Benefit / Cost Analysis

The What, Why and How of a Benefit / Cost Ratio
What is a Benefit / Cost Analysis?

- A Method of Determining the Cost Effectiveness of a Project Over Time
- Benefits Must Exceed Costs For a Project to be Considered Cost Effective
- A Ratio Where Benefits are Divided by Costs With a Result of 1.0 or Greater Being Considered Cost Effective
The Why of a Benefit / Cost Analysis

- Requirement of the Robert T. Stafford Disaster Relief and Emergency Assistance Act as Amended (Title 42 U. S. Code 5170c)
- Ensure that Projects are Not Wasting Taxpayer Funds on Ineffective Measures
- Provides a Means of Prioritizing Projects Allowing the States to Assume the Higher Ground When Project Submissions Exceeds Available Funds
The How of a Benefit / Cost Analysis

- There Are Four Ways to Achieve a 1.0 or Greater Benefit / Cost Ratio
  - Use of FEMA's BCA Toolkit
  - Substantial Damage Automatic 1.0
  - Use of FEMA's 5% Initiative (HMGP ONLY)
  - Use of FEMA's New Cost Effectiveness Policy Dated October 15, 2013 (HMGP ONLY)
FEMA's BCA Toolkit

- This Method is the Most Accurate Giving an Exact Ratio and Required for FMA and PDM

  Requirements:
  - The Full Module Requires A Detailed Flood Insurance Study. Missing Information Will Require Use of the Damage Frequency Assessment Module
  - Detailed Survey and Certified Appraisal
  - Building Replacement Values and Full Photography

  Pros and Cons:
  - Pros – Definitive Ratio That Can be Defended and it Fulfills the FMA and PDM Requirements Making Projects Cross Program Compliant Allowing Aggregation Options
  - Cons – Expensive and Time Consuming Requiring Extensive Documentation
Substantial Damage Automatic 1.0

- Structures Designated by the Community Gain an Automatic 1.0 Ratio Reflecting the Probability That it is Likely to be Repetitive if Allowed to be Repaired

  - Requirements:
    - Use of FEMA's Substantial Damage Estimator Software and a Declaration Letter From the Community

  - Pros and Cons:
    - Pros – No Further Documentation is Required Once Substantial Damage is Confirmed
    - Cons – Requires Damage From a Disaster Meaning Someone Has Suffered a Flood Within the Period of Availability and Invokes the Community's Substantial Damage Clause in Their Floodplain Ordinance as Well as Duplication of Benefits
5% Initiative (HMGP ONLY)

- FEMA Allows 5% of Available Funding for Projects That a Benefit / Cost Ratio Cannot be Ascertained in the Hazard Mitigation Grant Program ONLY

- Requirements:
  - Sound Reasoning Why a Ratio Cannot be Determined and Proof That the Action is a Reasonable Mitigation Effort

- Pros and Cons:
  - Pros – After Documenting the Above, No Further Action is Required
  - Cons – Cannot be Used for Projects That Can Have a Ratio Calculated and is Limited to 5% of the Available Funding
FEMA's New Cost Effectiveness Policy (HMGP ONLY)

- In August of 2013 and Later Superseded in October 2013 FEMA Implemented a Cost Effectiveness Policy Allowing for a Least Accepted Benefit for Acquisition / Demolition and Elevation Projects

  - Requirements:
    - A Cost of $276,000 for Acquisition and $175,000 for Elevation Per Structure in the SFHA is Considered Cost Effective With an Automatic 1.0 Ratio

  - Pros and Cons:
    - Pros – Allows for a Quicker Development of an Application With a Wider Option for Structures That May Not Pass a Standard BCA
    - Cons – Destroys a Defensible Prioritization and Can Quickly Deplete Available Funding. It Can Also Have the Potential to Destroy Local Economies and Community Viability
Why the New Policy?
# Resources

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<tr>
<td>BCA Software and Helpline</td>
<td>Telephone: (866) 222-3580</td>
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<td>Email: <a href="mailto:bchelpline@dhs.gov">bchelpline@dhs.gov</a></td>
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