

Waterfront Access

Emergency Planning Implications

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New York City 9-11-01
1 million people evacuated

San Francisco 1989
Loma Prieta Earthquake



Waterfront Access Emergency Planning Implications



New York City 9-11-01

"It (the evacuation) looked seamless, like it was perfectly planned, even though you knew that everyone was just winging it."

Coast Guard Chief Petty Officer Brandon Brewer

New York City 9-11-01

"It turns out that all these ferries were invaluable. It's a shame that it takes something like this for the city to see just how important they are to the transportation infrastructure."

New York Fast Ferry President John Koenig

Emergency Egress

- Key element in emergency planning
- Plan ahead to maximize effectiveness

Waterfront Access

- Redundancy to fixed structures like bridges and tunnels

People are moving back into the cities

- To avoid commuter traffic congestion
- To improve their “quality of life”

Population shift back to the cities

- Puts intense pressure on downtown waterfront real estate
- Historically has been industrial use, typically port centered activity such as shipping terminals, wharves and piers, warehouses, shipyards, etc.

Convert waterfront to residential and non-maritime business use

- Condominiums
- Office towers
- Restaurants
- Public parks

Squeezing out industrial marine activity

Passenger ferry operation is increasing

- Reduces roadway traffic congestion
- Low cost alternative to bridges and tunnels

“Seamless” commuting experience

- Ready access to and from the ferry passenger terminals
- Sufficient commuter parking
- Effective links with public landside transportation

Increasingly popular urban waterfront land resources

Once waterfront properties have been converted to alternative uses, they are effectively lost for maritime use for generations to come

Toronto Waterfront Regenerative Trust

Principal: Waterfront should be Clean, Green, Accessible, Connected, Open, Useable, Diverse, Affordable and Attractive

Goal: Make sure people can get to the water, and that the water is worth getting to

Municipal planners encouraged to:

- preserve urban waterfront for maritime use; essential to retain and improve overall quality of life
- incorporate the emergency access function when developing and executing waterfront plans.

Waterfront access

- Make a part of an intermodal transportation system
- Carefully consider each element

Waterside condominium

- Can you maintain pedestrian access to the water?
- Can the structure be set back from the water to allow a mobilization or marshalling area in case of emergency?

Seawall design

- Can you design the seawall to accommodate various sizes and types of vessels and avoid the use of gangways and stairways?
- Can you assure deep water at the seawall and minimize the movements and spacing between the wall and the prospective vessel?

Seawall design

- Can you safely secure the vessel(s) and accommodate wave action, currents, and tides?
- Can you balance the need for **waterfront security** with the emergency egress function?

Land/water interface details are critical to the effectiveness of waterfront access

On 9-11, lower Manhattan's Battery Park water access hampered by obstacles:

- Bollards and chains lined the walkways
- Rip-rap protruded at the seawall making the approach by boat that much more perilous

We simply cannot afford to lose our water connection

Planners, architects, developers, and builders need to be educated as to the critical role that waterfront access plays, especially as it relates to egress

Funding and planning resources

- Metropolitan Planning Organizations (MPO's)
- Coastal Zone Management Act (CZMA)
- Federal Emergency Management Agency (FEMA)

Metropolitan Planning Organizations (MPO's)

Provide for the conscientious application of sound planning principles in order to promote a more livable, environmentally sound, and economically viable community that is **accessible** through an efficient and effective **multi-modal transportation system**

Metropolitan Planning Organizations (MPO's)

- Planning Funds promote a coordinated, multi-modal transportation system.
- Transit Planning Funds (Section 5303) promote an efficient public transit system
- Extra Urban Funds = construction \$'s

Coastal Zone Management Act (CZMA)

- Goal is to ensure public access to the nation's coastlines
- Project examples include:
 - providing directions
 - purchasing land, adding infrastructure through physical improvements
 - protecting habitat

Coastal Zone Management Act (CZMA)

- Additional project examples include:
 - revitalize declining ports, harbors and waterfronts
 - assess public access needs, determine if current **access resources** are adequate, and identify suitable **locations for new or enhanced access**

Coastal Zone Management Act (CZMA)

- Additional project examples include:
 - Maine developed a list of priority coastal access sites to acquire, based on an inventory and needs assessment
 - Mississippi is developing a comprehensive public access strategic plan
- A national inventory of water access points to navigable water has been suggested

New York City Waterfront Revitalization Program (WRP)

- Broad goals of the waterfront policies are to:
 - increase public access to the waterfront
 - encourage maritime and industrial development
 - improve water quality and protect natural resources
 - promote residential and commercial development in underused areas

New York City Waterfront Revitalization Program (WRP)

- Substitutes 10 coastal policies for the existing 44 state and 12 city policies
- Recognizes that the relevance of each policy may vary depending upon the project type (redevelopment, working waterfront uses, natural resource protection, or public use) and where it is located

Federal Emergency Management Agency (FEMA)

Federal Response Plan may be implemented concurrently with:

- National Plan for Telecommunications Support in Non-Wartime Emergencies
- National Oil and Hazardous Substances Pollution Contingency Plan
- Federal Radiological Emergency Response Plan

Federal Emergency Management Agency (FEMA)

Federal Response Plan may also be implemented in response to the consequences of terrorism

- Weapons of mass destruction
- Acts of chemical/biological terrorism
- Radiological emergency

Coordinated disaster planning

- Coast Guard and their Vessel Traffic Service (VTS), marine police
- Fireboats
- Marine pilots
- Tug and towing companies
- Corps of Engineers

Coordinated disaster planning

- commercial passenger vessels including ferries, dinner cruise and sightseeing boats, and others
- Establish and maintain a directory of vessels (name, capacity, speed, draft, etc.) and emergency contact information for key personnel.

Waterfront access

- Taken for granted, frequently misunderstood and under-appreciated
- Vital role in effecting **emergency egress**
- Critical element of our national **Marine Transportation System (MTS)**