairs through the Post-Sandy Planning Grant Program. These funds will enable the Township to integrate their hazard mitigation planning into the traditional land use planning of the community. The Post-Sandy Planning Grant Program has provided the Township the opportunity to build on the information included in the recently adopted Ocean County Hazard Mitigation Plan and conduct a more detailed, township-specific study to further characterize flood hazards in the municipality and fine-tune the mitigation actions and recommendations. This effort will allow for development of a comprehensive planning strategy that works toward implementation of short-term recovery and mitigation projects and lay the groundwork for long-term recovery and resiliency.

The following deliverables will be developed under this project:

- Floodplain Management Plan
- Repetitive Loss Area Analyses
- Neighborhood Specific Plans
- Capital Improvement Plan
- Hazard Mitigation Plan
- Flood Warning and Response Plan
- Ordinance Preparation
- Master Plan

Further background and details regarding the floodplain management plan are included in this brochure.

Floodplain Management Plan Mission Statement

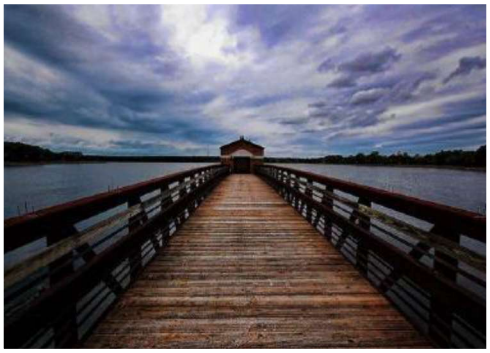
The mission of the Township of Brick is to create a safe, protected, and well-informed community with a comprehensive set of tools and the necessary capacity to identify and address vulnerabilities to flood related hazards. The Township of Brick will strive to protect the health, safety, and quality of life of community members and remain a safe, resilient, and prosperous place to live.

The Floodplain Management Plan provides a basis for flood hazard mitigation. What is Hazard Mitigation?

Hazard Mitigation is any action taken to reduce the loss of life and property by limiting the impact of disasters (natural, technological, and man-made) (www.fema.gov). It is often considered the first of the four phases of emergency management: mitigation, preparedness, response, and recovery.

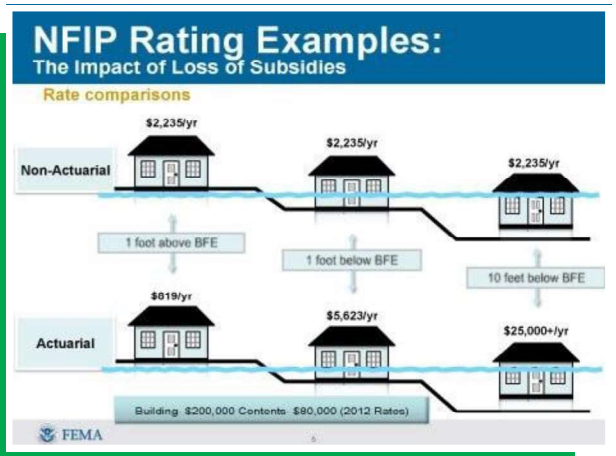
Mitigation measures fall into the following six general categories, and address both public and private property:

- **Prevention:** Measures such as planning and zoning, open space preservation, and regulations on development, building codes, storm water management, fire fuel reduction, soil erosion, and sediment control.
- **Property Protection:** Measures such as acquisition, relocation, storm shutters, rebuilding, barriers, flood-proofing, insurance, and structural retrofits for high winds and earthquake hazards.
- **Public Education and Awareness:** Measures such as outreach projects, real estate disclosure, hazard information centers, technical assistance, and school age and adult education programs.
- **Natural Resource Protection:** Measures such as erosion and sediment control, stream corridor protection, vegetative management, and wetlands preservation.
- **Emergency Services:** Measures such as hazard threat recognition, hazard warning systems, emergency response, protection of critical facilities, and health and safety maintenance.
- **Structural Projects:** Measures such as dams, levees, seawalls, bulkheads, revetments, high flow diversions, spillways, buttresses, debris basins, retaining walls, channel modifications, storm sewers, and retrofitted buildings and elevated roadways.



The Community Rating System (CRS) provides incentive for stronger floodplain management and potential discounts in flood insurance premiums. What is CRS?

The National Flood Insurance Program (NFIP) Community Rating System (CRS) was implemented in 1990 as a voluntary program for recognizing and encouraging community floodplain management activities that would exceed the minimum NFIP standards. Any community in full compliance with the minimum NFIP floodplain management requirements may apply to join the CRS.



Under the CRS, flood insurance premium rates are discounted to reward community actions that meet the three goals of the CRS, which are: (1) reduce flood damage to insurable property; (2) strengthen and support the insurance aspects of the NFIP; and (3) encourage a comprehensive approach to floodplain management.

A community accrues points to improve its CRS Class rating and receive increasingly higher discounts. Points are awarded for engaging in any of 19 creditable activities, organized under four categories:

- Public information
- Mapping and regulations
- Flood damage reduction
- Warning and response.

Benefits of the CRS

Lower cost flood insurance rates are only one of the rewards a community receives from participating in the CRS. Other benefits include:

- Citizens and property owners in CRS communities have increased opportunities to learn about risk, evaluate their individual vulnerabilities, and take action to protect themselves, as well as their homes and businesses.
- CRS floodplain management activities provide enhanced public safety, reduced damage to property and public infrastructure, and avoidance of economic disruption and loss.
- Communities can evaluate the effectiveness of their floodplain programs against a nationally recognized benchmark.
- Technical assistance in designing and implementing some activities is available to community officials at no charge.
- CRS communities have incentives to maintain and improve their floodplain programs over time.

What is a Floodplain Management Plan?

Floodplain management planning (FMP) is a community -wide plan that identifies existing and future flood-related hazards and their causes and provides a blueprint for mitigation of the impacts of flooding. The plan ensures that recommended activities meet the goals and objectives of the community and are in coordination with land use and comprehensive planning and that criteria used in land use and development account for the hazards faced by existing and new development. Education of the community about the hazards, loss reduction measures, and the natural and beneficial benefits of floodplains is included the planning process.

What is a Repetitive Loss Area Analysis?

Repetitive loss area analyses (RLAA): a more detailed site-specific plan to reduce flood losses in repetitively flooded areas. It has a highly specific and detailed focus on analyzing areas that experience a significant amount of repetitive losses.

What is a Hazard Mitigation Plan?

The development of a Hazard Mitigation Plan (HMP) will help facilitate short-term recovery as well as provide the foundation for long-term resiliency. The HMP will factor in current FEMA best management practices on integrating hazard mitigation into local planning.

How does this Plan benefit the Township of Brick and its residents?

The Comprehensive Floodplain and Hazard Management, Recovery, and Resiliency Plan assists the Township of Brick with the following:

- An increased understanding of natural hazards that the community faces;
- Reduced long-term impacts and damages to human health and structures and reduced repair costs;
- Development of more sustainable and disaster-resistant communities; and
- Access to federal mitigation grant funding for eligible projects.

Proactive mitigation leads to sustainable, more cost-effective projects. By contrast, reactive mitigation tends to lead to the “quick-fix” alternatives; it simply costs too much to address the effects of disasters only after they happen. A surprising amount of damage can be prevented if the County can anticipate where and how disasters will occur, and take steps to mitigate those damages.

Benefits: A well-prepared plan will:

- Identify existing and future flood-related hazards and their causes;
- Ensure that a comprehensive review of all possible activities and mitigation measures is conducted so that the most appropriate solutions will be implemented to address the hazard;
- Ensure that the recommended activities meet the goals and objectives of the community, are in coordination with land use and comprehensive planning, do not create conflicts with other activities, and are coordinated so that the costs of implementing individual activities are reduced;
- Ensure that the criteria used in community land use and development programs account for the hazards faced by existing and new development;
- Educate residents and property owners about the hazards, loss reduction measures, and the natural and beneficial functions of floodplains;
- Build public and political support for activities and projects that prevent new problems, reduce losses, and protect the natural and beneficial functions of floodplains; and
- Build a constituency that wants to see the Plan’s recommendations implemented.

How can I get involved in the Planning Process?

Go to the Township of Brick website for more information: http://www.twp.brick.nj.us/

Take the online Township of Brick Flood Preparedness and Planning Survey at https://www.surveymonkey.com/r/BrickPublicSurvey .

Attend public outreach events held during the planning process which will be held on

- Thursday June 11 at Midstreams Elementary School from 7 to 9PM for the Princeton-Midstreams Neighborhood;
- Tuesday, June 16th at Drum Point Elementary School from 7 to 9PM for the Cherry Quay-Bay Harbor and the Shore Acres neighborhood; and
- Saturday, July 18th for the Barrier Island neighborhood. The final meeting will be held as a presentation at the Federation of Brick Beach Associations (FOBA) meeting which begins at 10AM with our presentation taking place at approximately 11AM after which there will be time for questions, comments and feedback.

The public is requested to reach out to the Township contacts for more information.

Township Contacts

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Scheduled Floodplain Management Planning Committee Meetings

Floodplain Management Planning Committee Meetings will be held at the Township Municipal Building and are open to the public.

- Committee Meeting #1 4:00 PM Wednesday 4/15/15
- Committee Meeting #2 4:00 PM Wednesday 5/20/15
- Committee Meeting #3 4:00 PM Wednesday 6/17/15
- Committee Meeting #4 4:00 PM Wednesday 7/15/15
- Committee Meeting #5 4:00 PM Wednesday 8/19/15
- Committee Meeting #6 4:00 PM Wednesday 9/16/15
- Committee Meeting #7 4:00 PM Wednesday 10/21/15

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June 26, 2015 Ocean County, The Brick Times

Planning For The Next Sandy In Brick

Brick Focus Meetings Look At Mitigation

By Judy Smestad-Nunn

Tony and Irene Almeida of Seawood Harbor, looking at some of the displays during the workshop. (Photo by Judy Smestad-Nunn)

BRICK – Cherry Quay resident Sharon DeMaio does not live in a waterfront home, and before Superstorm Sandy, was not in the floodplain and was therefore not required to carry flood insurance.

Nonetheless, two to three inches of water flooded the house and garage during the storm, and with the new base flood elevation maps, her home is now in the AE7 zone.

"I'm not raising my house. Life didn't stop when Sandy hit; I have a full-time job, my elderly parents were moving down and we were selling their house…I didn't have time to apply for the RREM grant," she said.

One of about a dozen residents such as DeMaio attended the latest open house event to gather public input about what the township should look like in the face of changing floodplain maps.

The second of three neighborhood open house meetings, the event was scheduled to get public input that would assist the township and its consultants to formulate hazard and flood mitigation plans as part of the Sandy recovery process.

Mitigation actions could include open space preservation, building codes, stormwater management, property protection, vegetative management, seawalls, bulkheads, elevated roadways and much more.

DeMaio said she is concerned about the flooding on the corner of Boom Lane and Bark Road, and volume of vacant houses in her neighborhood. "It's scary. It makes me wonder if the neighborhood will change," she said.

The township applied for and received a $450,000 grant from the NJ Department of Community Affairs through the Post-Sandy Planning Grant Program, which will enable the township to integrate their hazard mitigation planning into the land use planning in the community. Toms River received a grant of its own and is working on its planning.

The end result would be a township-specific study to identify flood hazards here and fine-tune mitigation actions and recommendations, and to develop a planning strategy to lay the groundwork for long term recovery and resiliency.

Maser Consulting and Tetra Tech -- an engineering and environmental firm -- have partnered with the township to create the hazard and flood mitigation plans.

"We are going to draft a set of data analysis and come up with strategies for each individual neighborhood," said David Glynn Roberts, senior associate at Maser Consulting.

"The riverine neighborhoods have tidal flow, but it's a different kind of water body. The mainland lagoon communities that are mostly on the bay and Kettle Creek -- are here tonight," he said.

Some residents expressed concerns about changes in their neighborhoods -- for example, people rebuilding homes that are dramatically larger in scale, Roberts said.

The Drum Point Road area was littered with boats after the storm surge of Sandy. (Photo by Judy Smestad-Nunn)

The public was able to write down items specific to their neighborhoods such as stormwater/catchbasin issues, local roads that flood, vacant buildings and lots, properties that are flood prone and so on.

Roberts said that a more effective way to handle stormwater is needed in the flood prone neighborhoods. For example, the township has applied for a grant to restore the pond in Cherry Quay, which is part of a leftover marsh. If it were dredged, it would be able to handle more stormwater, he explained.

Cynthia Bianco with Tetra Tech said a floodplain management plan would address the reduction of flood vulnerability in Brick, develop up-to-date strategies for short-term recovery and lay the groundwork for long-term resiliency.

"We are organizing resources -- looking at flood maps, damage data, flood claims, and then we write a township profile, including the extent and location of flooding," Bianco said.

Afterward, the consultants create a vulnerability analysis, identify what structures are at risk for damage, which all get points towards the national Credit Rating System (CRS).

The CRS is part of the National Flood Insurance Program, which recognizes and encourages community floodplain management activities that would exceed the NFIP standards. Communities are rewarded by a reduction in flood insurance premium rates to those who need it.

The township's CRS Committee would document the progress of mitigation projects, Bianco said.

Tony and Irene Almeida of Seawood Harbor said they have a problem with flooding on the only access road going into their neighborhood.

"Mandalay Road was a problem even before Sandy. Flooding in the homes was a problem after Sandy," Irene said.

The couple had about an inch of water in their home after Sandy, and everything had to be torn up, they said.

"We're hoping to find out if they're planning to raise the road; our choices in cars is based on how high up they are," she said.

The project schedule started in January with the contract execution; the final document should be prepared by November; and the plan should be adopted by the township by the end of the year.

The first mitigation meeting was on June 11 at the Midstreams Elementary School for the river neighborhoods of Princeton and Midstreams; the second was on June 16 at the Drum Point Elementary School for residents of the bay and lagoon neighborhoods of Cherry Quay, Bay Harbor and

Shore Acres, and the final open house will be held on July 18 at the Dover Brick Beach First Aid Station in Normandy Beach, at 10 a.m. for barrier island ocean residents.

For more information visit the township's website *twp.brick.nj.us*, or take the flood preparedness and planning survey at *surveymonkey.com/BrickPublicSurvey*.

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July 24, 2015 Ocean County, The Brick Times

Brick Identifies More Than 190 Ways To Address Flooding

By Judy Smestad-Nunn

"Snake" Road is one that floods every lunar cycle and in need of mitigation. (Photo by Steven Smith)

BRICK – With more than 190 mitigation strategies to address flooding in Brick, a neighborhood-by-neighborhood look at analyzing the post-Superstorm Sandy options is now underway.

Neighborhood-specific opportunities included an elevation for "Snake" Road leading into Seawood Harbor–which floods twice a month during lunar tide; the need for an outlet structure for the pond in Cherry Quay by Boom Lane; the elevation of evacuation routes, including South Drive, and more.

The township is pouring over the results and resident feedback at recent neighborhood meetings to address floodplain management. A report spelling out what's next is planned for November.

With 26 opportunities to improve flood mitigation discussed at the township's recent Floodplain Management Planning Committee, key points identified included the need for more equipment–such as 10 john boats staged at each firehouse (50-60 total), and more high-wheeled vehicles; educating the public on where to find information on the location of shelters and imminent or ongoing storms; improvements to Brick MUA; upgrading generators for sewerage systems, and much more.

The township's Floodplain Management Planning Committee held its monthly meeting at Town Hall recently, and the subject for the meeting was the strengths, weaknesses, obstacles and opportunities – or SWOO -- for mitigating flood hazards that impact the township following Superstorm Sandy.

Brick's Floodplain Management Planning Committee met with the consultants helping to compile neighborhood data and resident feedback on what areas of town are prone to flooding. (Photo by Judy Smestad-Nunn).

The committee includes township officials, elected officials, department heads, environmental groups, consultants and citizens.

The township applied for a received a $450,000 grant from the NJ Department of Community Affairs through the Post-Sandy Planning Grant Program, and some of those funds are being used to pay outside contractors–Maser Consulting and Tetra Tech (engineering and environmental firms) to partner with the township to create a neighborhood-specific hazard and flood mitigation plans.

Several neighborhood open houses have been held in recent weeks to get public input to assist officials to formulate the plans as part of the Sandy recovery process.

"I have some homework for the committee," said Cynthia Bianco from Tetra Tech. "Look at the list of projects; should we add anything? Has anything already been completed by the township?" she asked.

She said that the risk assessment for critical areas in the township have been identified and the first round of neighborhood meetings had almost been completed.

"The public understands what we're doing," Bianco said.

The township's strengths before Sandy included a historical knowledge of flood prone areas–which helped to guide emergency response efforts; the use of social media during the event–which helped to take the load off police dispatch; an EOC (Emergency Operations Center) staff that is "extremely" well trained and managed; a well-operated call center, and more, she said.

After Sandy, some of the strengths were identified, and that included cleaning and flushing some 1,682 outfalls identified in the Sandy floodplain; a quick response by the township with new zoning regulations for height, walkways, etc.; the township adopting new FEMA mapping, and the Engineering Department assisting residents with compliance; large tracts of land–slated for development–were acquired by the township, which helps with natural flood mitigation, and more.

Weaknesses included the need for electric grid maps–the township did not know which houses were on which grid, and that hampered the recovery of electricity; the need for an official Red Cross shelter; not enough generators for critical facilities; there were no communications to senior communities; the need to prevent salt water infiltration into fresh water, and more.

Obstacles included an onerous process for FEMA reimbursement; easements; the U.S. Army Corps of Engineers, and more.

Bianco and others agreed that items for the group to discuss should include the possibility of the township appealing the coastal V-zone after the beach and dune replenishment project is completed.

Zach Zeilman of Maser Consulting said that some of the items to be addressed in individualized neighborhood plans would include different design approaches for buildings; the addition of parks/green spaces; overbuilding on narrow lots, and more.

"We looked at the comment sheets from the neighborhood meetings...and we collected feedback on flood-prone properties, catch basins that regularly flood, empty houses, and the need to raise roads," he said.

In total, 191 mitigation strategies were listed for the township.

A final document would be prepared by November, and the plan should be adopted by the township by the end of the year.

"The main goal of this whole process is for a CRS (Community Rating System) rating so residents can get a reduction in their flood insurance premiums and make (Brick Township) more resilient," said Tara Paxton, assistant municipal planner and co-chair of the committee.

The CRS was implemented in 1990 as a voluntary program for communities who comply with floodplain management activities.

During the meeting, Stan Hales, director of the Barnegat Bay Partnership, noted that communities can earn the most points in the CRS program by preserving open space, which helps to retain the environment's natural flood mitigation capabilities by ground infiltration, sediment removal and flood storage capacity.

