

A Psycho-Social Response to Community Water Disasters

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Whole Armour Designs



COASTAL BOTTLE MILLER
SERVICES
MILLER HIGH
LIFE .89

COASTAL BOTTLE MILLER
SERVICES
AQUAFINA 1.39

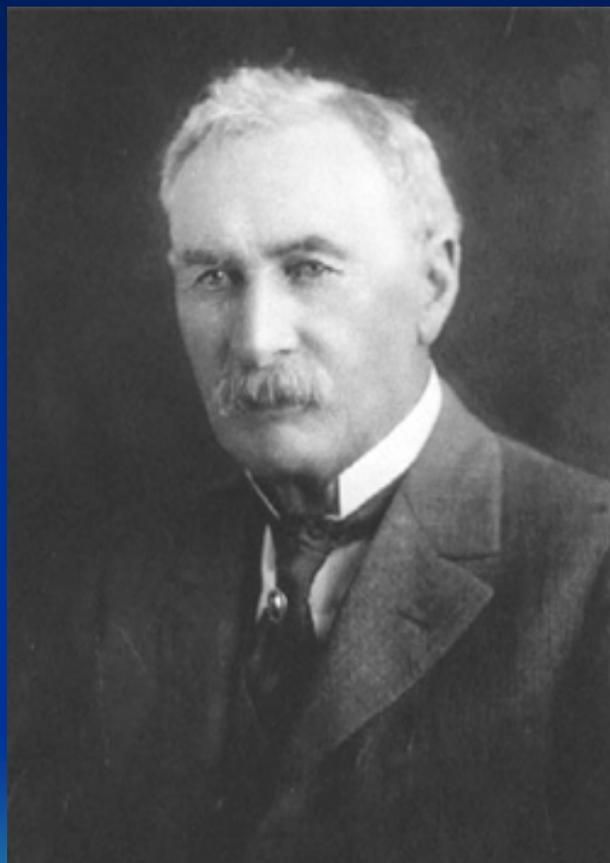


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Can you Identify?

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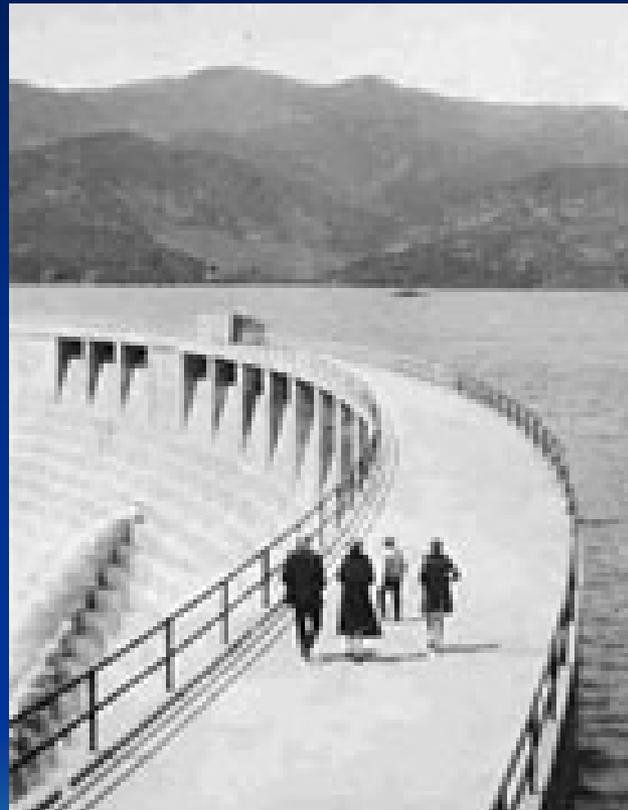




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Los Angeles Aqueduct: the beginning of the water wars

- The water wars began when [Frederick Eaton](#) was elected mayor of Los Angeles in 1898, and appointed his friend, [William Mulholland](#), the superintendent of the newly-created [Los Angeles Department of Water and Power](#) (LADWP).
- Eaton and Mulholland had a vision of a Los Angeles that would become far bigger than the Los Angeles of the turn of the century. The limiting factor of Los Angeles' growth was water supply. Eaton and Mulholland realized that the Owens Valley had a large amount of runoff from the [Sierra Nevada](#), and a gravity-fed [aqueduct](#) could deliver the Owens water to Los Angeles.



