Thursday, March 21, 2013

Workshop Session 2

Time of Session: 10:45-11:45AM

Session Title: Benefit Cost Analysis

Speaker: **Joe Johnson**, GOHSEP

Room: 250

Head Count: 16

Note Taker: Tara Lambeth

- Joe works as a consultant for GOHSEP
- We need to show the federal government that a project is cost effective
- For competitive grants, a BCA is more important
- In HMGP, all you need is a ratio of one in the BCA
- FEMA has their own modules, but there are several ways to do a BCA
- The ideal is that every dollar spent on a mitigation project should get $4 in return
- The state had a billion dollars to spend after Katrina and measured the projects by benefits
- Need to document the process
- Need to be able to paint a picture of the damages before mitigation
- The more damage you can formulate, the better
- Cost-effectiveness is used as a tool to rank projects
- Benefits divided by cost = ratio
- Estimate needs to be as detailed as possible
- Ask do we need to inflate costs into future dollars?
- Benefits have to be brought to present day also
- Maintenance is the biggest hang up
- Maintenance isn't in the budget, but has to be considered for BCA
- The benefit cost ratio should be greater than or equal to 1
- FEMA has a document in draft form called What is a Benefit? That is used for the process
- Question: over what period of time do you calculate damages?
- Answer: Give projected damages depend on the project, called the project use for life, 10 years isn't as good as 50 years
- Comment: Variation from FEMA's default use for life has to show justification
- There is a value on deaths and injuries that can be calculated
- The module calculates wind speeds and spits out damages depending on location
- Erosion can cause loss of service, which is a damage
- Can document deaths and injuries as a loss
- Have to sell the benefits to them
- The loss of function of public buildings can be calculated
- Can take a loss of function, use a continuity premium and multiply damages (x10 for EOC or police station)
- Can multiply per use of building
- Residential buildings are all about displacement and the default is $500 for one-time costs
- Frequency = how often, how severe, can both be calculated in dollars
- FEMA's BCA tool is for normalizing damages
- Damages don't differ by region in the module
- BCA is about reducing risks

- FEMA counted Katrina as a 65 year event, so the frequency of the event is low
- Flooding of the streets that occurs frequently counts more in a BCA
- The state is spending a billion to protect homes now
- The module counts 10 year damages more heavily than 100 year damages
- Question: Is street flooding part of the Katrina model?
- Answer: We break it down to individual elements to calculate frequency and benefit
- Question: What happens if you are calculating if it is more cost effective to rebuild than renovate?
- Answer: You have to meet the 50% rule, but it wouldn't be a mitigation grant for BCAs, for that you just want to know the damages
- The 100 year wind zone incorporates frequency and severity
- Can't take Katrina to New York, but you might be able to take it to Florida, but still, you must be disaster specific
- FEMA accepted LIDAR for Katrina, but want elevation certificate for other disasters
- Question: Is that because of the size of the catastrophe?
- Answer: Yes and they are getting tighter with the money now
- The damage frequency assessment data isn't in the public domain
- Different modules may give more benefits, and you can use older modules for older disasters
- The BCA Helpline is FEMA's, but sometimes they don't even agree with it and need a third party to make a decision, but they will respond to inquiries
- The 3.0 module cannot be used for Isaac, but it can be used for Katrina
- For BCA's, they used a 1% maintenance cost default for Katrina, but now maintenance costs have to be documented
- BCAs must be reasonable