For more information, visit the township's website at www.twp.brick.nj.us, and click on Floodplain Management.

brick township nj, fema, flood, flooding, ocean county, ocean county news, rebuild, superstorm sandy

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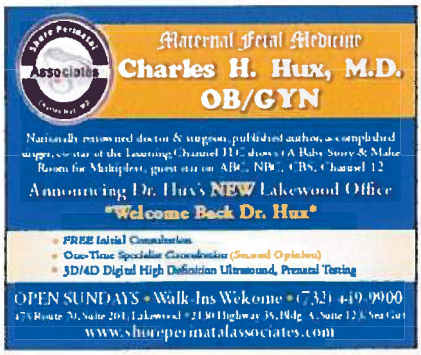
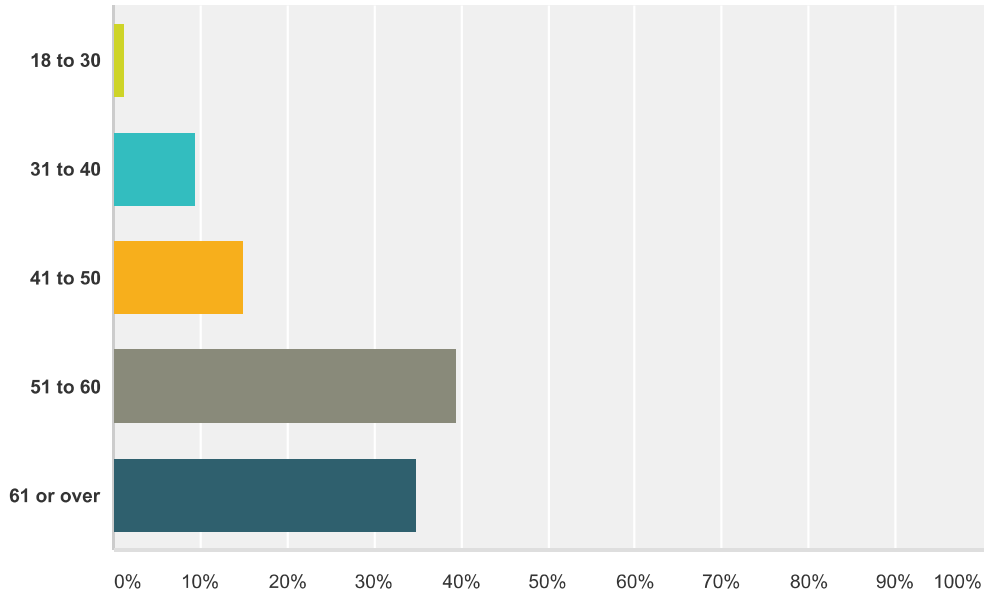


Q1 Please indicate your age range:

Answered: 86 Skipped: 0

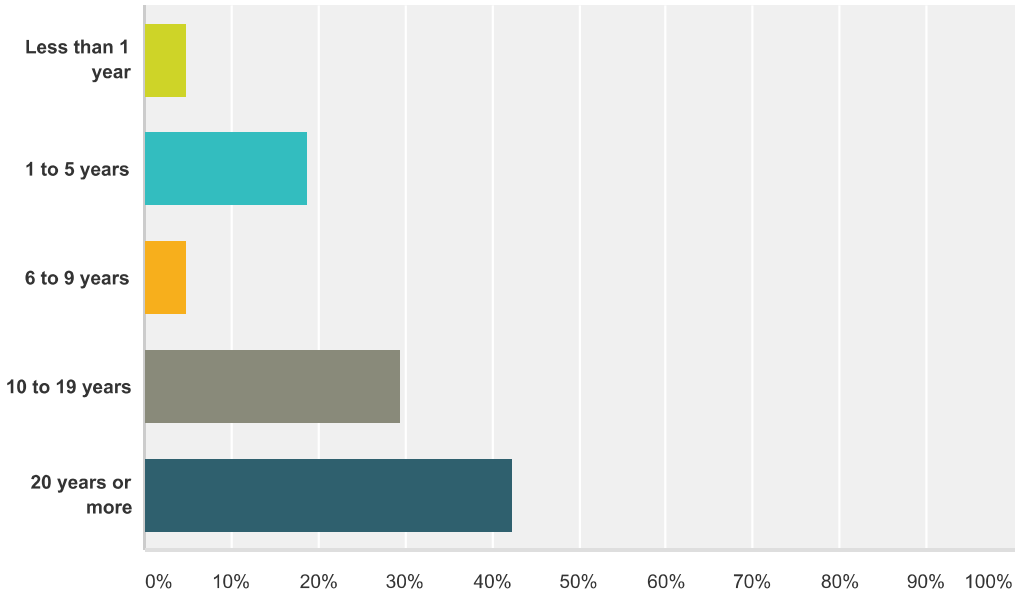


Answer Choices	Responses	
18 to 30	**1.16%**	1
31 to 40	**9.30%**	8
41 to 50	**15.12%**	13
51 to 60	**39.53%**	34
61 or over	**34.88%**	30
Total		**86**

Please note confidential information has been redacted from the publicly available version of this survey.

Q3 How long have you lived in the Township of Brick?

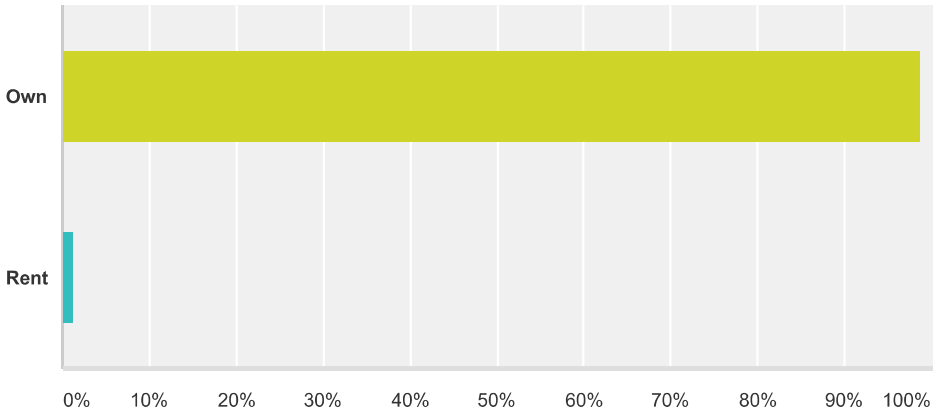
Answered: 85 Skipped: 1



Answer Choices	Responses	
Less than 1 year	**4.71%**	4
1 to 5 years	**18.82%**	16
6 to 9 years	**4.71%**	4
10 to 19 years	**29.41%**	25
20 years or more	**42.35%**	36
Total		**85**

Q4 Do you currently own or rent your home in the Township of Brick?

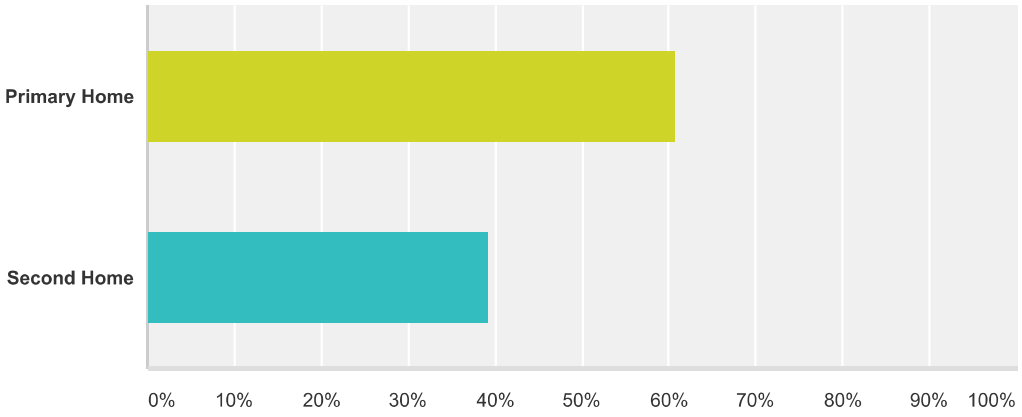
Answered: 85 Skipped: 1



Answer Choices	Responses	
Own	**98.82%**	84
Rent	**1.18%**	1
Total		**85**

Q6 Is your home in the Township of Brick your primary home or a second home?

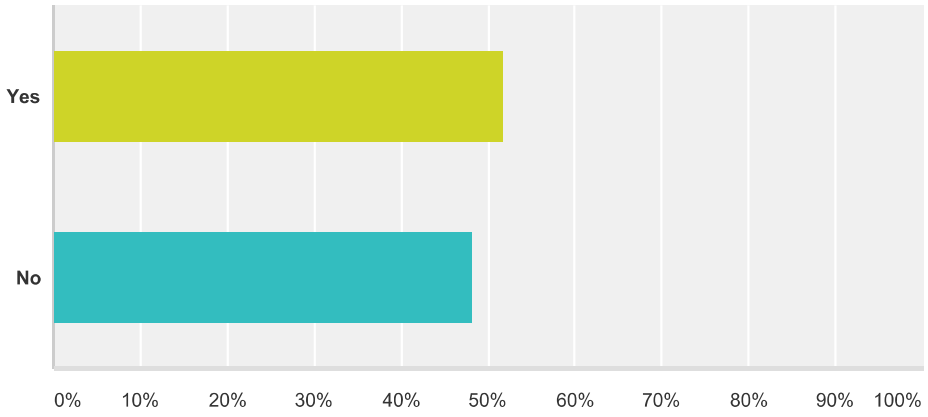
Answered: 84 Skipped: 2



Answer Choices	Responses	
Primary Home	**60.71%**	51
Second Home	**39.29%**	33
Total		**84**

Q7 Do you have an evacuation plan if needed?

Answered: 81 Skipped: 5



Answer Choices	Responses	
Yes	**51.85%**	42
No	**48.15%**	39
Total		**81**

Q8 What is your reason for having an evacuation plan?

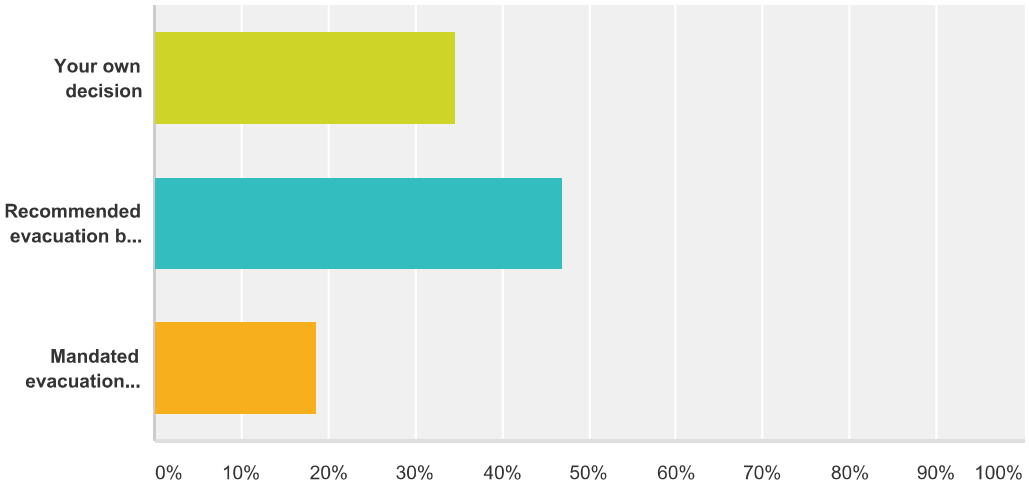
Answered: 41 Skipped: 45

#	Responses	Date
1	Prior Experience - Superstorm Sandy	10/13/2015 6:45 AM
2	safety	10/12/2015 11:04 AM
3	Superstorm Sandy	10/11/2015 3:50 PM
4	In the event of flooding	10/11/2015 10:58 AM
5	It is always good to have an advance plan in place	10/11/2015 8:51 AM
6	leave before the storm comes	9/20/2015 6:24 PM
7	safety	9/3/2015 7:23 PM
8	avoid confusion.	8/28/2015 1:58 PM
9	Flood	8/28/2015 11:07 AM
10	good to have	8/27/2015 10:04 PM
11	safety First	8/27/2015 7:06 PM
12	Safety	8/27/2015 6:45 PM
13	sandy	8/27/2015 6:18 PM
14	House destroyed	8/27/2015 5:54 PM
15	Experience	8/27/2015 12:57 PM
16	Storm risk	8/27/2015 11:43 AM
17	Living on the water and Hurricanes Irene & Sandy	8/26/2015 1:41 PM
18	Common sense	8/26/2015 12:34 PM
19	In case of a storm	8/26/2015 11:13 AM
20	expecting hurricane	8/26/2015 9:34 AM
21	My husband is disabled and on oxygen 24/7	8/25/2015 5:11 PM
22	My safety and that of my family	8/25/2015 4:41 PM
23	Flood and/or no heat or water	8/25/2015 4:11 PM
24	Hurricane/Tropical Storm Weather	8/25/2015 4:06 PM
25	ocean	8/23/2015 7:36 AM
26	N/A	8/22/2015 10:38 AM
27	Hurricanes	8/7/2015 11:50 AM
28	Always Prepared	6/18/2015 10:25 PM
29	Sandy!	6/17/2015 10:28 PM
30	Sandy	6/16/2015 10:33 PM
31	The results of Superstorm Sandy	6/16/2015 8:46 AM
32	in case there is a diaster we can survive.	6/15/2015 10:18 AM
33	in case of potential flooding	6/13/2015 4:54 AM
34	Bad flooding in area during Hurricane Sandy	6/12/2015 6:02 PM

35	flooding potential	6/12/2015 1:13 PM
36	storms or fire	6/12/2015 12:46 PM
37	need one	6/12/2015 7:44 AM
38	Emergency preparedness...Marine Corps training	6/11/2015 7:50 PM
39	Lived through Sandy	6/11/2015 3:06 PM
40	Always be prepared.	6/11/2015 11:41 AM
41	Superstorm sandy	6/11/2015 10:03 AM

Q9 During an emergency, when are you most likely to evacuate your home?

Answered: 81 Skipped: 5



Answer Choices	Responses	
Your own decision	**34.57%**	28
Recommended evacuation by a government official	**46.91%**	38
Mandated evacuation order	**18.52%**	15
Total		**81**

Q10 If your were asked to evacuate the Township of Brick, what road(s) would you most likely use to leave the area?

Answered: 77 Skipped: 9

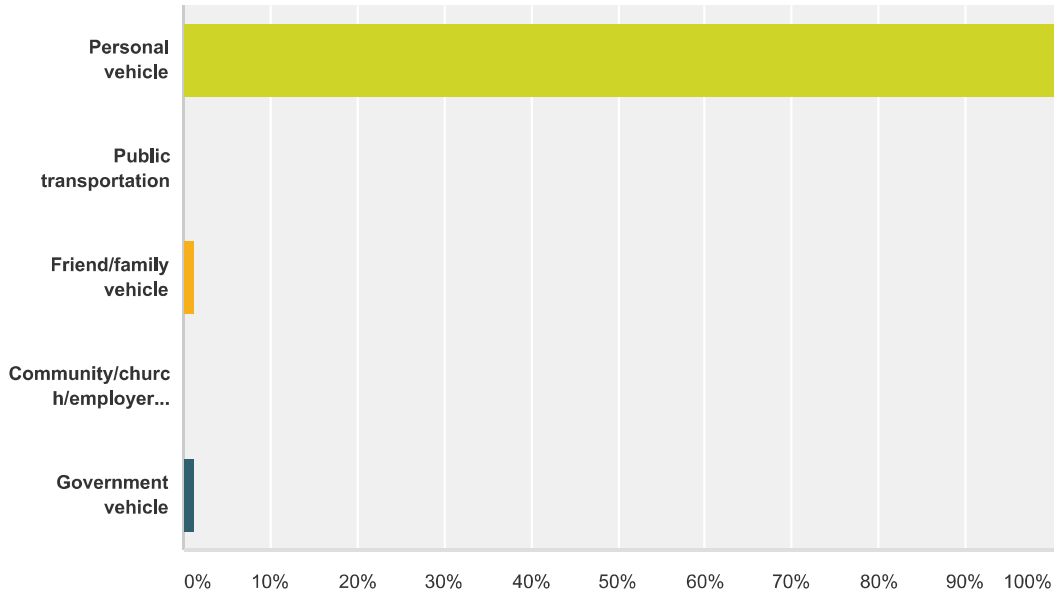
#	Responses	Date
1	Route 35 to Mantoloking Bridge	10/13/2015 6:45 AM
2	Mantoloking bridge and rd	10/12/2015 3:10 PM
3	Mantoloking Rd	10/12/2015 11:04 AM
4	route 35, Mantoloking Road, Route 70	10/11/2015 3:50 PM
5	Route 35 North	10/11/2015 10:58 AM
6	35 north to Mantoloking road	10/11/2015 8:51 AM
7	Rout 35n to Mantoloking Rd	10/10/2015 5:46 PM
8	Mantoloking Road	10/6/2015 9:26 PM
9	Baywood Blvd and Drum Point Rd	9/24/2015 10:34 AM
10	Drum Point Road	9/20/2015 6:24 PM
11	Herbert Street Bridge	9/10/2015 8:40 AM
12	yes	9/8/2015 11:53 AM
13	mantoloking road	9/3/2015 7:23 PM
14	route 35 North OR Mantoloking Rd.	8/31/2015 1:01 AM
15	Drumpoint	8/29/2015 10:05 AM
16	Mantiloking Road, Brick Blvd, Cedarbridge Ave, Rt. 70, Garden State Parkway	8/28/2015 6:06 PM
17	Burnt Tavern	8/28/2015 1:58 PM
18	Drum point to ceaderbridge	8/28/2015 11:07 AM
19	Hooper Ave	8/28/2015 10:21 AM
20	Herbertsville rd to Rt 195	8/28/2015 4:14 AM
21	Herbertsville	8/27/2015 10:04 PM
22	Drum pt. rte 70	8/27/2015 8:59 PM
23	Drum point rd to hooper ave	8/27/2015 7:36 PM
24	Mantoloking Bridge	8/27/2015 7:16 PM
25	Midstream rd to 88	8/27/2015 7:06 PM
26	Drum ooint. Brick Blvd. Rt 70	8/27/2015 6:45 PM
27	Baywood blvd Drumpoint rd	8/27/2015 6:18 PM
28	Drum Point Rd	8/27/2015 5:54 PM
29	Route 70 Garden State Parkway	8/27/2015 3:01 PM
30	Rte 35 N. GSP	8/27/2015 12:57 PM
31	Route 70 Route 88 east	8/27/2015 12:18 PM
32	Drum Point Rd	8/27/2015 11:55 AM
33	Drum Point Road	8/27/2015 11:43 AM

34	Rt 70, Cedar Bridge, Rt 9	8/27/2015 11:35 AM
35	Mantoloking Road	8/27/2015 6:50 AM
36	Rt. 35	8/26/2015 3:18 PM
37	Rt. 35	8/26/2015 3:07 PM
38	Route 35 North off the island or to Herbert Street or Route 35 South to Route 37 West	8/26/2015 1:41 PM
39	Mantoloking road	8/26/2015 12:34 PM
40	Mantolokng Rd	8/26/2015 11:13 AM
41	35 North to 34 North to GSP	8/26/2015 9:34 AM
42	Route 35	8/26/2015 5:45 AM
43	Route 35	8/25/2015 9:19 PM
44	Rt. 35 to Rt 34	8/25/2015 7:25 PM
45	Route 35	8/25/2015 5:57 PM
46	route 35 north to Route 528	8/25/2015 5:22 PM
47	RT 35	8/25/2015 5:11 PM
48	Route 35	8/25/2015 4:41 PM
49	Route 35	8/25/2015 4:35 PM
50	Garden State Parkway or Rt 195	8/25/2015 4:11 PM
51	Ocean Ave	8/25/2015 4:09 PM
52	Route 35 Mantoloking Rd	8/25/2015 4:06 PM
53	Route 35 North	8/25/2015 4:04 PM
54	Route 35	8/25/2015 2:14 PM
55	route 35	8/23/2015 7:36 AM
56	Mantoloking Road	8/22/2015 10:38 AM
57	RT 35 North to Mantoloking Bridge and out	8/7/2015 11:50 AM
58	Cedar Bridge Ave, Parkway	6/24/2015 9:17 AM
59	Drum Point, Hooper, Cedar Bridge, Parkway	6/18/2015 10:25 PM
60	Cherry quay drum point chambers bridge to cedar bridge	6/17/2015 10:28 PM
61	Route 70 or Garden State Parkway.	6/17/2015 11:12 AM
62	Bark	6/16/2015 10:33 PM
63	Port Road to Cherry Quay Road	6/16/2015 8:46 AM
64	cherry quay rd,drumpoint, hooper ave,rt. 70	6/15/2015 10:18 AM
65	Cherry Quay Road to Drum point Road	6/13/2015 5:58 PM
66	cherry quay rd. drum point rd. hooper ave. rt. 70	6/13/2015 4:54 AM
67	Cherry Quay Road	6/12/2015 6:02 PM
68	Cherry quay to drum point to cedar bridge to the parkway	6/12/2015 2:36 PM
69	Hooper Ave	6/12/2015 1:13 PM
70	I most likely wouldn't evacuate. I stayed during Sandy and every other storm since the 60's. I was flooded during Sandy, but I stayed anyway.	6/12/2015 12:46 PM
71	route 88	6/12/2015 7:44 AM
72	Depends on where the threat is approaching from	6/11/2015 7:50 PM
73	Route 70	6/11/2015 3:06 PM

74	park way	6/11/2015 1:54 PM
75	Midstreams Rd	6/11/2015 12:08 PM
76	Mantoloking Road	6/11/2015 11:41 AM
77	Parkway	6/11/2015 10:03 AM

Q11 How will you evacuate the area?