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St. Francis Dam Failure





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Standing water almost always results in mold infestation





Corrosion and hole in larger gas pipe caused by smaller water pipe on top. Photo courtesy of Jose M. Malo, Electrical Research Institute, Mexico. Source: <http://www.corrosion-doctors.org/Localized/sewer.htm>; accessed May 5, 2006.



Rubble in center of street destroyed by sewer explosions in Guadalajara, 1992. Photo credit, with permission (Jon Seals): Disaster Recovery Journal at: http://www.drj.com/drworld/content/w2_028.htm; accessed May 5, 2006.



Guadalajara street ravine following 1992 sewer explosions. Source: <http://www.guadalajarareporter.com/fullbooks.cfm?section=books&id=115>; accessed May 5, 2006.



Water in sewer flooding up through a manhole onto street in Massachusetts. Source: <http://www.mass.gov/agency/images/mema/manhole.jpg>; accessed May 5, 2006.

The Water Continuum



Tragedy of the Commons

- The **Tragedy of the Commons** is a type of [social trap](#), often economic, that involves a conflict over finite resources between individual interests and the [common good](#). The term derives originally from a comparison noticed by [William Forster Lloyd](#) with medieval village land holding in his 1833 book on population.[\[1\]](#) It was then popularized and extended by [Garrett Hardin](#) in his 1968 [Science](#) essay "The Tragedy of the Commons."[\[2\]](#) However, the theory itself is as old as [Thucydides](#)[\[3\]](#) and [Aristotle](#).[\[](#)

Attribution Theory

- “You can’t wash your car because it’s the LAW!”
- “I need to water the new shrub that’s wilting”

The Blame Game

- People Always want to blame someone else for misfortune.
- People always want to take credit for Good fortune.

Genesis 3: 11-13

And He said, "Who told you that you were naked? Have you eaten from the tree of which I commanded you not to eat?"

12(KThe man said, "The woman whom You gave to be with me, she gave me from the tree, and I ate."

13Then the LORD God said to the woman, "What is this you have done?" And the woman said, "(L)The serpent deceived me, and I ate."

Establishing a Strategy for Reacting to Community Water Disasters

- **Preparation** for Disaster
- Identify Disaster Potential
 - Drinking Water
 - Sanitary Sewer
 - Storm Water Run-off
- Identify Required Supplies
 - Drinking Water
 - Shelter
 - Medical Attention
 - Transportation
- **Reaction** to Disaster
- Is Disaster Natural or Human Based?
- Who is affected by the Disaster?
- What is the Scope of the Disaster?
 - Immediate
 - Short Term
 - Long Term



