

# What does flood- resilience mean in Kingston?

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5stonesfitness.com

**Healthy systems are more likely to withstand stress.  
An ounce of prevention...**

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Resilience is the ability to absorb and/or bounce back quickly from a sudden shock.

Human body can be used as an analogy. The body has many systems. If we don't take care of our body's systems (eating right, exercise, sleep etc) we are less able to withstand or bounce back quickly from an injury or illness.

...able to withstand and recover from severe weather events without suffering permanent loss of functions, devastating damage, diminished productivity or quality of life, and with minimal outside assistance  
– Dept. of State



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This is a working definition from guidance that DOS is developing to evaluate vulnerability in waterfront communities.

We'll be using some of those tools in our work with the task force in the coming months.

In general, resilient communities are communities that take care of their critical systems that support life, protect clean water and air and the environment, and promote economic vitality in an equitable way.

## Resiliency enhanced by:

- Long term thinking
- Collaboration
- Diversity
- Decentralized efforts
- Flexibility
- Redundancy



<http://signsofpolitics.blogspot.com/2009/03/around-and-about-resilience.html>

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1. Long term thinking and planning: The same way that long term thinking is good for financial planning for households and businesses it's good for communities.

According to FEMA every \$1 they spend on hazard mitigation (actions to reduce disaster losses) provides the nation \$4 in future benefits – FEMA Multihazard mitigation council report (2005)

2. Collaboration: Working at all scales and across government, property, department, community boundaries
3. Diversity: Diversity of strategies - if you depend on one solution and it fails then what?
4. Decentralized efforts: To the extent that everyone considers resiliency a goal – down to the household level – the community is more resilient as a whole. Our state and nation won't be resilient until all communities make resiliency a goal.
5. Flexibility - Communities will experience difficult times. We can't eliminate all risk. You want your community to be able to bend, absorb the shock and bounce back – like a spring – not break.
6. Redundancy – Design communities so that if one system fails others can absorb the stress.

## What is realistic?

- The future is uncertain. Can't remove all risk, difficulty or distress.
- Do we plan for current or future conditions?
- What storm? 100 year? 500 year? 10,000 year (like the Dutch)

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Important question: If we can't remove all risk, what level of risk is Kingston comfortable living with on its waterfront?

# What does a flood-resilient Kingston waterfront mean to you?

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This is an opportunity to re-imagine, redesign, reconnect waterfronts in Kingston and around the world.

And it's an opportunity to stop reacting to devastating storms and begin planning for them – to avoid costs of the future.

## Rising Currents - ARO and dlandstudio



# Resilience

*The ability to prepare and plan for, absorb, recover from, or more successfully adapt to actual or potential adverse events.*

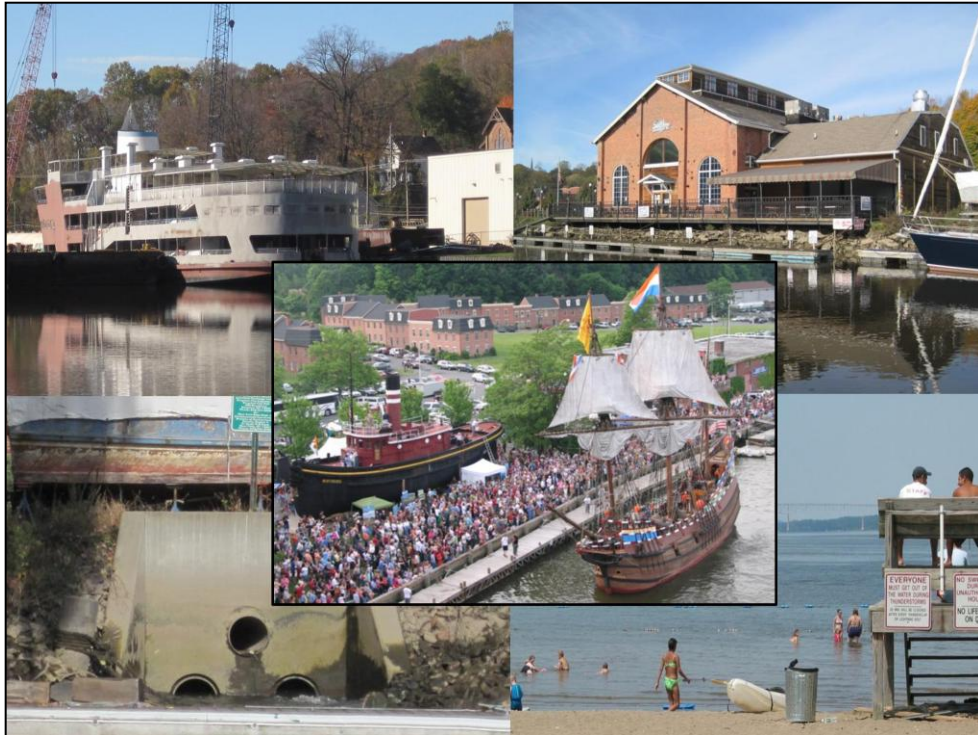
From: Disaster Resilience: A National Imperative. National Academies. 2012



[http://farm4.static.flickr.com/3661/3407491778\\_54dd33f464\\_o.jpg](http://farm4.static.flickr.com/3661/3407491778_54dd33f464_o.jpg)

Here is the definition we gave you in our pre-event survey. Thanks to all who completed it.





**Here are some responses from the pre-survey:**

**Vibrant waterfront for people and business**

- “sustainably amenable to business, culture and tourism”
- “safe inviting space for public and businesses”
- “An attraction for all ages and demographics, where the Hudson River and entertainment become harmonious.”
- “working waterfront, integrating business, history and environment “

**Site built environment away from vulnerable areas, use shoreline for recreation/greenspace**

- “Locate built environments in places less sensitive to natural disasters”
- “New development or re-development should be excluded in floodplain and floodway areas”
- “buildings set back from the flooding zone and walking and biking trails and greenspace in the areas more likely to be flooded”
- “moving critical infrastructure, businesses, and cultural resources up the hill”

**Other concepts**

- Critical infrastructure: “protection and continuity of operations of the City's Wastewater Treatment Facility”
- Self-sufficiency: “able to supply everything needed for the city to thrive”
- Adaptability: “changing waterfront that adapts over time”
- Green shorelines: “smart soft and living shore solutions”

"The best way to  
predict your future is  
to create it!"

-- **Abraham Lincoln**



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# Questions?

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