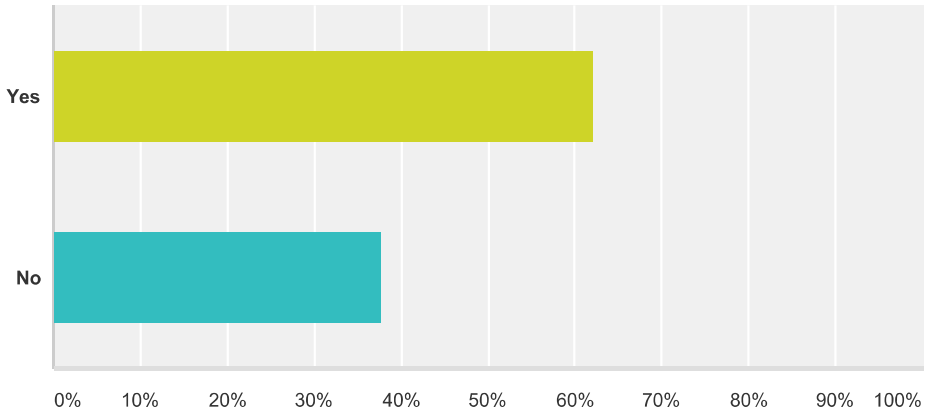
Answered: 81 Skipped: 5



Answer Choices	Responses	
Personal vehicle	**100.00%**	81
Public transportation	**0.00%**	0
Friend/family vehicle	**1.23%**	1
Community/church/employer vehicle	**0.00%**	0
Government vehicle	**1.23%**	1
Total Respondents: 81		

Q12 Are you or any member of your family on medications which must be taken daily?

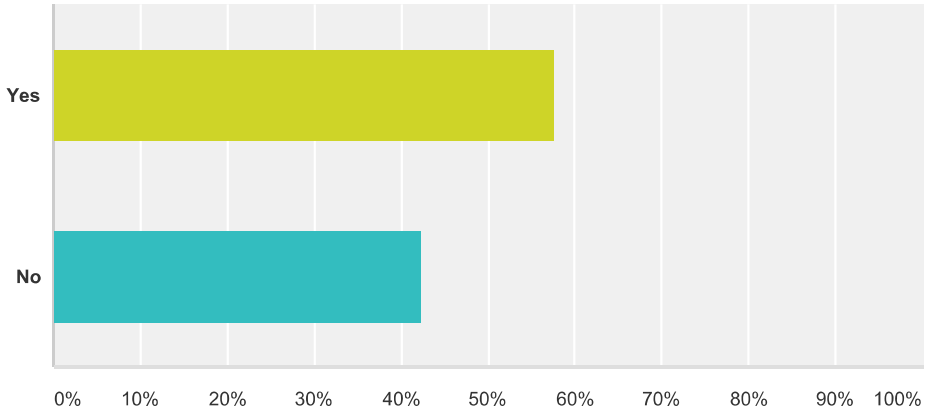
Answered: 82 Skipped: 4



Answer Choices	Responses	
Yes	**62.20%**	51
No	**37.80%**	31
Total		**82**

Q13 Do you have an additional supply of that medication on hand if a disaster event occurred and you were unable to fill your prescription?

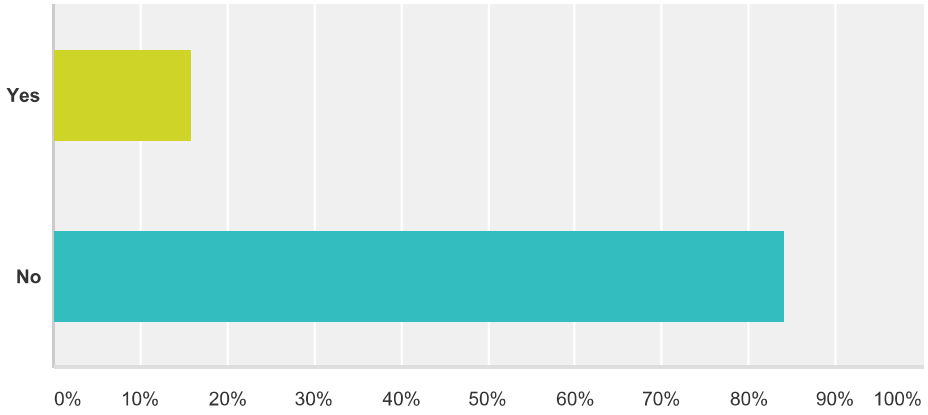
Answered: 73 Skipped: 13



Answer Choices	Responses	
Yes	**57.53%**	42
No	**42.47%**	31
Total		**73**

Q14 Do you have an elderly person or person with disabilities residing in your residence (or for whom you are responsible) that requires assistance should an evacuation occur?

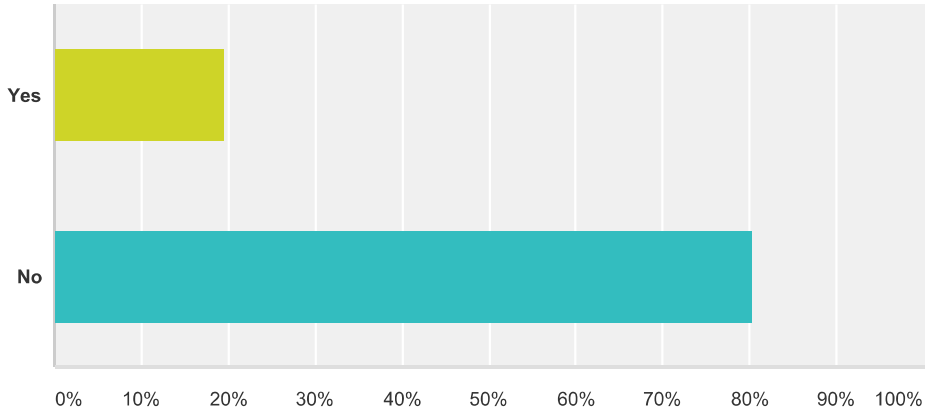
Answered: 82 Skipped: 4



Answer Choices	Responses	
Yes	**15.85%**	13
No	**84.15%**	69
Total		**82**

Q15 Have arrangements been made for assistance for that individual if evacuation is necessary?

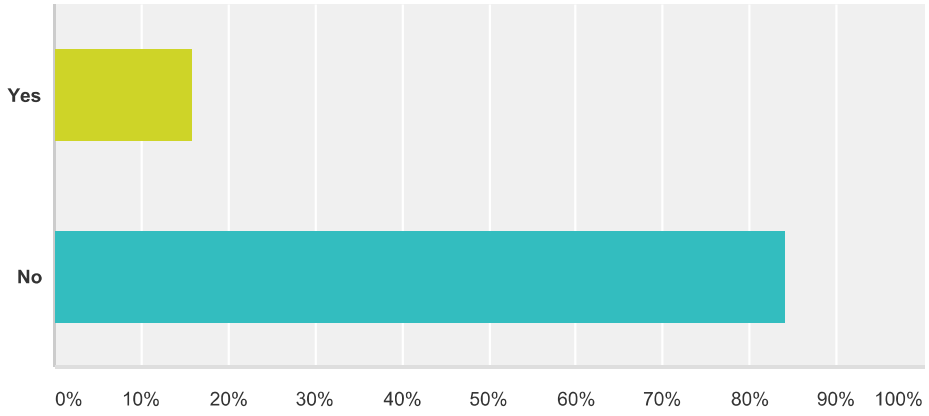
Answered: 51 Skipped: 35



Answer Choices	Responses	
Yes	**19.61%**	10
No	**80.39%**	41
Total		**51**

Q16 Do you know where your closest shelter is to your home if an evacuation occurs?

Answered: 82 Skipped: 4



Answer Choices	Responses	
Yes	**15.85%**	13
No	**84.15%**	69
Total		**82**

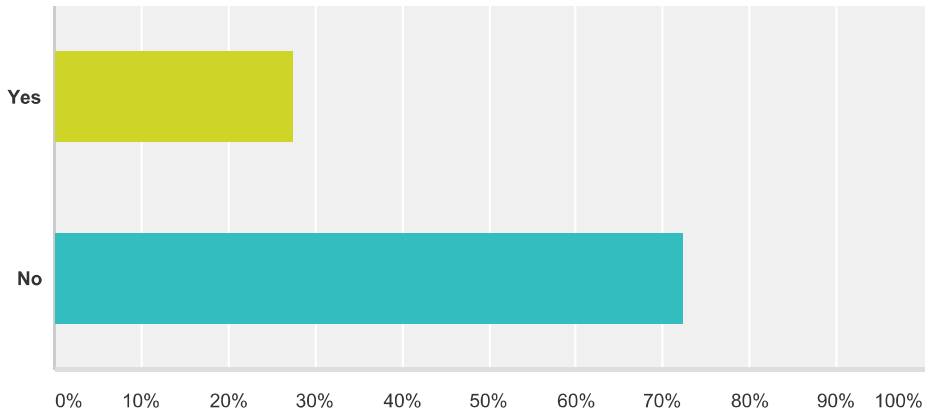
Q17 If the answer to question 16 is "yes", which location?

Answered: 11 Skipped: 75

#	Responses	Date
1	VFW Adamston Road	10/13/2015 6:45 AM
2	primary house	9/3/2015 7:23 PM
3	Brick HS ?	8/28/2015 10:21 AM
4	Drumpoint road school	8/27/2015 6:18 PM
5	Midstream school or brick township volunteer EMS	8/27/2015 12:18 PM
6	School on Drum Point	8/27/2015 11:43 AM
7	Hamilton nj	8/26/2015 12:34 PM
8	Primary Home	8/25/2015 7:25 PM
9	Family	8/25/2015 5:11 PM
10	township schools	6/12/2015 12:46 PM
11	Emma Havens Young, PAL Brick High School, Recreation Center	6/11/2015 3:06 PM

Q18 If the answer to question 16 is "yes," do you know if that shelter has mechanisms in place to address the access and functional needs of the individual(s) who has disabilities for whom you are responsible?

Answered: 29 Skipped: 57



Answer Choices	Responses	
Yes	27.59%	8
No	72.41%	21
Total		**29**

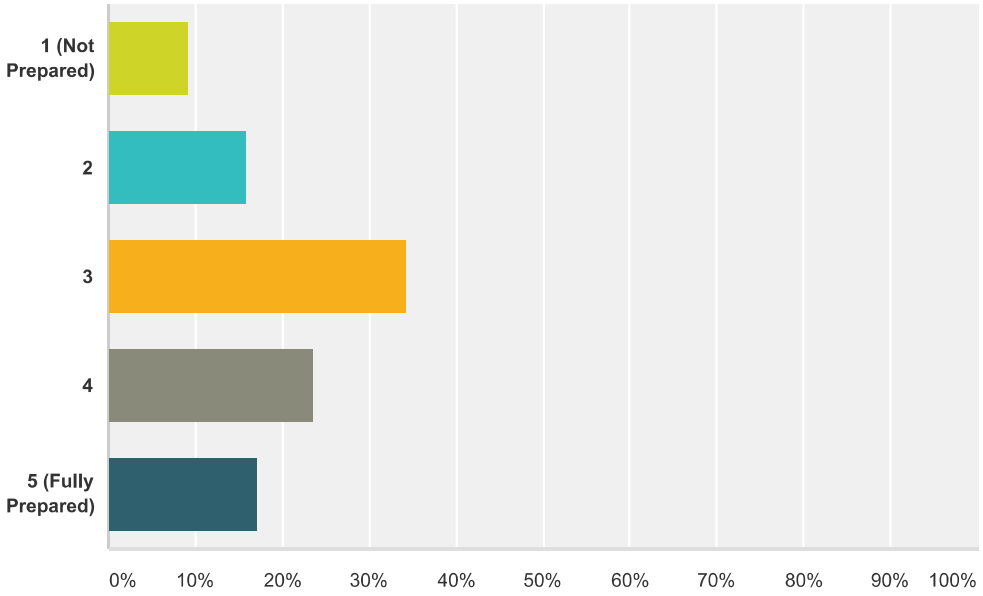
Q19 What type of assistance is needed to address the access and functional needs of the individual(s) with disabilities living within your household or for whom you have responsibility?

Answered: 15 Skipped: 71

#	Responses	Date
1	Wheelchair access. Dialysis within 3 days	10/13/2015 6:45 AM
2	N/A	10/11/2015 8:51 AM
3	n/a	9/3/2015 7:23 PM
4	Minor Visual and Auditory Assistance	8/28/2015 10:21 AM
5	wheel chair	8/28/2015 4:14 AM
6	needs help with medications, elderly so needs to have heat and assistance obtaining food	8/27/2015 3:01 PM
7	Not applicable	8/26/2015 12:34 PM
8	Electrical power	8/25/2015 5:11 PM
9	N/A	8/25/2015 4:41 PM
10	N/A	6/16/2015 8:46 AM
11	medications. assistance in walking.	6/12/2015 1:13 PM
12	Warm or air conditioned area	6/11/2015 3:06 PM
13	none	6/11/2015 1:54 PM
14	Limited mobility.	6/11/2015 11:41 AM
15	Is in a wheelchair and can't walk unassisted	6/11/2015 10:03 AM

Q20 Please rank how prepared you think you and those who live with you are for the floods that are likely to occur within the Township of Brick. Rank on a scale of 1 to 5, with 5 representing the most prepared.

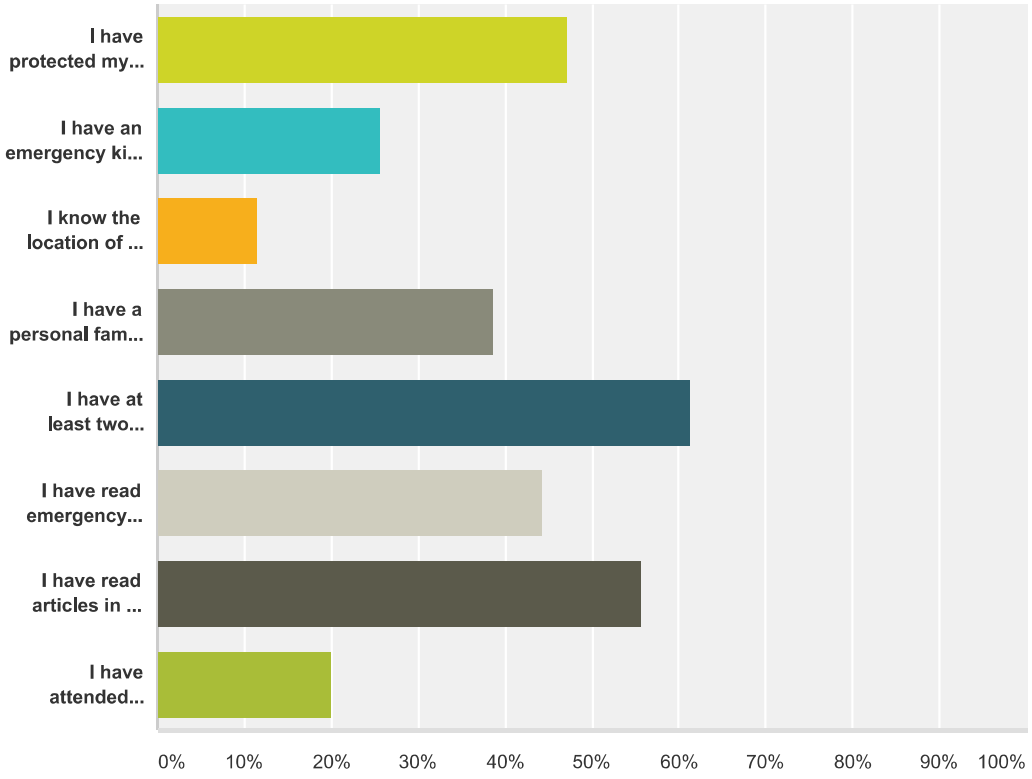
Answered: 76 Skipped: 10



Answer Choices	Responses	
1 (Not Prepared)	**9.21%**	7
2	**15.79%**	12
3	**34.21%**	26
4	**23.68%**	18
5 (Fully Prepared)	**17.11%**	13
Total		**76**

Q21 In what ways do you believe you are prepared for floods? (Please check all that apply)

Answered: 70 Skipped: 16

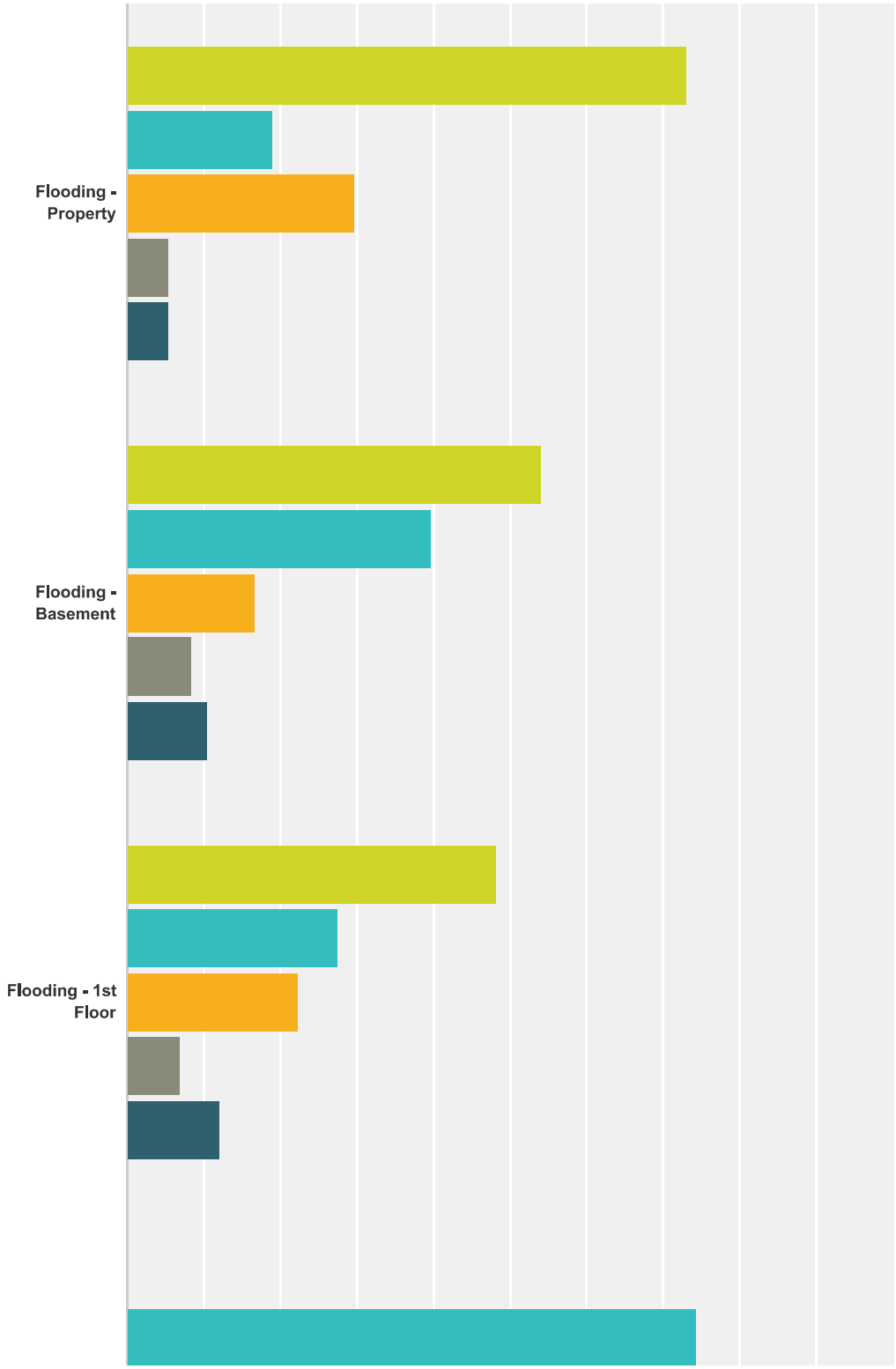


Answer Choices	Responses	
I have protected my property by either building my home or repairing my home to be safer from floods.	**47.14%**	33
I have an emergency kit with non-perishable food, water and supplies for my family and myself.	**25.71%**	18
I know the location of the nearest emergency shelter.	**11.43%**	8
I have a personal family emergency preparedness plan, and have discussed it with my family and others for whom I have responsibility.	**38.57%**	27
I have at least two methods for receiving emergency notifications and for information during severe weather or other potential emergency situations.	**61.43%**	43
I have read emergency preparedness information from a government source (e.g., federal, state, or local emergency management).	**44.29%**	31
I have read articles in the paper or other news sources.	**55.71%**	39
I have attended meetings that have dealt with disaster preparedness.	**20.00%**	14
Total Respondents: 70		