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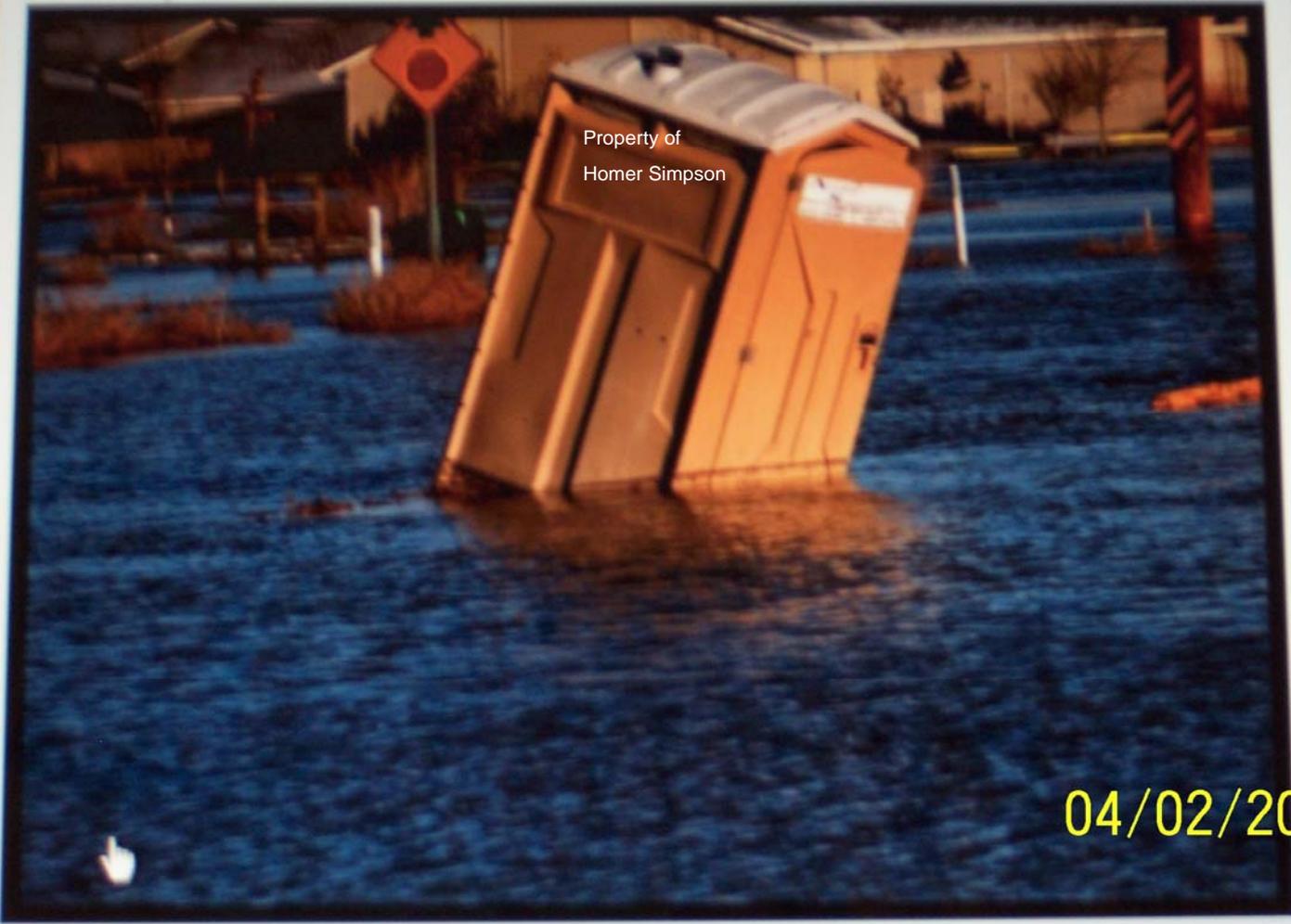


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Fernley levee break



Property of
Homer Simpson

04/02/2004

How did Water become a National Issue?

- Love Canal (Niagra Falls, NY circa 1972)
- Times Beach, MO (circa 1982, Dioxin)
- Superfund Act

Why has Water Become an Issue?

- Population and Social Density
 - Impervious area & surface run-off
- Sep. 11, 2001 Attacks
- Frequency of Floods and Droughts