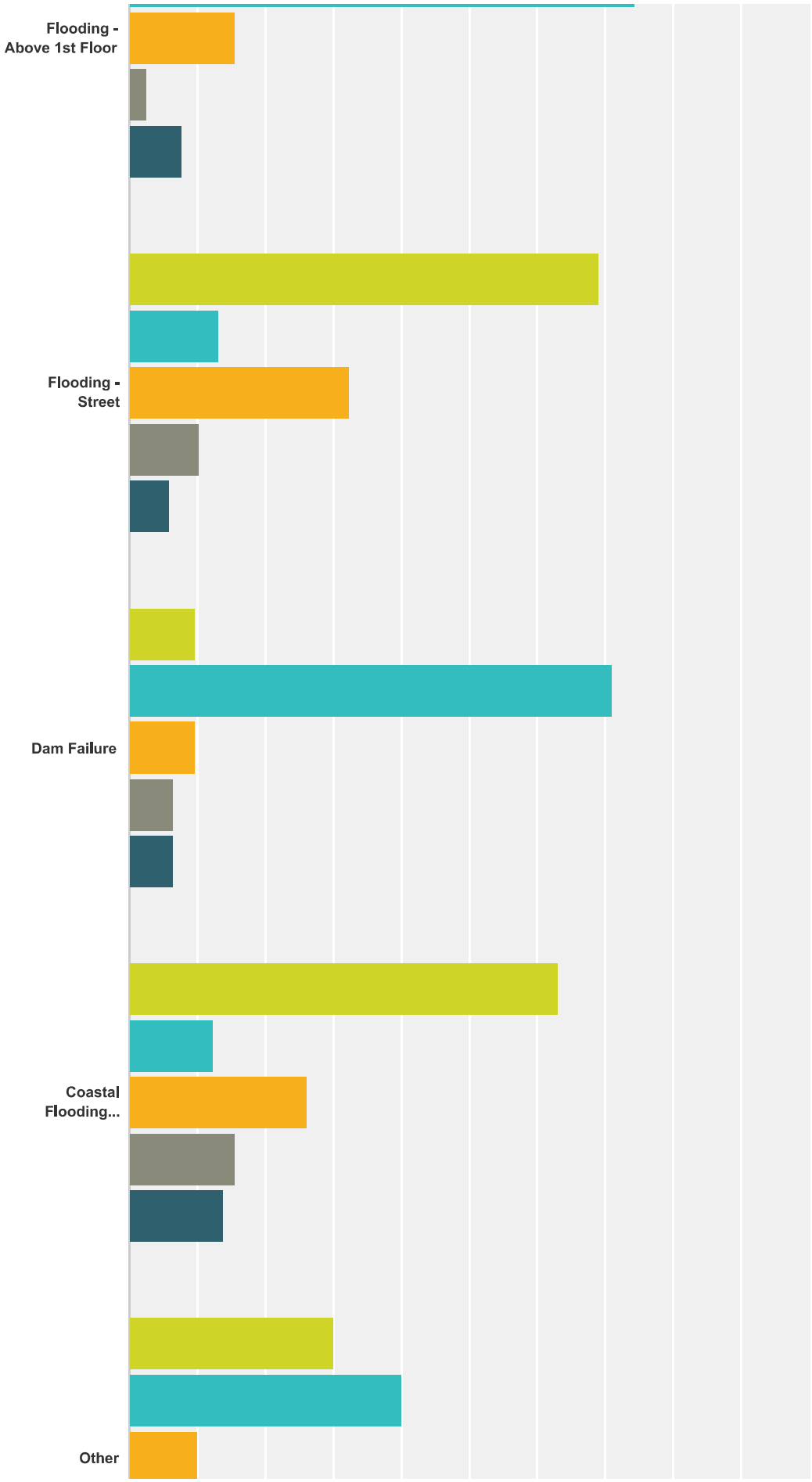
#	Other (please specify)	Date
	There are no responses.	

Q22 In the past 10 years, which of the following types of events have you or someone in your household experienced? How concerned are you about each type of flooding?

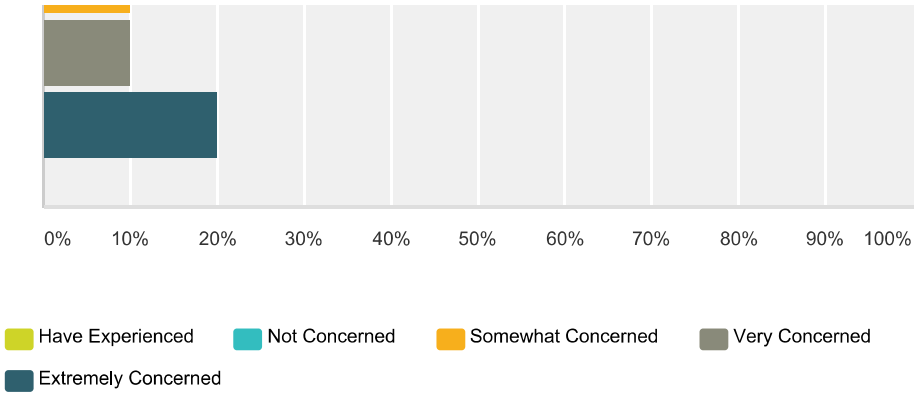
Answered: 77 Skipped: 9



Township of Brick Flood Preparedness and Planning Survey



Township of Brick Flood Preparedness and Planning Survey



	Have Experienced	Not Concerned	Somewhat Concerned	Very Concerned	Extremely Concerned	Total Respondents
Flooding - Property	**72.97%** 54	**18.92%** 14	**29.73%** 22	**5.41%** 4	**5.41%** 4	74
Flooding - Basement	**54.17%** 26	**39.58%** 19	**16.67%** 8	**8.33%** 4	**10.42%** 5	48
Flooding - 1st Floor	**48.28%** 28	**27.59%** 16	**22.41%** 13	**6.90%** 4	**12.07%** 7	58
Flooding - Above 1st Floor	**0.00%** 0	**74.36%** 29	**15.38%** 6	**2.56%** 1	**7.69%** 3	39
Flooding - Street	**69.12%** 47	**13.24%** 9	**32.35%** 22	**10.29%** 7	**5.88%** 4	68
Dam Failure	**9.68%** 3	**70.97%** 22	**9.68%** 3	**6.45%** 2	**6.45%** 2	31
Coastal Flooding secondary impacts (Coastal Erosion or Storm Surge)	**63.08%** 41	**12.31%** 8	**26.15%** 17	**15.38%** 10	**13.85%** 9	65
Other	**30.00%** 3	**40.00%** 4	**10.00%** 1	**10.00%** 1	**20.00%** 2	10

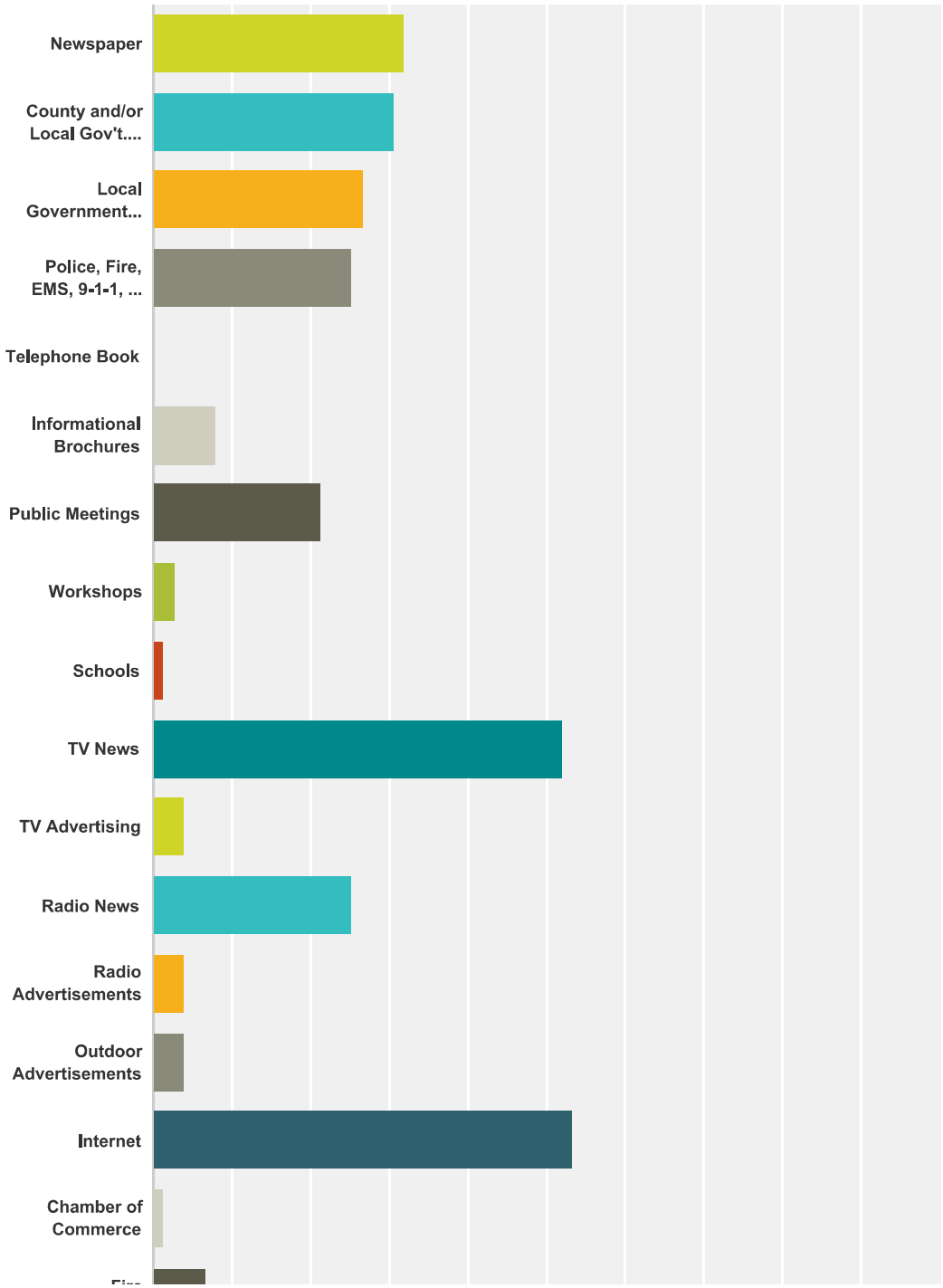
Q23 Other-Please describe other flood hazards you have experienced.

Answered: 12 Skipped: 74

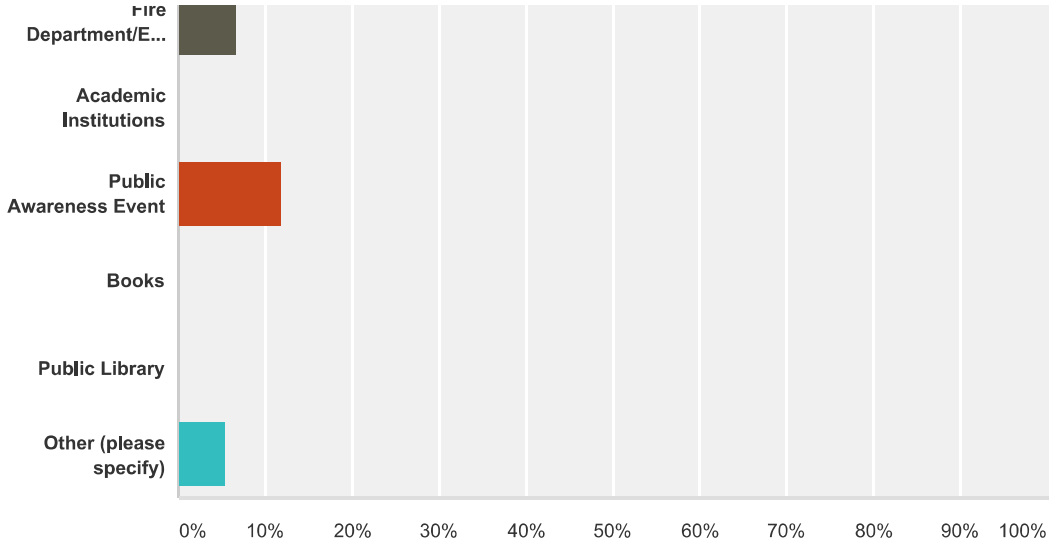
#	Responses	Date
1	Some flooding from Hurricane Sandy to crawl space and damage to AC units	10/11/2015 11:00 AM
2	none	9/20/2015 6:26 PM
3	Tidal Wave	8/28/2015 10:19 AM
4	See above	8/25/2015 5:14 PM
5	sandy	8/23/2015 7:44 AM
6	no basement but crawl space floods during storms and sometimes street flooding from high tides,full moon etc	8/7/2015 11:56 AM
7	Long Term Power Outage	6/18/2015 10:28 PM
8	The vacant properties that sit untouched since sandy filled with mold	6/17/2015 10:33 PM
9	Pond behind my house floods yards	6/16/2015 10:35 PM
10	We need the dune replenishment project to get started asap as this is the only protection the mainland side of the bay has from the ocean. If the breech (at Mantoloking) didn't occur during Sandy we would HAVE NOT flooded!! Get the holdouts to sign the easements now. take eminent domain today.	6/12/2015 12:54 PM
11	Power outage	6/11/2015 3:08 PM
12	None we are located in Zone X would only be concerned with high wind conditions. Sandy caused no damage or flooding conditions. only or Beach was flooded.	6/11/2015 12:07 PM

Q24 Information on how to prepare for floods can be given to the public in various ways. Of the information sources below, please identify the top three (3) that are MOST EFFECTIVE in providing you with information to make your home safer and better able to withstand the impact of floods.

Answered: 75 Skipped: 11



Township of Brick Flood Preparedness and Planning Survey



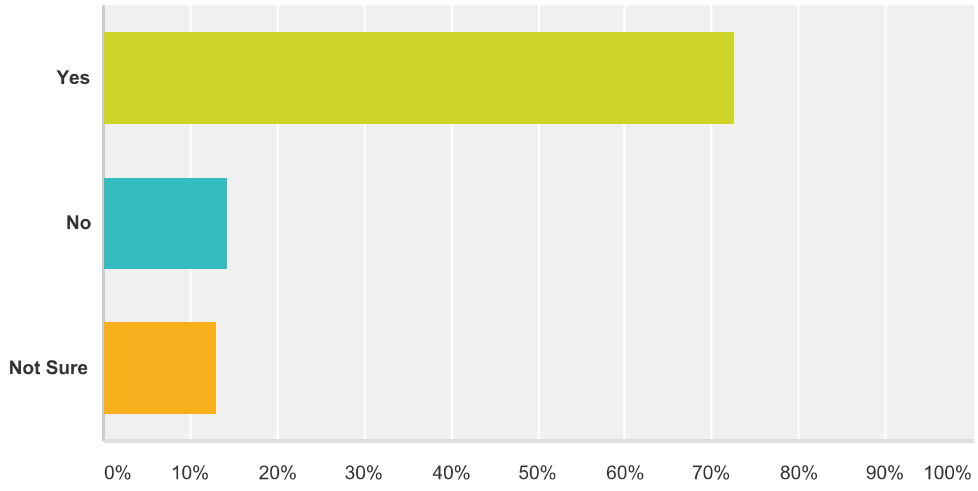
Answer Choices	Responses	
Newspaper	**32.00%**	24
County and/or Local Gov't. Websites	**30.67%**	23
Local Government E-Mail	**26.67%**	20
Police, Fire, EMS, 9-1-1, NJ 2-1-1	**25.33%**	19
Telephone Book	**0.00%**	0
Informational Brochures	**8.00%**	6
Public Meetings	**21.33%**	16
Workshops	**2.67%**	2
Schools	**1.33%**	1
TV News	**52.00%**	39
TV Advertising	**4.00%**	3
Radio News	**25.33%**	19
Radio Advertisements	**4.00%**	3
Outdoor Advertisements	**4.00%**	3
Internet	**53.33%**	40
Chamber of Commerce	**1.33%**	1
Fire Department/EMS Agency	**6.67%**	5
Academic Institutions	**0.00%**	0
Public Awareness Event	**12.00%**	9
Books	**0.00%**	0
Public Library	**0.00%**	0
Other (please specify)	**5.33%**	4

Total Respondents: 75	

#	Other (please specify)	Date
1	Q	8/25/2015 5:25 PM
2	Jersey Shore Hurricane News web site	8/25/2015 5:14 PM
3	facebook	6/12/2015 12:54 PM
4	Facebook	6/11/2015 10:24 AM

Q25 To the best of your knowledge, is your property located in a floodplain?

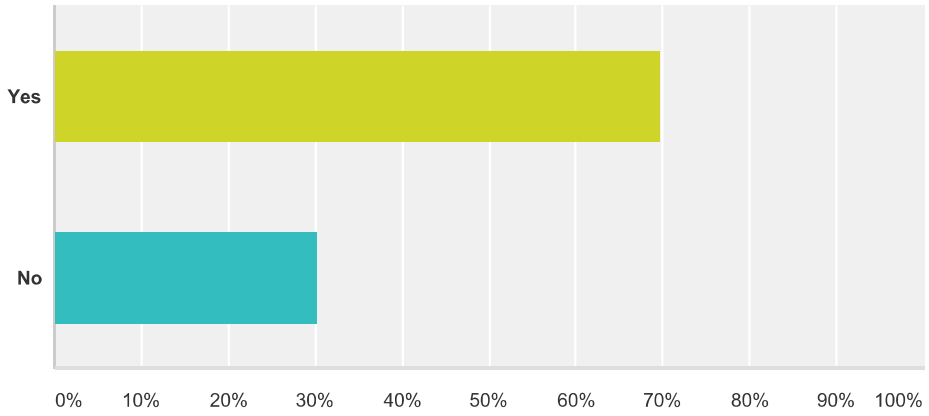
Answered: 77 Skipped: 9



Answer Choices	Responses	
Yes	**72.73%**	56
No	**14.29%**	11
Not Sure	**12.99%**	10
Total		**77**

Q26 Do you have flood insurance?

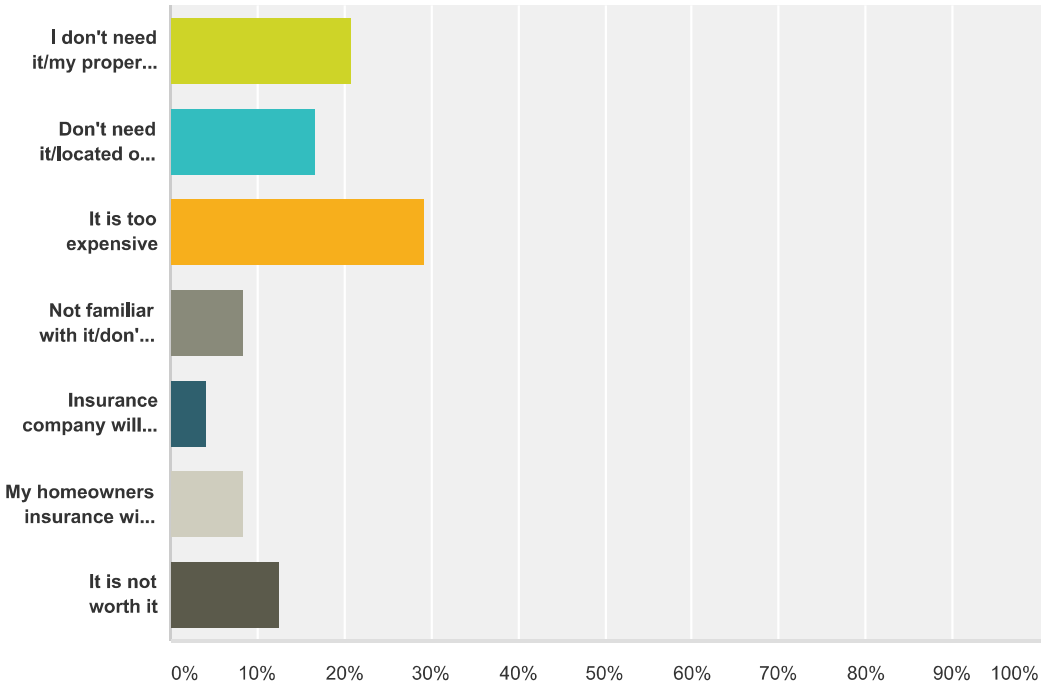
Answered: 76 Skipped: 10



Answer Choices	Responses	
Yes	**69.74%**	53
No	**30.26%**	23
Total		**76**

Q27 If you do NOT have flood insurance, what is the primary reason?

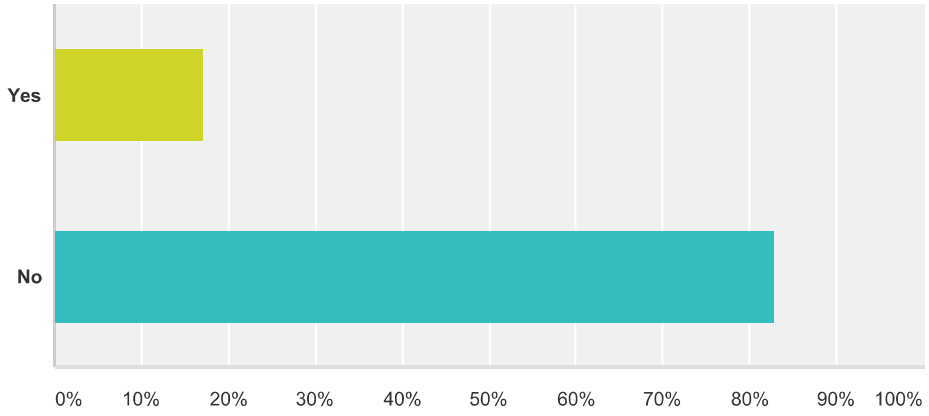
Answered: 24 Skipped: 62



Answer Choices	Responses	
I don't need it/my property has never flooded	20.83%	5
Don't need it/located on high ground	16.67%	4
It is too expensive	29.17%	7
Not familiar with it/don't know about it	8.33%	2
Insurance company will not provide	4.17%	1
My homeowners insurance will cover me	8.33%	2
It is not worth it	12.50%	3
Total		**24**

Q28 Do you or have you had problems getting homeowners/renters insurance due to floods?

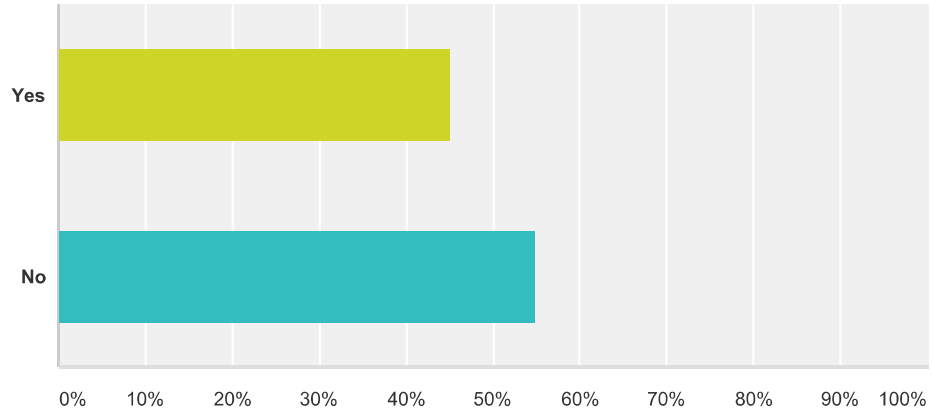
Answered: 76 Skipped: 10



Answer Choices	Responses	
Yes	**17.11%**	13
No	**82.89%**	63
Total		**76**

Q29 Did you consider the impact a flood could have on your home before you purchased/moved into your home?

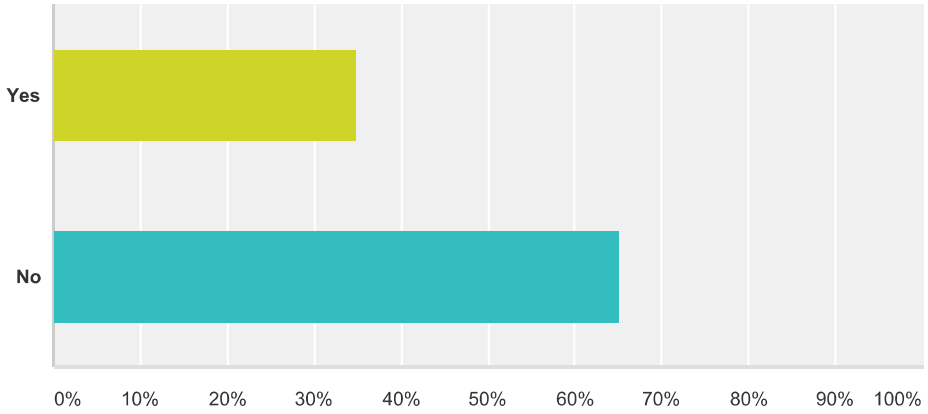
Answered: 71 Skipped: 15



Answer Choices	Responses	
Yes	**45.07%**	32
No	**54.93%**	39
Total		**71**

Q30 Was the presence of a flood hazard risk zone disclosed to you by a real estate agent, seller, or landlord before you purchased/moved into your home?

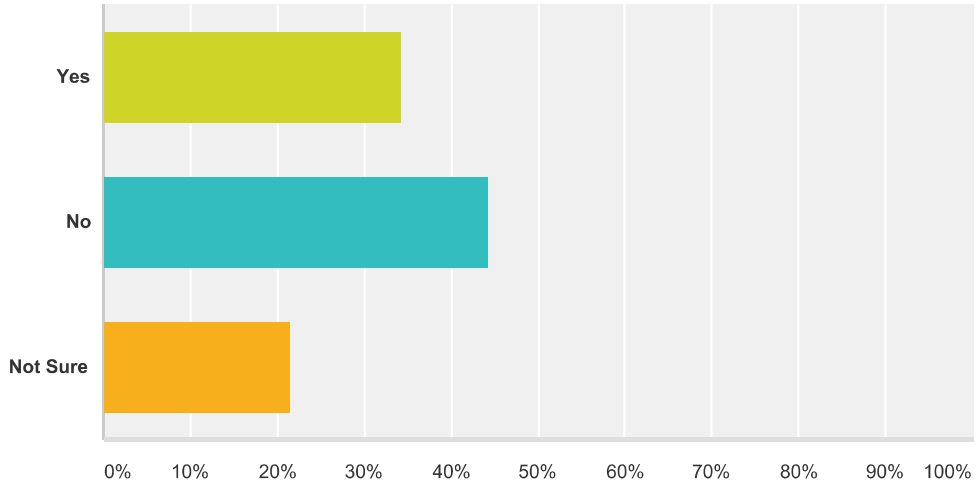
Answered: 69 Skipped: 17



Answer Choices	Responses	
Yes	**34.78%**	24
No	**65.22%**	45
Total		**69**

Q31 Would the disclosure of this type of information have influenced your decision to purchase/move into a home?

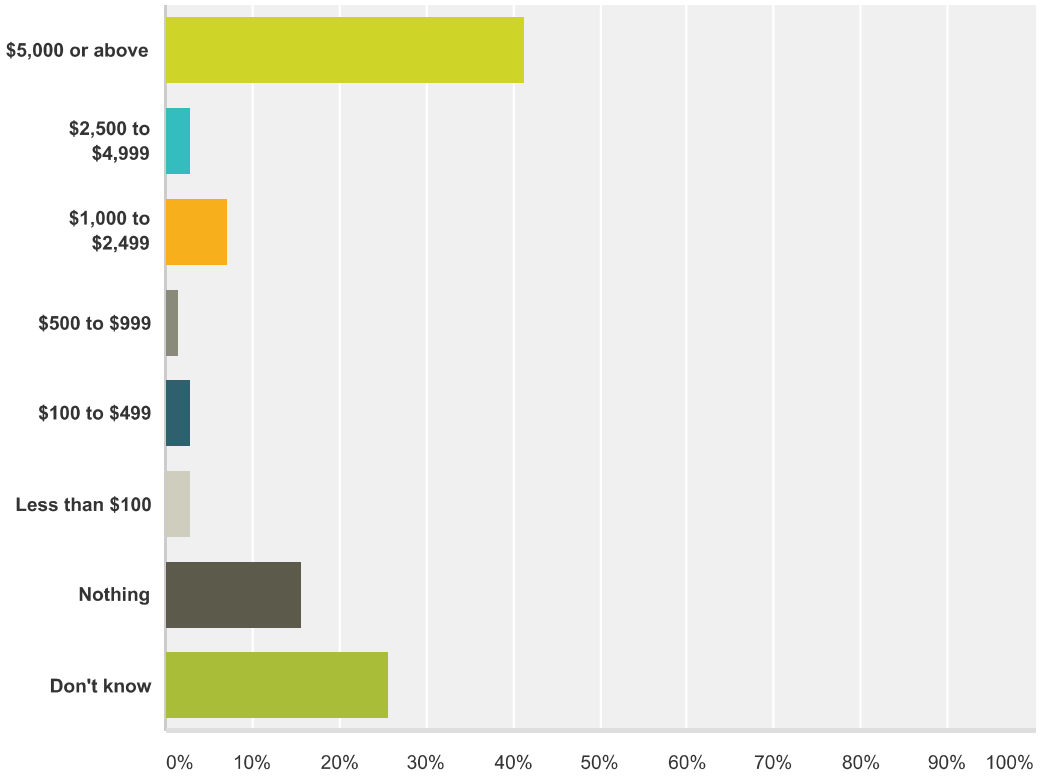
Answered: 70 Skipped: 16



Answer Choices	Responses	
Yes	**34.29%**	24
No	**44.29%**	31
Not Sure	**21.43%**	15
Total		**70**

Q32 How much money would you be willing to spend on your current home to make changes to it that would reduce the impacts of potential future flood disasters? Examples of improvements are: Elevating a flood-prone home (above the base flood elevation) and elevating utilities in flood-prone basements.

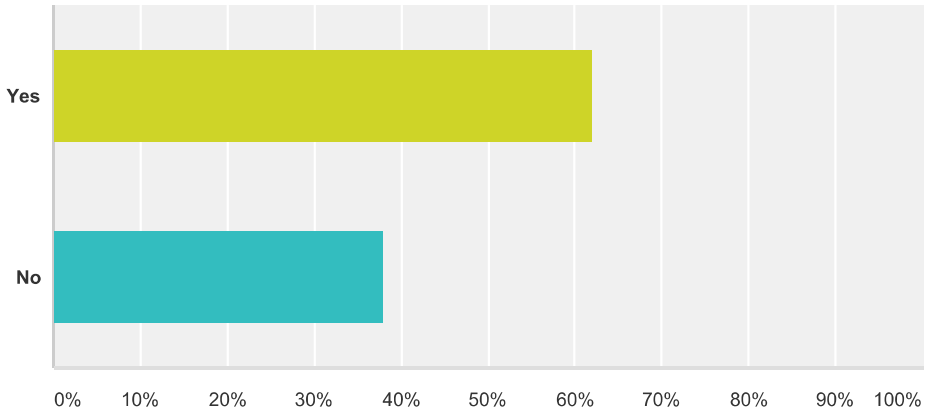
Answered: 70 Skipped: 16



Answer Choices	Responses	
$5,000 or above	**41.43%**	29
$2,500 to $4,999	**2.86%**	2
$1,000 to $2,499	**7.14%**	5
$500 to $999	**1.43%**	1
$100 to $499	**2.86%**	2
Less than $100	**2.86%**	2
Nothing	**15.71%**	11
Don't know	**25.71%**	18
Total		**70**

Q33 If your property is located in a floodplain area, or had received repeated damages from flooding events, would you consider a "buyout" (selling your property and moving), elevation of the structure (above the base flood height), or relocation offered by a public agency should it be made available?

Answered: 63 Skipped: 23



Answer Choices	Responses	
Yes	61.90%	39
No	38.10%	24
Total		**63**

Q34 Have you made any changes to your property in the past to reduce the damage from floods? What have you done to your home or business to prevent future damages?

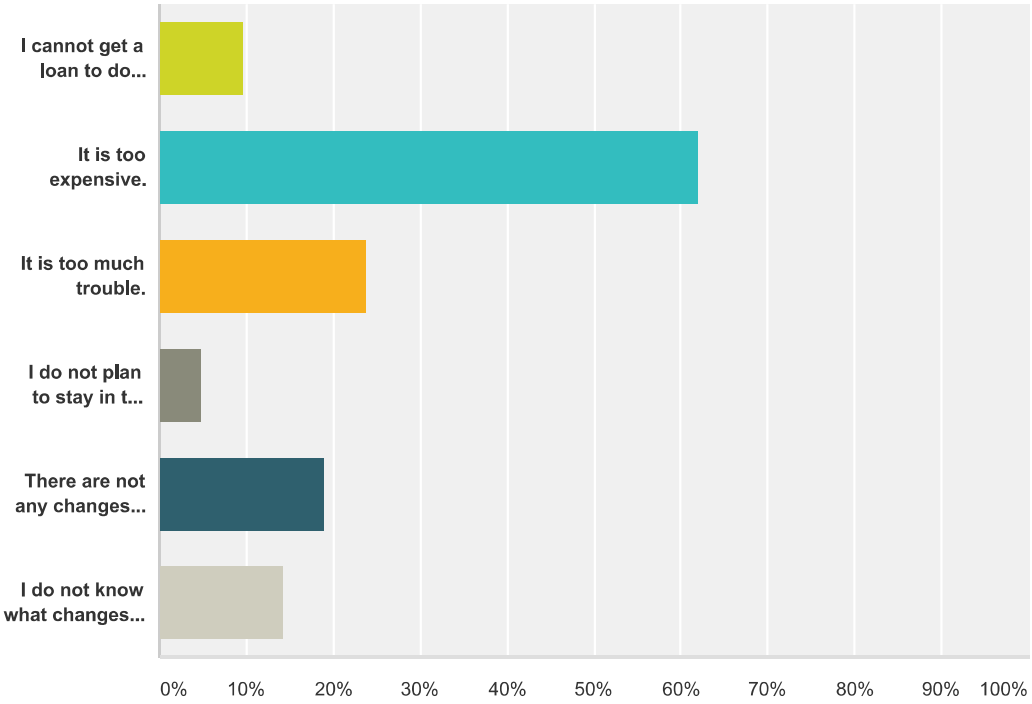
Answered: 36 Skipped: 50

#	Responses	Date
1	Removed furnace and air conditioning unit from basement. Elevated hot water heater	10/13/2015 6:51 AM
2	built up the dunes	10/12/2015 11:10 AM
3	Raised some of our mechanical systems	10/6/2015 9:31 PM
4	yes	9/20/2015 6:29 PM
5	New Home built above BFE	9/10/2015 8:43 AM
6	raised mecahnicals and electric outlets, closed cell insulation, cement board and vinyl wainscot walls, no sheet rock	9/3/2015 7:29 PM
7	Elevation of home.	8/29/2015 10:15 AM
8	In the process or elevating it	8/28/2015 11:15 AM
9	Raised house	8/27/2015 6:50 PM
10	lifting house now	8/27/2015 6:34 PM
11	Yes we have a new Modular home on pilings.	8/27/2015 5:58 PM
12	trying to raise/replace air conditioning units but permit process in Brick is taking months	8/27/2015 3:17 PM
13	Yes. I razed and rebuilt my home on pilings. 1st floor is now 5' above BFE (v-zone) my insurance quote was still $20,000 which is unbelievable after all this. should have saved my money. could have avoided all the cost to do the right thing and would not have had to deal with the brick building dept. as well. (story for another day = NIGHTMARE)	8/27/2015 7:00 AM
14	Elevated our home above the base flood elevation including utilities.	8/26/2015 1:48 PM
15	Foamed and closed off crawl space. Elevated a/c and furnace and hot water	8/26/2015 12:42 PM
16	No	8/26/2015 11:22 AM
17	demolished and are currently rebuilding at the higher elevation	8/26/2015 9:41 AM
18	Starting process of lifting	8/25/2015 7:30 PM
19	The home is built on pilings - and was high enough that we only lost the garage and crawlspace (and everything in them)	8/25/2015 6:30 PM
20	No	8/25/2015 6:03 PM
21	Elevated my electric, raised my A/C unit	8/25/2015 4:48 PM
22	Elevated heating system, refrigerator and washing machine/dryer	8/25/2015 4:43 PM
23	Elevated improvements	8/22/2015 10:43 AM
24	elevated house during renovation to the required /recommended height in place at the time.(2010) It was not high enough by about 4 inches. Do not expect to elevate further up to the new standards developed after Sandy- too expensive to lift again.	8/7/2015 12:05 PM
25	Lifting currently	6/17/2015 10:38 PM
26	Updated the rain gutters to allow rain to drain further from the house, as well as a new roof.	6/17/2015 11:17 AM
27	yes demolished and built new home	6/16/2015 10:40 PM
28	Demolished home and now building modular home with 9 ft foundation.	6/16/2015 8:50 AM

29	not yet	6/15/2015 10:28 AM
30	I am a foot and 3 inches above current base flood elevation	6/13/2015 6:07 PM
31	Raised all electrical outlets, furnace, and hot water heater on first floor	6/12/2015 2:43 PM
32	No. cost prohibitive to raise. unless a grant, to cover the full cost and cover rental assistance, is rec'd I will not elevate. The NEW FEMA MAPS ARE WRONG!! It's a government money grab... The only reason the maps have expanded and BFE's were raised (2-3 ft) it to get more money for FEMA. The ONLY reason the mainland side flooded was due to the breach. The solution it to make the barrier island a barrier. Don't raise our houses, raise the dunes.	6/12/2015 1:01 PM
33	No	6/11/2015 3:17 PM
34	N/A	6/11/2015 12:21 PM
35	Elevated all utilities	6/11/2015 12:16 PM
36	Taxes too high - can't afford to fix it - rather sell it to the people of Lakewood. They don't pay taxes - they keep redeveloping. Would love someone to buy me out !!	6/11/2015 10:29 AM

Q35 If you have been flooded and have had damages to your home or business, and you have not done anything to reduce future damages, why have you not done anything?

Answered: 21 Skipped: 65



Answer Choices	Responses	
I cannot get a loan to do this.	**9.52%**	2
It is too expensive.	**61.90%**	13
It is too much trouble.	**23.81%**	5
I do not plan to stay in the house long enough to justify the expense.	**4.76%**	1
There are not any changes that can be made to reduce my risk.	**19.05%**	4
I do not know what changes to make.	**14.29%**	3
Total Respondents: 21		

#	Other (please specify)	Date
1	Not sure if the risk outweighs the cost	10/11/2015 9:03 AM
2	Still deciding the best option for us.	8/27/2015 7:23 PM
3	I have rebuilt my house.	8/27/2015 7:00 AM
4	Not Applicable	8/25/2015 6:30 PM
5	Will do when we remodel home	8/25/2015 6:03 PM

6	I lifted house up to 7 ft in 2010, that was about a 3 ft height increase. I don't feel going up another few feet is worth the money for what I hope is a once in a lfetime storm.	8/7/2015 12:05 PM
7	I want to raise my home but do not know how high i should go. Also, not knowing if fema will change the maps for bfe again and how the maps will change. I would raise my home 3 feet which is 3 ft. above bfe but will the maps later on change to where i have to lift again which i cannot afford.	6/15/2015 10:28 AM
8	I've lived in Cherry Quay for 50 plus years; we have NEVER flooded. BUILD THE DUNES!!! Raise the dunes, NOT houses.	6/12/2015 1:01 PM
9	Have not been flooded.	6/11/2015 12:21 PM

Q36 What incentives would help to encourage you to spend money to retrofit your home to avoid flood damages?