Install siding before gutters

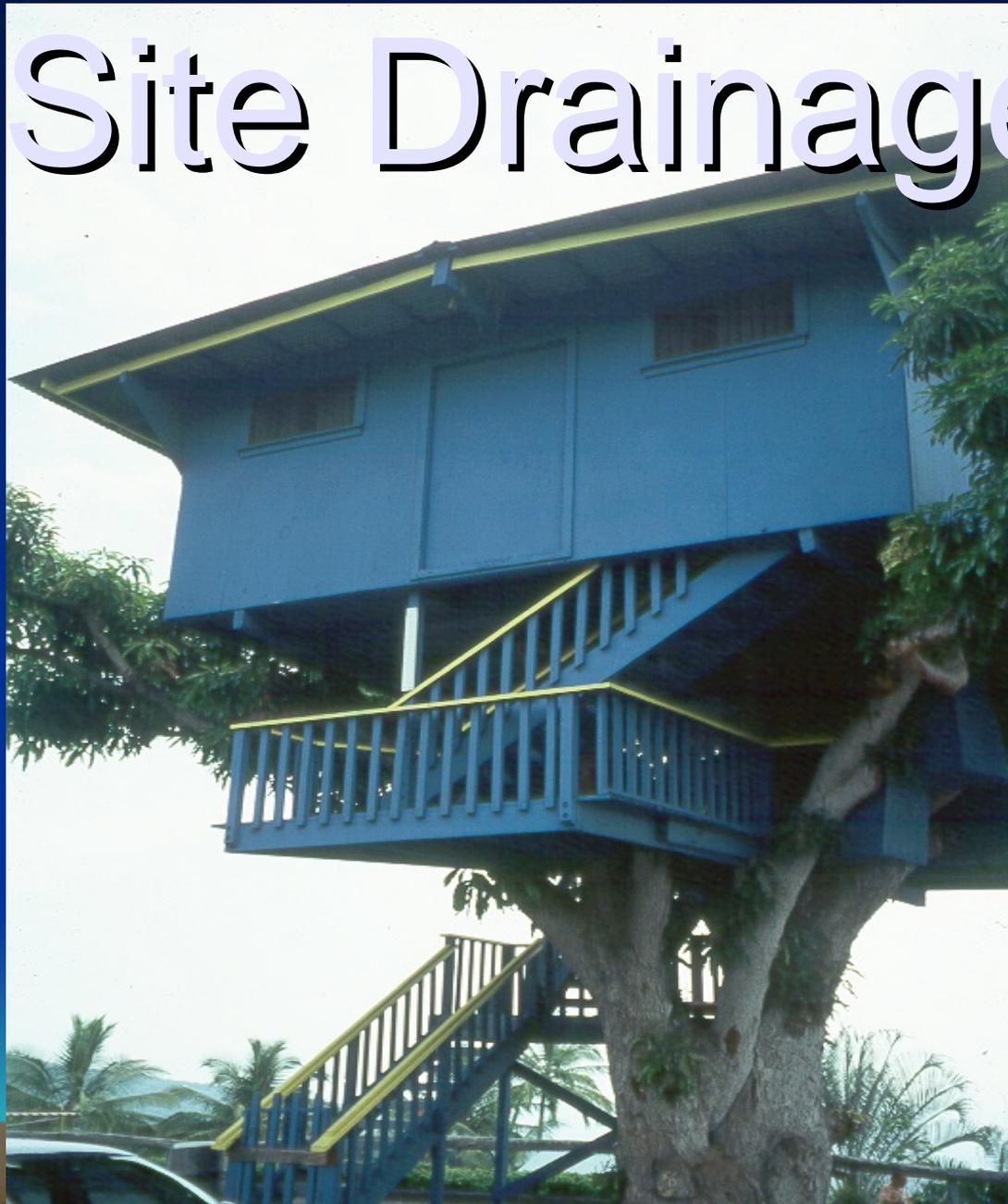
One Way To Prevent Window Leaks

Windows?