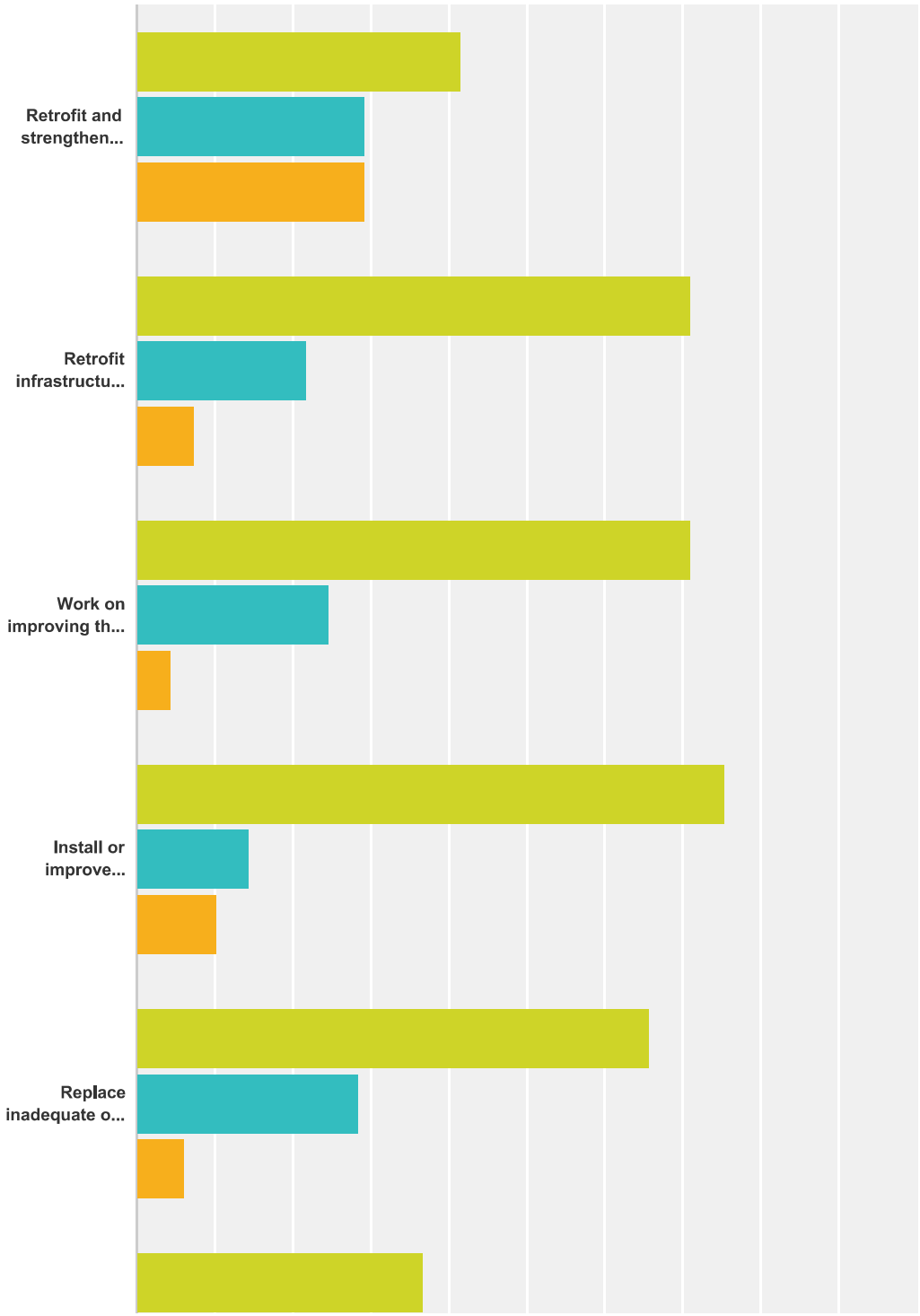
Answered: 31 Skipped: 55

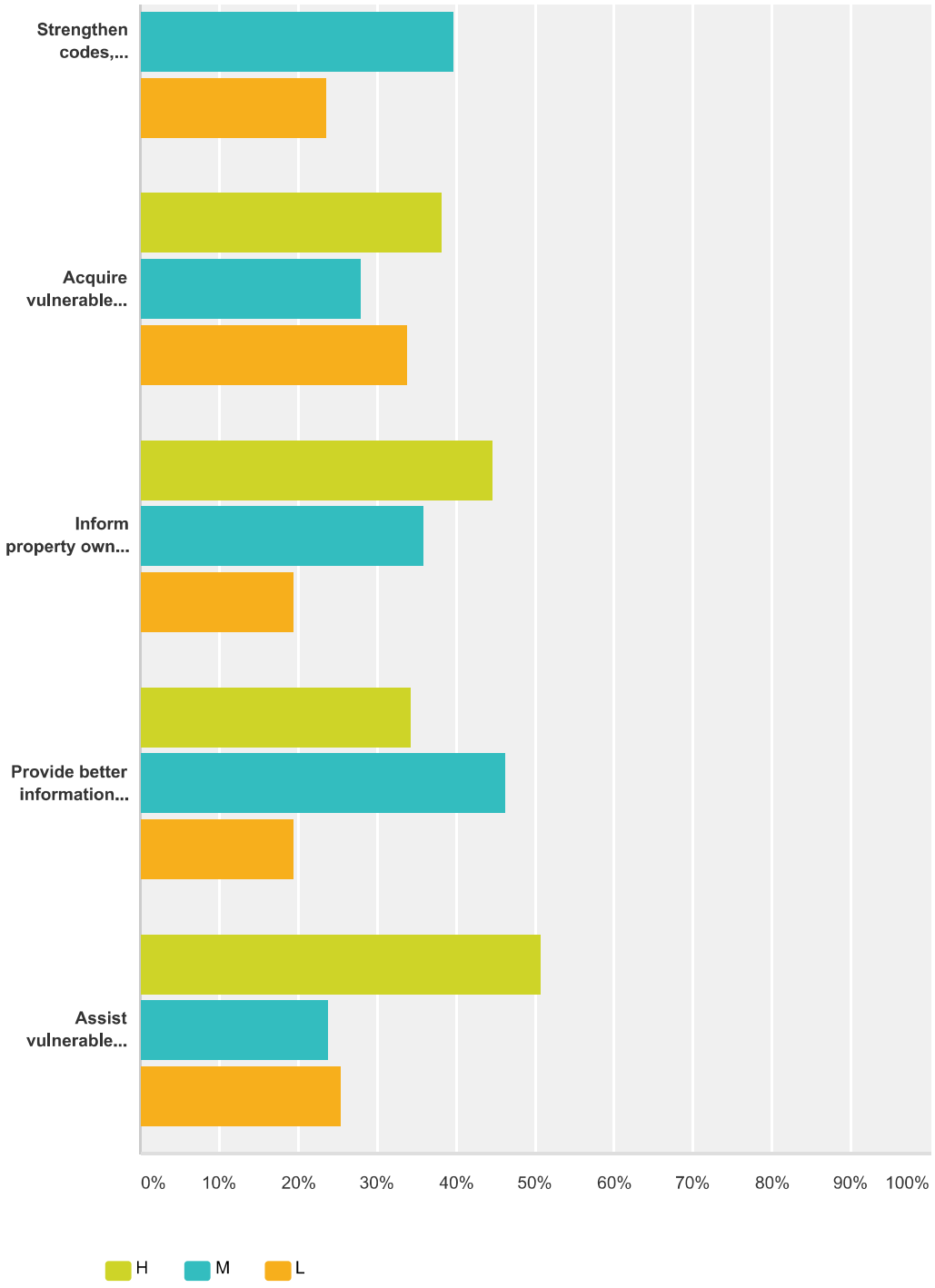
#	Responses	Date
1	Grants that are not too complicated to get	10/13/2015 6:51 AM
2	See reason above	10/11/2015 9:03 AM
3	to help raise my home	9/20/2015 6:29 PM
4	grants for all homeowners not just primary residence.	9/8/2015 11:58 AM
5	provide funds for a complete elevation	9/3/2015 7:29 PM
6	Grants	8/28/2015 11:15 AM
7	Free Grants	8/28/2015 10:28 AM
8	Simpler grant applications	8/27/2015 7:23 PM
9	more grant money $150,000.00 not enough from rrem	8/27/2015 6:34 PM
10	Lifting house would mean I would have to redesign some inside space, reside the house since garage door could not be used, add stairs, move utilities, etc. so cost would be $150,000 plus House is currently worth about 1/2 of what I paid for it. I believe putting money into it to raise it is money I would never get back so I am not likely to make further changes	8/27/2015 3:17 PM
11	Better administration of the RREM program.	8/27/2015 11:47 AM
12	the assurance that my flood insurance premiums would be significantly lower. My house is now rebuilt to 19' above sea level and my flood insurance quote was $20,000	8/27/2015 7:00 AM
13	Lowering my taxes	8/26/2015 3:22 PM
14	Subsidies for home elevation	8/26/2015 12:42 PM
15	Grants	8/26/2015 11:22 AM
16	grants and tax incentives	8/26/2015 5:50 AM
17	Financial help	8/25/2015 9:28 PM
18	N/A	8/25/2015 6:30 PM
19	Lower insurance costs	8/25/2015 6:03 PM
20	None	8/25/2015 4:48 PM
21	buy out	8/23/2015 7:50 AM
22	Grants paying for it. I've already spent hundreds of thousands of dollars recently to get up over the 7 ft mark and have used plywood on windows during last storm.	8/7/2015 12:05 PM
23	Financial assistance	6/18/2015 10:31 PM
24	grant $	6/17/2015 10:38 PM
25	Financial assistance; reduced flood insurance premiums.	6/16/2015 8:50 AM
26	Grants to help with the expense of lifting home.	6/15/2015 10:28 AM
27	Cost sharing with the government	6/12/2015 2:43 PM
28	A full grant; covering all raising expenses and rental assistance. AND NOT PREM!!! Allow the homeowner to GC their own house and hire GOOD contractors and NOT state appointed contractors. AND NO DEED restrictions.....	6/12/2015 1:01 PM
29	Not needed.	6/11/2015 12:21 PM
30	A grant	6/11/2015 12:16 PM

31	Pay no Taxes for 5 years!	6/11/2015 10:29 AM

Q37 What types of projects do you believe local, county, state, or federal government agencies should be doing in order to reduce the damage and disruption from flooding in the Township of Brick? Rate these by importance on a scale of H (high), M (medium), or L (low):

Answered: 69 Skipped: 17





	H	M	L	Total
Retrofit and strengthen essential facilities such as police, schools, hospitals	**41.54%** 27	**29.23%** 19	**29.23%** 19	65
Retrofit infrastructure, such as elevating roadways and improving drainage systems	**71.01%** 49	**21.74%** 15	**7.25%** 5	69
Work on improving the damage resistance of utilities (electricity, communications, etc.)	**71.01%** 49	**24.64%** 17	**4.35%** 3	69
Install or improve protective structures, such as floodwalls or levees	**75.36%** 52	**14.49%** 10	**10.14%** 7	69

Replace inadequate or vulnerable bridges and culverts	**65.67%** 44	**28.36%** 19	**5.97%** 4	67
Strengthen codes, ordinances and plans to require higher flood risk management standards and/or provide greater control over development in high flood areas	**36.76%** 25	**39.71%** 27	**23.53%** 16	68
Acquire vulnerable properties and maintain as open-space	**38.24%** 26	**27.94%** 19	**33.82%** 23	68
Inform property owners of ways they can reduce flood damage to their properties	**44.78%** 30	**35.82%** 24	**19.40%** 13	67
Provide better information about flood risks and high flood hazard areas	**34.33%** 23	**46.27%** 31	**19.40%** 13	67
Assist vulnerable property owners with securing funding to fix their properties	**50.75%** 34	**23.88%** 16	**25.37%** 17	67

#	Other (please specify)	Date
1	I personaly feel that greenspace should be left undeveloped.	10/11/2015 9:03 AM
2	Have a single and coordinated barrier island mitigation plan	8/25/2015 5:17 PM
3	Get the Dunes built and extend the beach Now	8/25/2015 2:26 PM
4	Extend or remove DOT seawall-ends at my property	8/23/2015 7:50 AM
5	more vegitation is required, less blacktop coverage to allow sand to filter water naturally, decrease amount of building on lot size or better regulate what is the coverage limit.	8/7/2015 12:05 PM
6	Put more sewer drains on Bark road and fix pond behind bark rd	6/16/2015 10:40 PM
7	Provide funding to second home owners for flood mitigation	6/15/2015 10:28 AM
8	BUILD THE DUNES.....	6/12/2015 1:01 PM
9	The biggest mistake in brick was allowing construction in the wetlands. The lagoon areas in Brick never should have been developed. I guarantee they will flood again. Raising home is just futile. The roads will continue to flood and damage will be done to cars and property. Water needs to flow from the Ocean into Barnegat Bay. This will clean up our waterways. We are too quick to put things back the way they were. We should have left the breach at the end of Mantoloking Road open and build a bridge and roadways around it. Every ones whose home were located in the “swamps” should have been bought out and removed. Why rebuild? Think about the future and general health of our waterways and not the taxes $$ these homes bring in.	6/11/2015 12:21 PM
10	lower my taxes	6/11/2015 10:29 AM

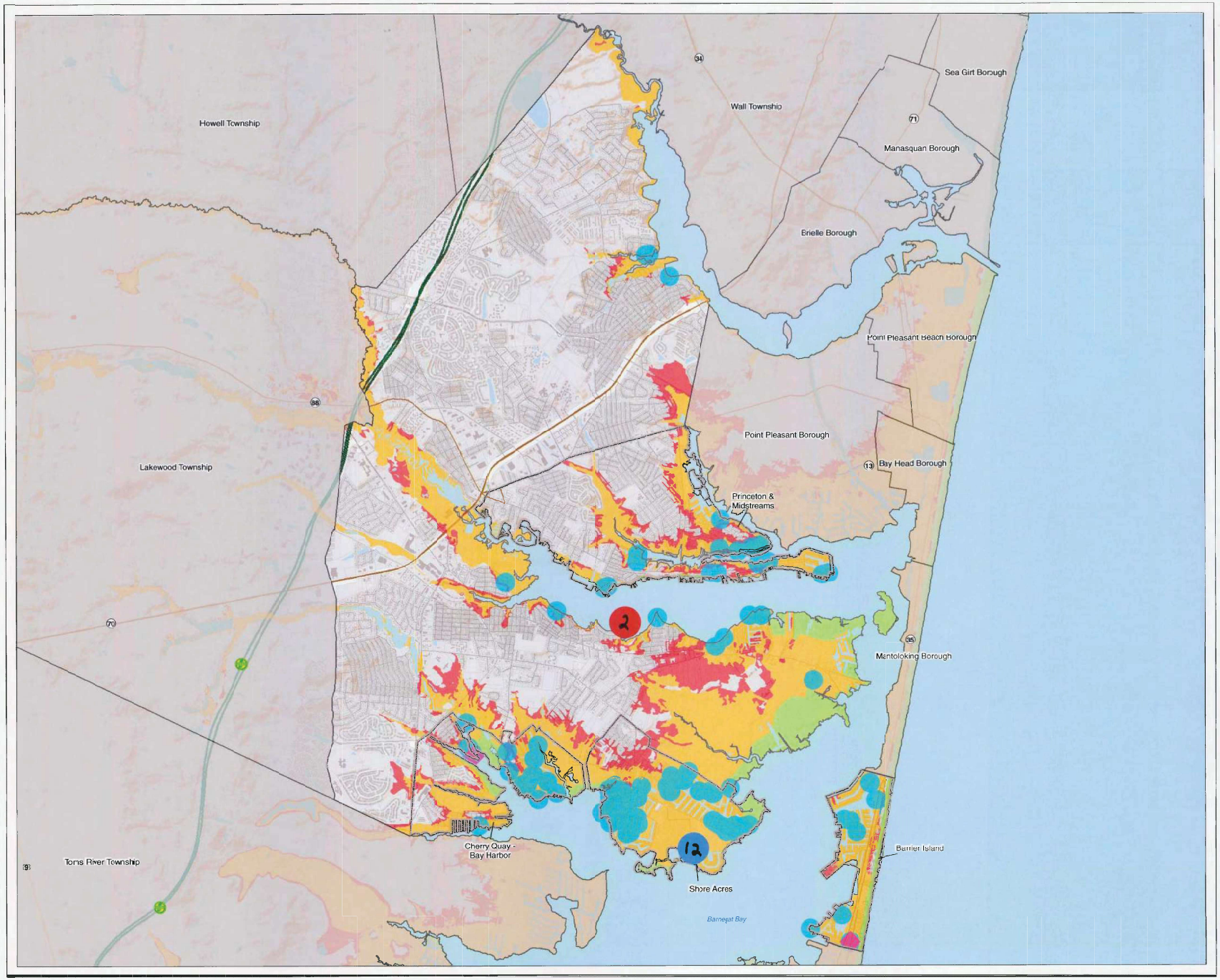
Q38 Please use the space below to include any other comments that you may have.

Answered: 22 Skipped: 64

#	Responses	Date
1	It is important to keep blue/green acres properties undeveloped	10/12/2015 11:11 AM
2	It would be nice if the town didn't take advantage of the flood victims of Brick. The permit process and inspections are very poor and charging over $4000.00 for a Elevation permit is a little high. That's why people don't want their help,or work with town and their poor systems.	8/29/2015 10:29 AM
3	I would appreciate info on Wind control options.	8/28/2015 2:06 PM
4	Don't go overboard. There is no way you can plan for every eventuality. Thank you	8/27/2015 7:24 PM
5	speed up building permit process	8/27/2015 6:38 PM
6	Building department should try to help the homeowner instead of being a bureaucratic no help only put up roadblocks. It seems the codes change daily with every inspection. I blame the elected officials for this unbelievable lack of leadership! If the elected officials went through this experience changes would have been made.	8/27/2015 6:04 PM
7	Gov't agencies (state, local, Fed) currently have very little credibility with residents due to the conflicting info that has been given to people about what needs to done, program info etc (even info in writing was not accurate.) Flood zones still don't make sense. Brick building dept seems to be an obstacle and ads little value (why does it take months to get a permit???) Grassroots groups seem to have done more to bring attention to issues and get action than any local gov't. Until/unless gov't at all levels develops credibility, it will be difficult to get people to follow advice, support plans, etc.	8/27/2015 3:24 PM
8	I think the town needs to be prepared and believe they do a good job. People need to make their own decisions. what i don't understand are the flood zones. I am on the beach in a v-zone. my neighbor across the street is in an A zone and only pays 650/yr in flood insurance. My house is on pilings and his was never raised (it's right at street level) it's an A zone presumably because of the line of houses blocking the wave action in front of them. Now that we have the steel sheet revetment in place don't the beachfront homes now have a "line" of protection from Wave action as well. Why aren't the flood maps modified to reflect this so i can get a flood insurance quote that is not $20,000	8/27/2015 7:06 AM
9	Perhaps reduced fees for variances and permits would help make improvements a little more affordable.	8/26/2015 9:42 AM
10	No Comments.	8/25/2015 6:31 PM
11	the barrier island must be considered as one in developing any future mitigation plan. It does not matter what town/township the location is "called". We all face the same risks and decisions made by one - impact all. In Sandy there was chaos with each town requiring different ids, access points, time schedule, communications - redundant, wastefull and confusing.	8/25/2015 5:18 PM
12	Sea walls and bay dunes need to be in place immediately	8/25/2015 4:49 PM
13	I do not want to be forced to modify my property in regards to potential flooding by the Township. It's a decision for the homeowner to make based on their own circumstances. Information is helpful in regards to what I can do if I choose.	8/25/2015 4:20 PM
14	DOT seawall that ends at my property in Brick presents a major hazard.Another "Sandy"will release 16 feet of sea water diverted from Bay Head,Mantoloking and Brick onto Normandy Beach.	8/23/2015 7:55 AM
15	higher dunes,more vegetation , more open space, there was noticeable lack of coordination among towns up and down Barrier Island post storm. Real Estate companies with offices in different towns had to operate under different rules to get back in and clean up to reopen. There is a revetment built but it stops because Brick/toms River/state not on same wavelength and next storm will negatively effect homes/property south of revetment where water will seek weakest point. We lost thousands of dollars because we couldn't rip down insulation soon enough- water whisked up and ruined first floor, The County of Ocean should have been main leader in recovery efforts- not individual Towns/Mayors/Police Chief- little continuity	8/7/2015 12:13 PM
16	I believe people who have made the right decisions and planned to retire into their shore house, should be able to get government money to repair their second houses. They are doing the right thing by trying to plan ahead and get neglected in their time of need.	6/17/2015 11:19 AM
17	Please fix flooding in street on bark road. And pleas fix pond from over flowing behind Bark Road in cherry quay.	6/16/2015 10:41 PM

18	I would like to see financial help to second home owners to mitigate there homes. also to have stability with fema bfe maps. there is a threat out there the maps may change every 4 years. how high do i have to raise my house just one time?	6/15/2015 10:30 AM
19	T	6/12/2015 6:05 PM
20	I am very involved and active in the understanding of the results of Sandy. I am part of STOP FEMA NOW. I am also involved with Save OUR NJ Communities. I have (and continue) to research the issues/topics daily. FIX FEMA, RAISE THE DUNES. KEEP FLOOD INSURANCE RATES AFFORDABLE. KEEP GRANDFATHERING FOR FLOOD INSURANCE. DON'T PENALIZE ME FOR DOING THE RIGHT THINGS WHEN I BUILT MY HOUSE IN 1983. I was 2+ ft over the BFE, never flooded except for SANDY, and based upon the data will NEVER flood again unless the dunes are not corrected. I plan to attend the meeting at Drum Point School.	6/12/2015 1:04 PM
21	Mother nature is essentially unstopable and the Corp of eEngineers has been proven wrong after an event many times. Home in vulnerable areas should be considered" at your own risk" and not be subsidized by state and federal "rescue" programs like beach replenishment. The moving of Cape Hatterass lighthouse was testament to admitting that nature always wins; eventually Barnegat light will have to be moved or suffer collapse.	6/11/2015 8:05 PM
22	Send everyone in the flood areas - a Certified letter asking if they want to sell their property or stay. Because Lakewood people are going around making deals with homeowners.. if the town doesn't buy out the homes - Lakewood will. You're going to have a bigger problem later !!!!! Want to do the right thing - think about it.	6/11/2015 10:42 AM