“We don’t
need no
stinkin’
windows”



Site Drainage



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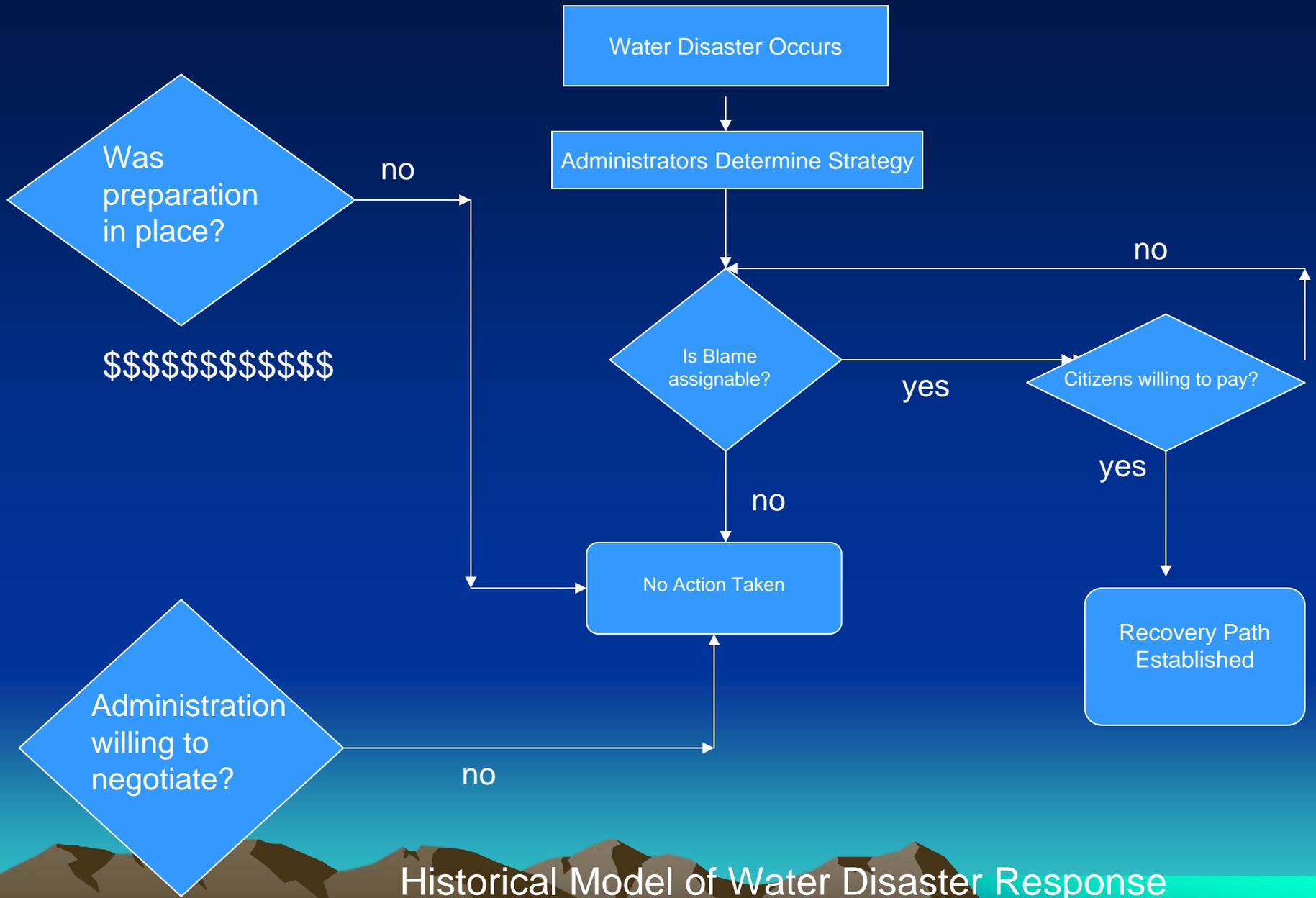
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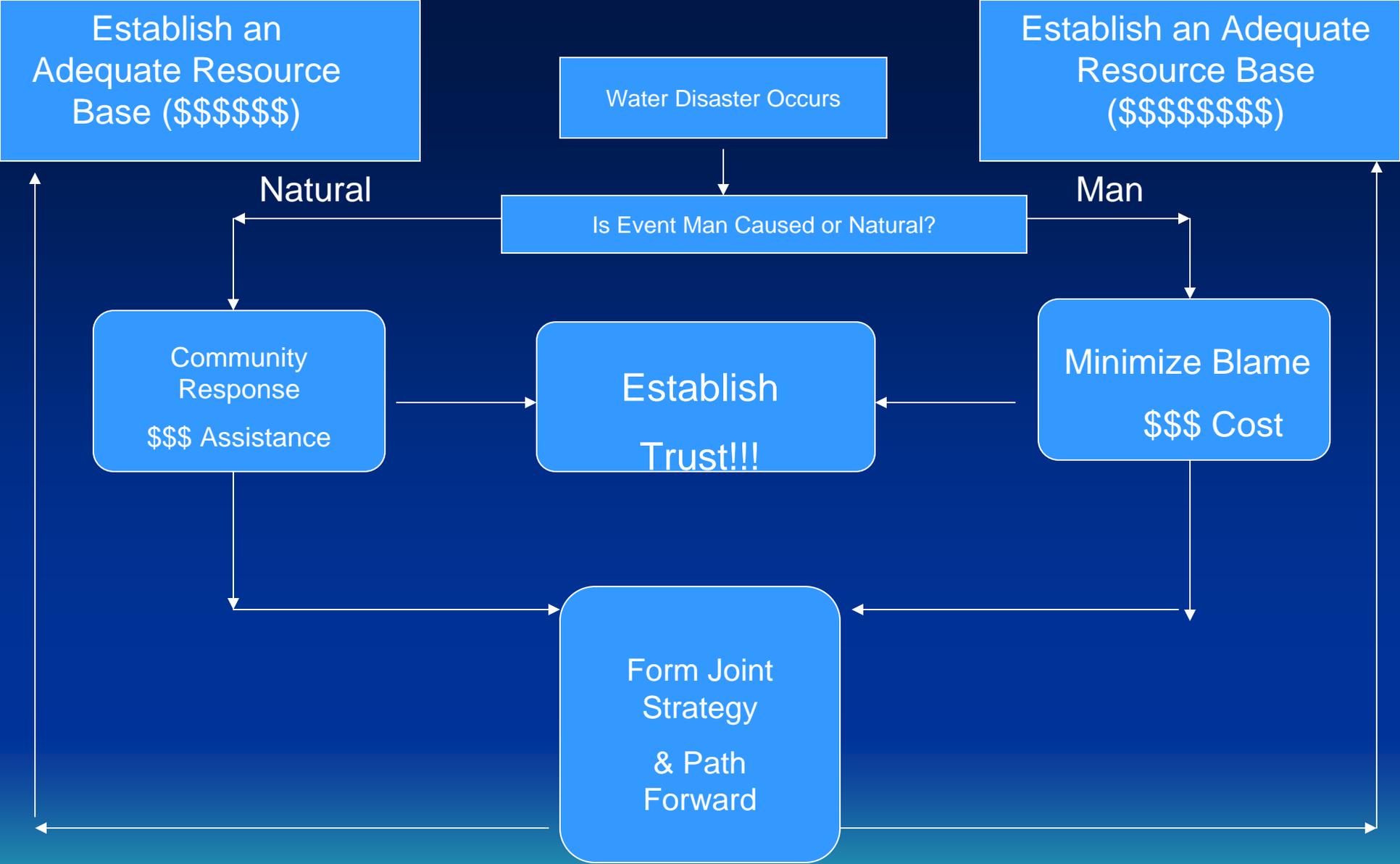
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New Water Strategies

- Use of Gray Water
- Low Impact
- System Inspections & Evaluations
- Pricing Strategies (Impact & Capacity fees) \$\$\$
- Privatization? (Tragedy of the Commons)
- Public Education
- Disclosure documentation



Historical Model of Water Disaster Response



THANK YOU!
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BEFORE

AFTER

Application of topical detergent agent
(chlorine-free)