Township of Brick
Ocean County
New Jersey
Neighborhood Map



Legend

- Municipal Boundary
- Brick Township
- Interstate
- U.S. Route
- State
- Toll Highway
- Local/County Roads
- Neighborhood Boundary

Flood Hazard

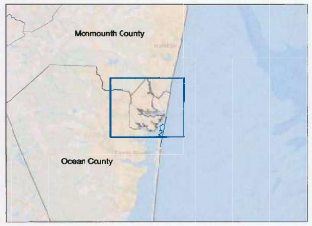
- 1% Annual Chance - A-Zone
- 1% Annual Chance - V-Zone
- 0.2% Annual Chance

NFIP

- Repetitive Loss
- Severe Repetitive Loss

0.5 0.25 0 0.5 Miles

Data Sources:
NJGIN - Boundaries, Transportation
FEMA - Flood, NFIP
Brick - Transportation, Neighborhood
ESRI - Basemap



MITIGATION | PREPAREDNESS | PROTECTION | RECOVERY

Appendix C

Princeton-Midstreams Neighborhood Open House

Township of Brick Post Sandy Recovery Planning

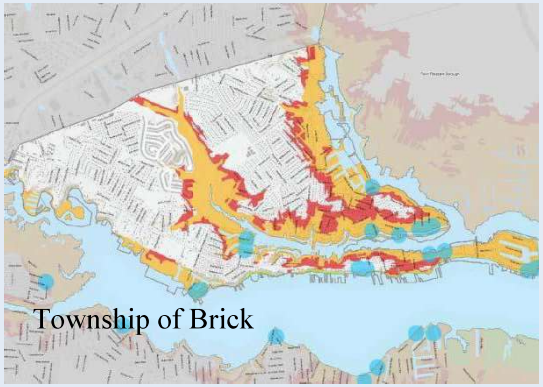
- **Brick Township Hazard Mitigation Plan**
- **Flood Management Plan**
- **Repetitive Loss Area Analysis**
- **Neighborhood Plan for Princeton-Midstreams**

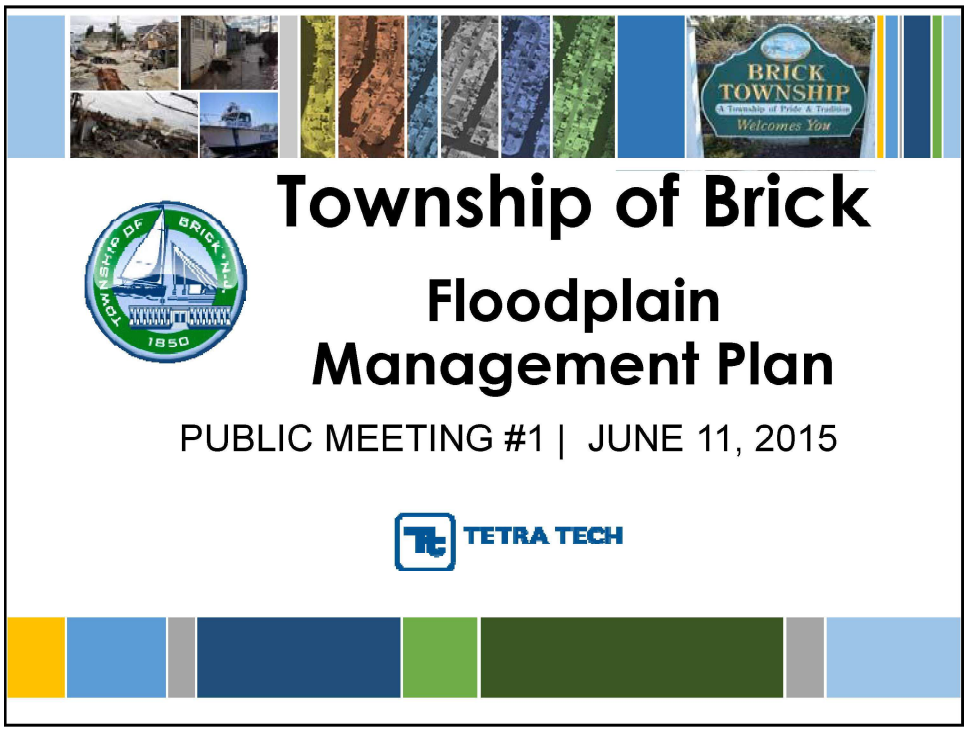
The Township has been awarded a grant from the NJ Department of Community Affairs to create a Neighborhood Plan for four Township neighborhoods, one of which is Princeton-Midstreams. Community stakeholders are a key resource for Township consultants, Maser Consulting, PA and Tetra Tech, Inc., to fully document the impacts on residents, businesses and public infrastructure and develop a Hazard Mitigation Plan, Flood Management Plan and Neighborhood Plan that coordinate recovery, mitigation and preparedness for future storms, while enhancing the Township's ranking in the Community Rating System (CRS) in order to lower flood insurance costs.

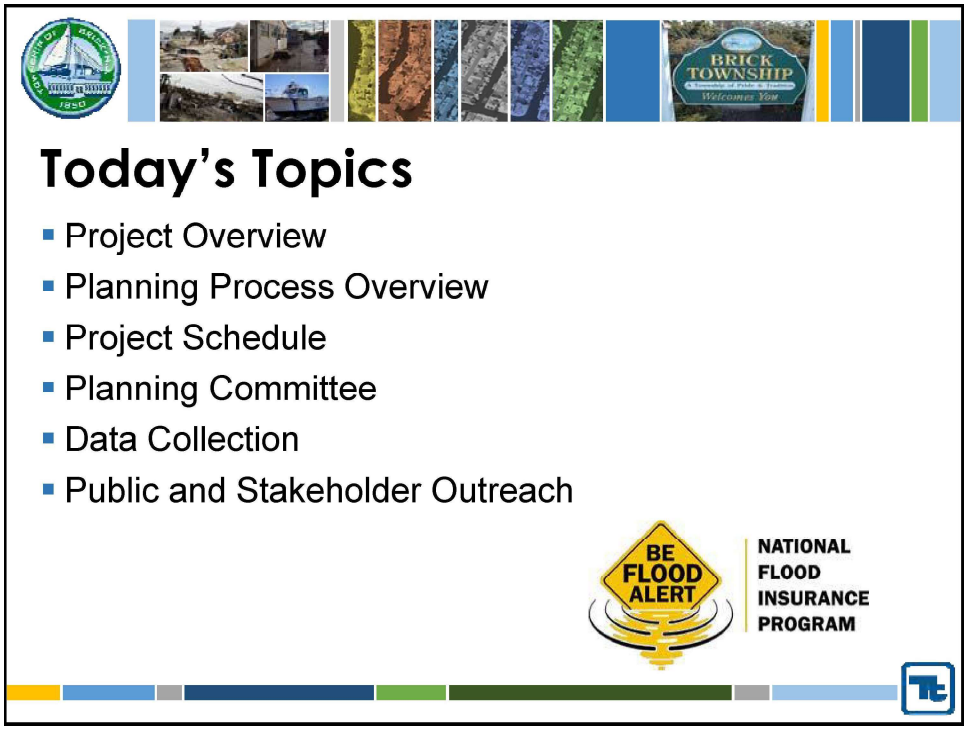
Come learn about the plans, offer comments to the consultants and be a part of the recovery!

Thursday, June 11 - 7PM to 9PM (come and go at your convenience)

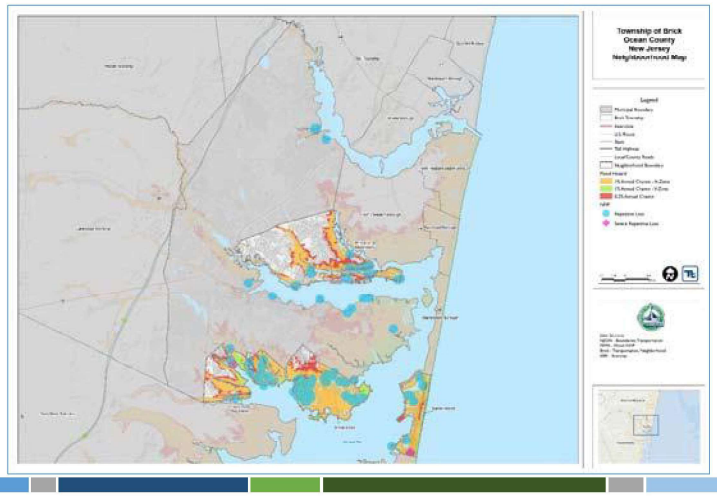
Midstreams Elementary School, 500 Midstreams Rd, Brick, NJ




BRICK TOWNSHIP
Welcomes You
Township of Brick
Floodplain Management Plan
PUBLIC MEETING #1 | JUNE 11, 2015
TETRA TECH

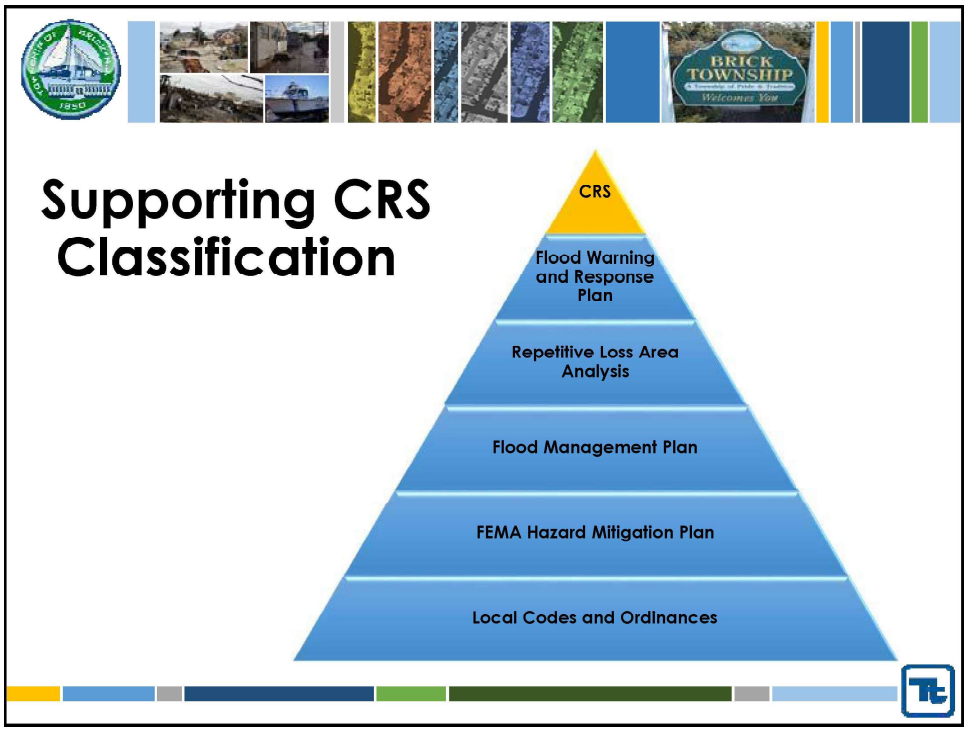

BRICK TOWNSHIP
Welcomes You
Today's Topics
Project Overview
Planning Process Overview
Project Schedule
Planning Committee
Data Collection
Public and Stakeholder Outreach
BE FLOOD ALERT
NATIONAL FLOOD INSURANCE PROGRAM

Brick Township Neighborhoods



Project Overview

- Maser/Tetra Tech engaged to prepare:
  - Flood Mitigation Plan
  - Repetitive Loss Area Analysis
  - Flood Warning and Response Plan
  - Hazard Mitigation Plan Element
  - Neighborhood Plans
    - Barrier Island
    - Shore Acres
    - Bay Harbor & Cherry Quay
    - Princeton & Midstreams
- Today we will focus on the Flood Mitigation Plan Process


Supporting CRS Classification
CRS
Flood Warning and Response Plan
Repetitive Loss Area Analysis
Flood Management Plan
FEMA Hazard Mitigation Plan
Local Codes and Ordinances

Why Plan?
"Mitigation"
Sustained action taken to reduce or eliminate long-term risk to life and property from a hazard event.
Preparedness
Response
Recovery
Mitigation
"provides the blueprint for reducing the potential losses identified in the risk assessment, based on existing authorities, policies, programs and resources, and local ability…" (CFR).

Outcomes

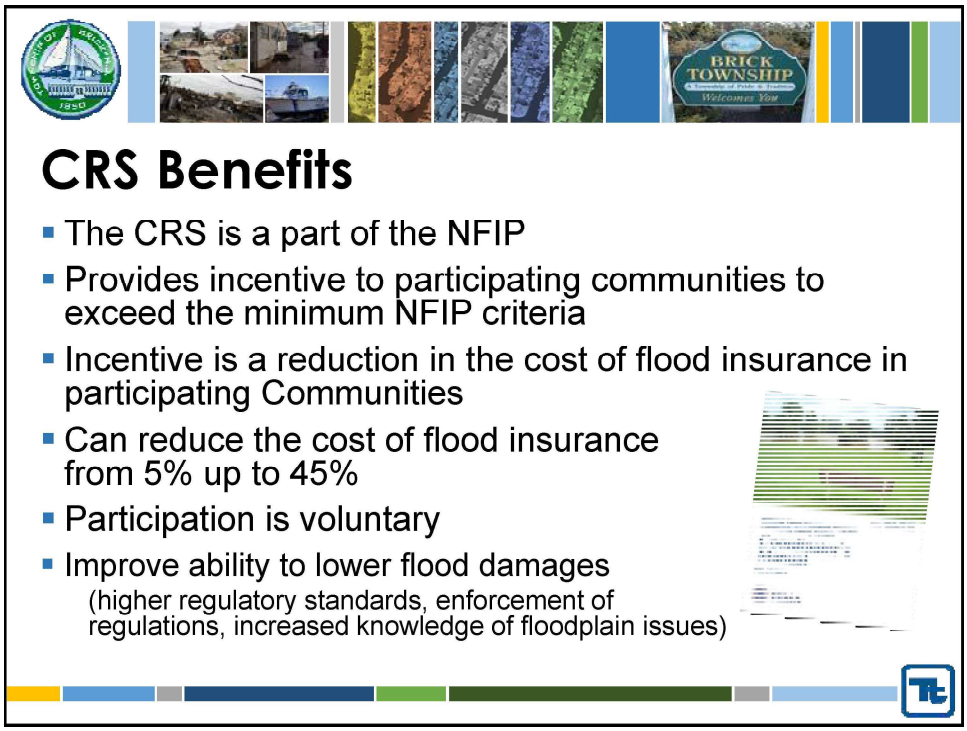
- Increased understanding of flooding that the Town faces
- Reduced long-term impacts and damages (life safety, structures, infrastructure, and services)
- Development of a more sustainable and disaster-resistant community
- Reduced flood insurance premiums [Community Rating System (CRS) compliant]
- Short-term recovery/Long-term resilience
- Plan Integration

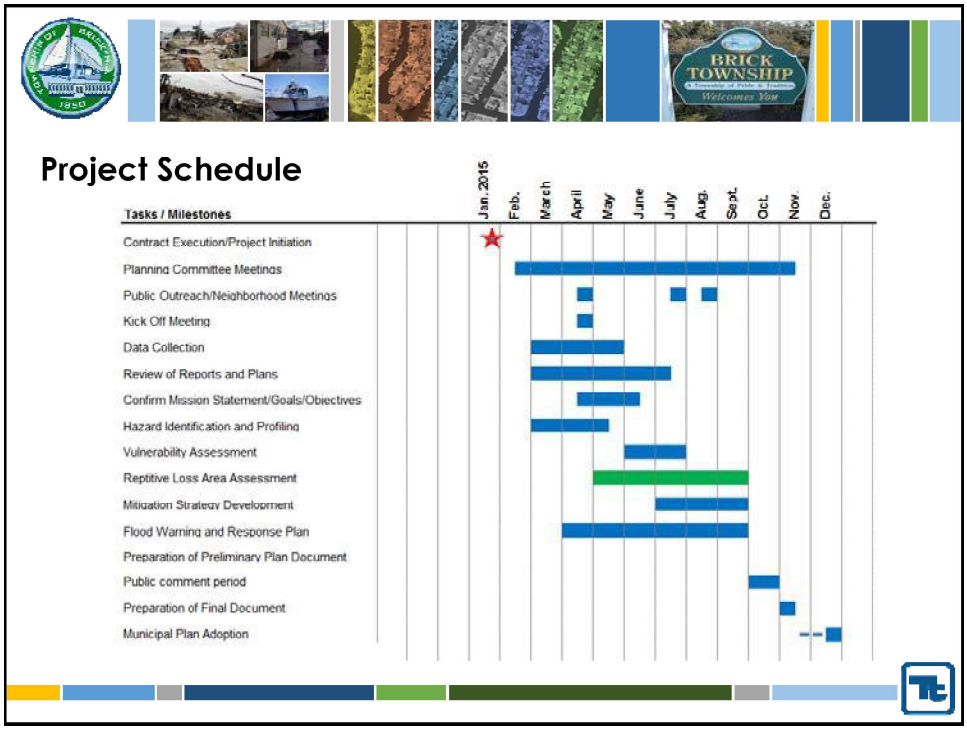
NFIP/CRS

A Local Flood Mitigation Plan demonstrates a commitment to reducing risks from flooding and serves as a guide for decision makers as they commit resources to minimize the effects of flood hazards.

The Township wishes to

- Examine its vulnerability to the flood hazard, create more detailed flood hazard analyses
- Add new mitigation actions/projects/initiatives so that it can continue to lower its flood hazard risk
- Garner points in the National Flood Insurance Program (NFIP) Community Rating System (CRS)


CRS Benefits
The CRS is a part of the NFIP
Provides incentive to participating communities to exceed the minimum NFIP criteria
Incentive is a reduction in the cost of flood insurance in participating Communities
Can reduce the cost of flood insurance from 5% up to 45%
Participation is voluntary
Improve ability to lower flood damages
(higher regulatory standards, enforcement of regulations, increased knowledge of floodplain issues)


Project Schedule
Tasks / Milestones
Jan. 2015
Feb.
March
April
May
June
July
Aug.
Sept.
Oct.
Nov.
Dec.
Contract Execution/Project Initiation
Planning Committee Meetings
Public Outreach/Neighborhood Meetings
Kick Off Meeting
Data Collection
Review of Reports and Plans
Confirm Mission Statement/Goals/Objectives
Hazard Identification and Profiling
Vulnerability Assessment
Reptitive Loss Area Assessment
Mitigation Strategy Development
Flood Warning and Response Plan
Preparation of Preliminary Plan Document
Public comment period
Preparation of Final Document
Municipal Plan Adoption

Plan Update Process Steps
1. Organize Resources
2. Assess Risks
3. Develop a Mitigation Plan
4. Implement Plan and Monitor Progress
Engage a Wide Range of "Stakeholders"
Federal, State, Regional and Local Agencies
Business and Civic Groups
Academic Institutions
Other "Local Governments"
The Public

Planning Committee
Comprised of Municipal Officials
Mayor and Administration
Planning
Engineering
DPW
OEM
Construction Code
Planning Board
Residents
Supporting Agencies
Barnegat Bay Partnership
Brick Township MUA
Jacques Cousteau National Estuarine Research Reserve

These are the Five Steps to Assess Risk

Mission Statement

The mission of the Township of Brick Flood Management Plan is

to create a safe, protected, and well-informed community with a comprehensive set of tools and the necessary capacity to identify and address vulnerabilities to flood related hazards. Township of Brick will strive to protect the health, safety, and quality of life of community members and remain a safe, resilient, and prosperous place to live.

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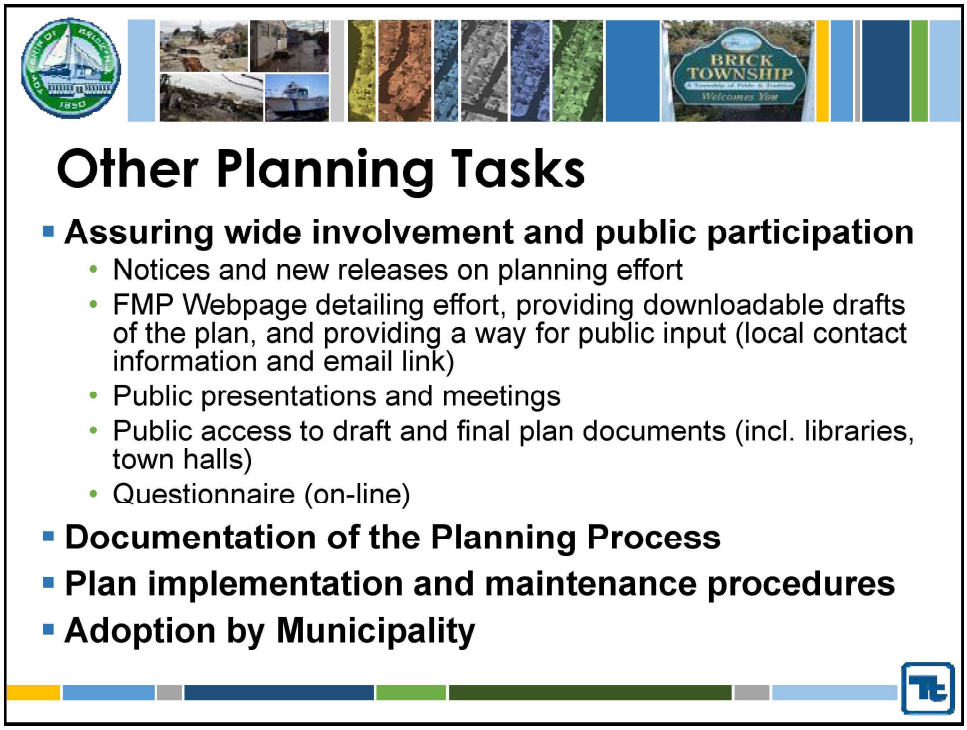
Goals and Objectives

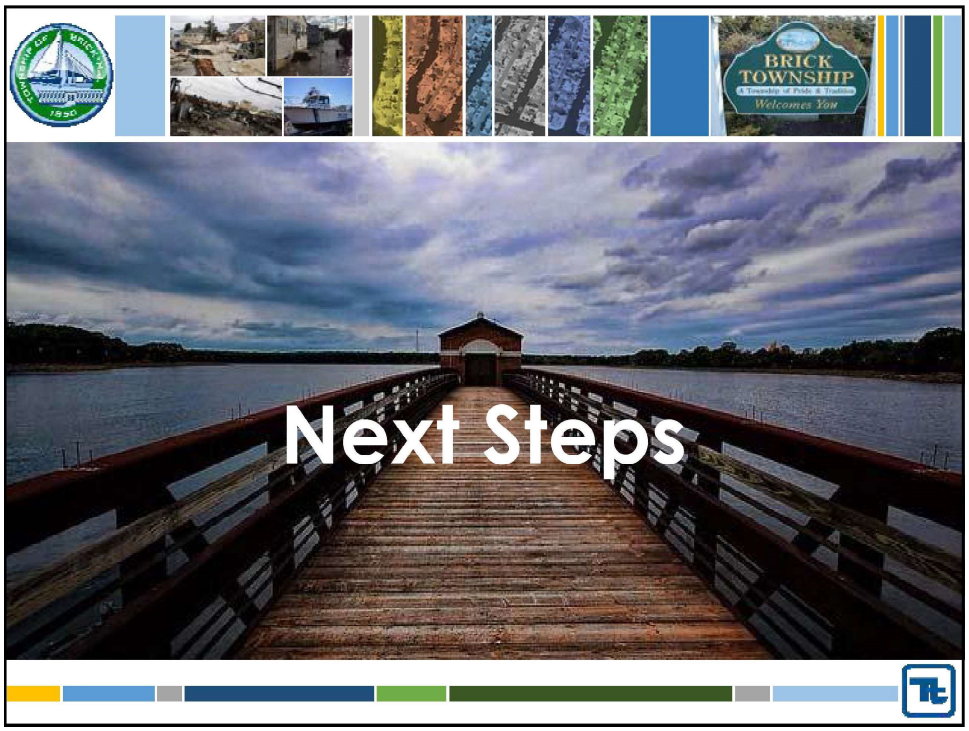
- **Goals:**
  - General guidelines that state what we want to achieve. Should be consistent with the State goals and other local goals.
    - Example: "Protect existing properties."
- **Objectives:**
  - Define strategies or implementation steps to attain a stated goal.
    - Example: "Enact or enforce regulatory measures that ensure new development will not increase flood threats to existing properties."
- **Actions:**
  - Specific activities that will achieve our goals and objectives and manage natural hazard risk.

Identification and Analysis of Mitigation Actions

- Mitigation actions need to be realistic, achievable and action-oriented.
- Will include both regional actions, as well as jurisdiction-specific.
- Will address both public and private property.
- For each proposed mitigation strategy, the following will be identified:
  - Implementation timeline
  - Estimated cost
  - Estimated benefits (avoided losses)
  - Potential funding sources
  - Lead agency or department
  - Supporting agencies

BRICK TOWNSHIP
Welcomes You
Mitigation Actions? Like What?
Prevention. Measures such as planning and zoning, open space preservation, land development regulations, building codes, storm water management.
Property Protection. Measures such as acquisition, relocation, storm shutters, rebuilding, barriers, floodproofing, insurance, and structural retrofits for high winds.
Public Education and Awareness. Measures such as outreach projects, real estate disclosure, hazard information centers, technical assistance.
Natural Resource Protection. Measures such as erosion and sediment control, stream corridor protection, vegetative management, and wetlands preservation.
Emergency Services. Measures such as hazard threat recognition, hazard warning systems, emergency response, protection of critical facilities, and health and safety maintenance.
Structural Projects. Measures such as dams, levees, seawalls, bulkheads, retaining walls, channel modifications, storm sewers, and retrofitted buildings and elevated roadways.


BRICK TOWNSHIP
Welcomes You
Other Planning Tasks
Assuring wide involvement and public participation
Notices and new releases on planning effort
FMP Webpage detailing effort, providing downloadable drafts of the plan, and providing a way for public input (local contact information and email link)
Public presentations and meetings
Public access to draft and final plan documents (incl. libraries, town halls)
Questionnaire (on-line)
Documentation of the Planning Process
Plan implementation and maintenance procedures
Adoption by Municipality


BRICK TOWNSHIP
Welcomes You
Next Steps

Township of Brick Neighborhood Meeting
Floodplain Management Plan and Hazard Mitigation Plan
Comment Sheet
June 11, 2015

Name (Optional): _____
Address (Optional): _____
_____

Do you (check all that apply):
___Own a home in the Township (primary residence)?
___Rent a primary residence in the Township?
___Own a vacation home in the Township?
___Own a business in the Township?

Identifying Critical Issues

Please provide a brief summary of any hazard-related critical issues facing the Township of Brick, its residents, visitors, and business/community leaders? Please describe the types and locations of the damage or other impacts in the Township from past events.

Township of Brick

Community Input Notes

Princeton Midstreams Public Meeting, June 11, 2015

1. Stormwater/catch basin issues.
2. Flooding - End of East Riverside.

   Sewer back flow. Address stormwater from Mantol Road.
3. Seggoing Road – Need check valve on Kettle Creek pipe.
4. Elevate road. Road flooding. Single access.
5. Carroll Fox Road (at arch) – Road floods during rainstorms.
6. Lenape Trail (off Princeton Avenue) – Unpaved driveways. Runoff washes away driveways and undermines the road. Limited stormwater management. Water never makes it to the drain.
7. Create "living breakwater" (or expand) on the small islands on the south branch of the Beaver Dam Creek.
8. Catch basin for Princeton Avenue currently backs up and floods front of property. Should be fixed soon to be piped directly to Beaver Dam Creek.
9. East of #9 was isolated without clear evacuation routes. Two bridges flooded and trees came down and blocked western access.
10. Water breached south of here, isolating land to the east and preventing evacuation. Times were mostly safe, but no medical help could get in, if needed.

AGENDA

Township of Brick Floodplain Management Plan and Hazard Mitigation Plan Neighborhood Meeting

Public Meeting #1

Thursday, June 11, 2015 | 7:00 – 9:00 p.m.

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1. **Welcome and Introductions**
2. **Workshop style meeting to provide Floodplain Management Plan purpose, overview, and status**
3. **Public input and feedback via workgroup stations including map displays of plan area, flood hazard and repetitive loss areas, and Hurricane Sandy substantial damage locations**
4. **Public comment encouraged via map mark-ups, comment sheets, and on-line survey**
5. **Meeting to adjourn at 9:00 pm**

Township of Brick Neighborhood Meeting
Floodplain Management Plan and Hazard Mitigation Plan
Comment Sheet
June 11, 2015

Name (Optional): [redacted]
Address (Optional):

Do you (check all that apply):

X Own a home in the Township (primary residence)?
___Rent a primary residence in the Township?
___Own a vacation home in the Township?
___Own a business in the Township?

Identifying Critical Issues

Please provide a brief summary of any hazard-related critical issues facing the Township of Brick, its residents, visitors, and business/community leaders? Please describe the types and locations of the damage or other impacts in the Township from past events.

Photo #17: Utilize island on South Branch of Beaver Dam Creek to help wildlife and reduce storm surge/flooding by expanding islands where eroding, plant wetland grasses or trees.

Township of Brick
Ocean County
New Jersey
Princeton & Midstreams Neighborhood

Legend

- Municipal Boundary
- Brick Township
- Interstate
- U.S. Route
- State
- Toll Highway
- Local/County Roads
- Building
- Neighborhood Boundary

Flood Hazard

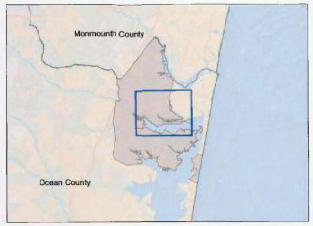
- 1% Annual Chance - A-Zone
- 1% Annual Chance - V-Zone
- 0.2% Annual Chance

NFIP legend

- Repetitive Loss
- Severe Repetitive Loss

750 375 0 750 Feet

Data Sources:
NJGIN - Boundaries, Transportation Parcels
FEMA - Flood, NFIP, Transportation
Brick - Transportation, Neighborhood Buildings
ESRI - Basemap



AGENDA

Township of Brick Floodplain Management Plan and Hazard Mitigation Plan Neighborhood Meeting

Public Meeting

Thursday, June 16, 2015 | 7:00 – 9:00 p.m.

1. **Welcome and Introductions**
2. **Workshop style meeting to provide Floodplain Management Plan purpose, overview, and status**
3. **Public input and feedback via workgroup stations including map displays of plan area, flood hazard and repetitive loss areas, and Hurricane Sandy substantial damage locations**
4. **Public comment encouraged via map mark-ups, comment sheets, and on-line survey**
5. **Meeting to adjourn at 9:00 pm**

Please take the time to go to the Township of Brick website for more information:
http://www.twp.brick.nj.us/

Take the online Township of Brick Flood Preparedness and Planning Survey at:
https://www.surveymonkey.com/r/BrickPublicSurvey

MITIGATION | PREPAREDNESS | PROTECTION | RECOVERY

Appendix C

Cherry Quay – Bay Harbor & Shore Acres

Neighborhood Open House

Township of Brick Post Sandy Recovery Planning

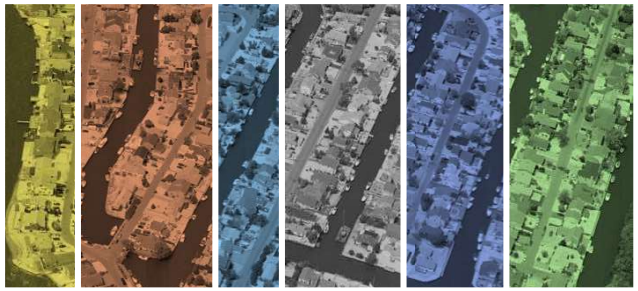
- Brick Township Hazard Mitigation Plan
- Flood Management Plan
- Repetitive Loss Area Analysis
- Neighborhood Plans for Cherry Quay/Bay Harbor & Shore Acres

The Township has been awarded a grant from the NJ Department of Community Affairs to create a Neighborhood Plan for four Township neighborhoods, one of which is Cherry Quay/Bay Harbor and another of which is Shore Acres. Community stakeholders are a key resource for Township consultants, Maser Consulting, PA and Tetra Tech, Inc., to fully document the impacts on residents, businesses and public infrastructure and develop a Hazard Mitigation Plan, Flood Management Plan and Neighborhood Plan that coordinate recovery, mitigation and preparedness for future storms, while enhancing the Township's ranking in the Community Rating System (CRS) in order to lower flood insurance costs.

Come learn about the plans, offer comments to the consultants and be a part of the recovery!

Tuesday, June 16 - 7PM to 9PM (come and go at your convenience)

Drum Point Elementary School, 41 Drum Point Rd., Brick, NJ

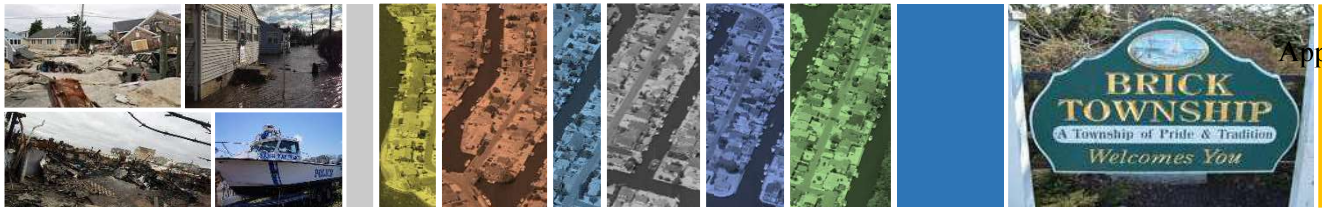


Township of Brick

Floodplain Management Plan

PUBLIC MEETING | JUNE 16, 2015

TETRA TECH

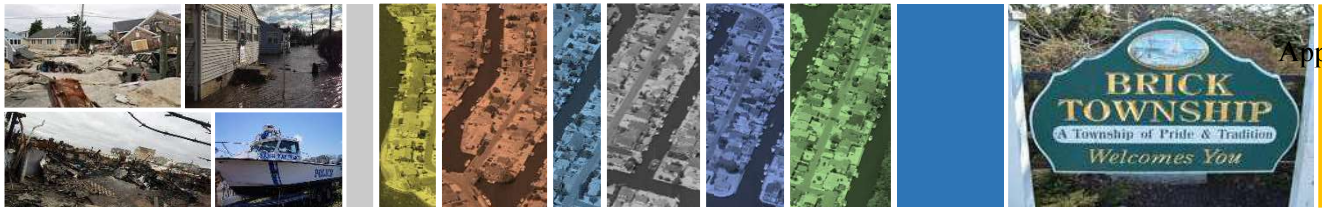


Today's Topics

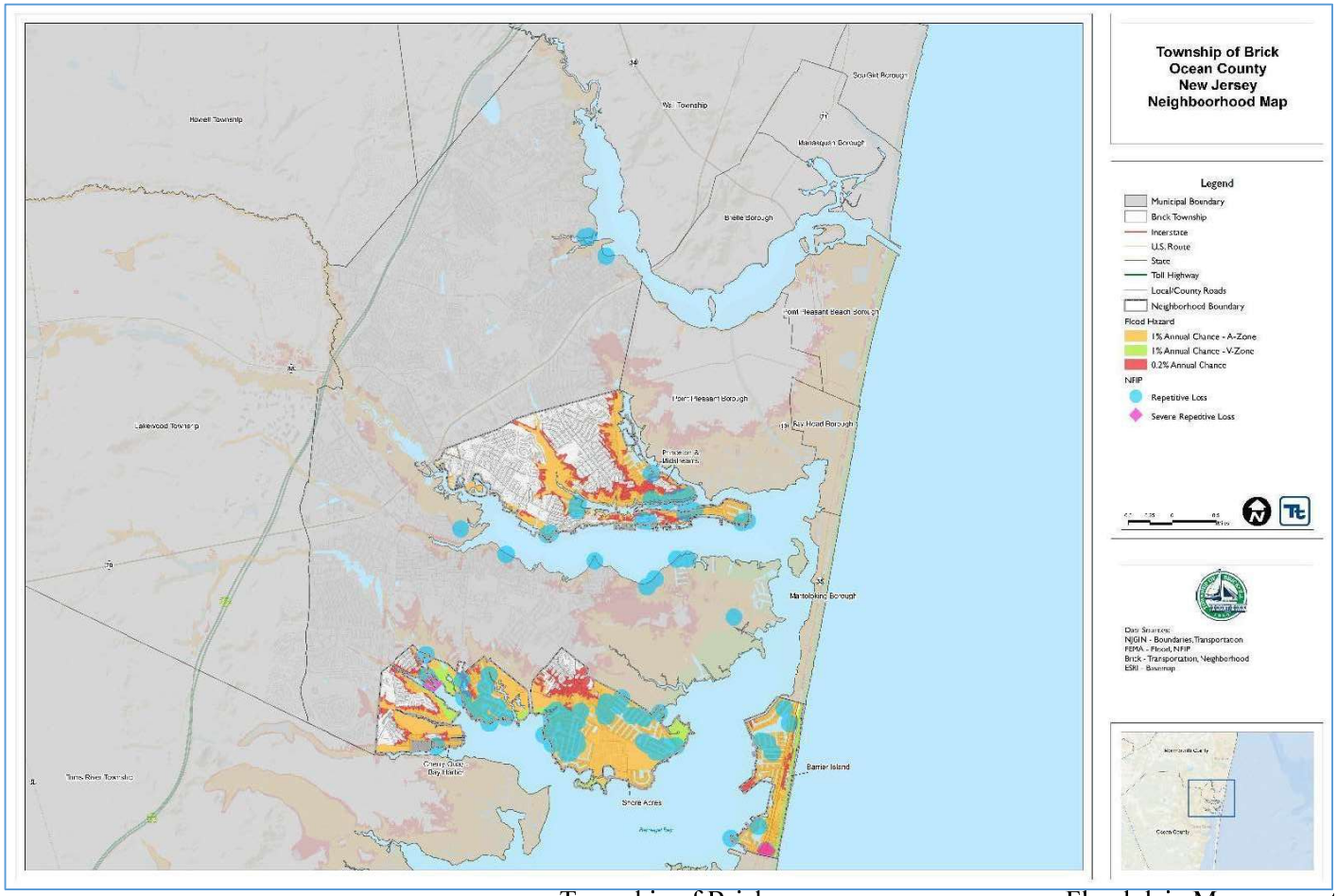
- Project Overview
- Planning Process Overview
- Project Schedule
- Planning Committee
- Data Collection
- Public and Stakeholder Outreach

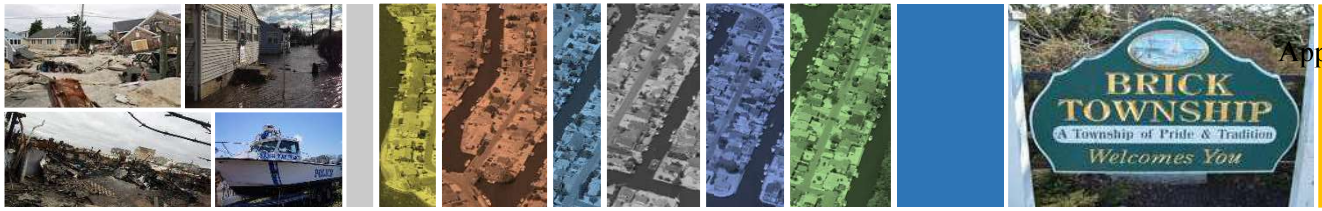
BE FLOOD ALERT

NATIONAL FLOOD INSURANCE PROGRAM



Brick Township Neighborhoods





Project Overview

- Maser/Tetra Tech engaged to prepare:
  - Floodplain Management Plan
  - Repetitive Loss Area Analysis
  - Flood Warning and Response Plan
  - Hazard Mitigation Plan
  - Neighborhood Plans
    - Barrier Island
    - Shore Acres
    - Bay Harbor & Cherry Quay
    - Princeton & Midstreams
- Today we will focus on the Floodplain Management Plan Process