

SECTION 5: PROJECT PRIORITIZATION METHODOLOGY

This appendix satisfies, in part, the following FEMA requirements:

Requirement: §201.6(c)(3)(iii): [The mitigation strategy section shall include] an action plan describing how the actions identified in section (c)(3)(ii) will be prioritized, implemented, and administered by the local jurisdiction. Prioritization **shall** include a special emphasis on the extent to which benefits are maximized according to a cost benefit review of the proposed projects and their associated costs.

Requirement §201.6(c)(3)(iv): For multi-jurisdictional plans, there must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan.

Requirement §201.6(c)(3)(ii): [The mitigation strategy shall include a] section that identifies and analyzes a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard, with particular emphasis on new and existing buildings and infrastructure.

Requirement: §201.6(c)(3)(ii): [The mitigation strategy] must also address the jurisdiction's participation in the National Flood Insurance Program (NFIP), and continued compliance with NFIP requirements, as appropriate.

5.1 DEVELOPMENT AND RATIONALE

The project prioritization methodology is the means by which the LMS Steering Committee or some designated subset of that Committee will develop the single prioritized list of mitigation projects, which is one of the ultimate goals of the LMS effort. The only projects eligible for FEMA approval have to be submitted by a local government who participated in the planning process. These local governments must follow and continue to follow Palm Beach County's Local Mitigation Strategy's participation rules in **Section 1**.

Palm Beach County established a scoring procedure when the plan was first written in 1999. The scoring procedure is detailed below along with examples in **Appendix K**. This procedure remains in place thus the county has a structured scoring process for projects seeking alternative funding sources other than federal programs. However, there could be changes made due to new Federal regulations.

The LMS has been proactive in getting its participants the ability to perform a Benefit Cost Analysis to keep Palm Beach County eligible to compete for federal monies nationwide. Projects being submitted for federal funding require a Benefit Cost Analysis to be completed along with an application for submission. The objective is to create an adequate strategy for Palm Beach County to prioritize projects for possible funding other than federal funds, which are going to be prioritized based on strictly on Benefit Cost Analysis, Environmentally sound and Technically feasible. A column has been added to the Project Prioritized List (PPL) to include whether or not the project has a Benefit Cost Analysis completed. Moreover, Palm Beach County encourages all projects with the potential of a Benefit Cost Analysis greater than 1 to be completed. The PPL can be referenced in **Appendix E**. In addition, **Appendix F** is a list of potential funding sources for mitigation projects. There was a column added to the PPL to

illustrate each individual project's potential funding source referenced to a narrative detailing these funding sources. There was also a column added to express time frame of potential funding for each individual project.

To be effective and gain the support of all the communities involved, the criteria used to rank and prioritize proposed mitigation projects must accomplish the following objectives:

- 1) They must be fair and objective. Mitigation projects proposed by small communities must have equal opportunity to achieve as high, or a higher priority than mitigation projects proposed by larger communities or the County. Likewise, mitigation projects proposed by poor communities must have the opportunity to achieve as high, or higher a priority than those projects proposed by richer communities. In short, the project evaluation criteria must ensure that each proposed mitigation project is evaluated and ranked based on individual merit;
- 2) They must be flexible enough to effectively rank projects mitigating for a variety of hazards. The LMS is an "all hazards" program. The criteria used to rank potential mitigation projects must be capable of ranking individual mitigation projects with diverse goals such as flood mitigation, wildfire protection, or hazardous waste spill prevention;
- 3) They must be functional and tied to real-world considerations such as competitive grant funding requirements. Palm Beach County will be developing a list of prioritized mitigation projects that will have to compete with a prioritized list of similar type projects from other counties in the state. It does no good to develop a list which ranks non-competitive, non-fundable projects as high priority mitigation projects;
- 4) They must be simple, easily understood, and relatively easy to apply. Many, perhaps hundreds, of potential mitigation projects will have to be prioritized by the Steering Committee or some subset thereof. This means that individual committee members will be scoring many projects. These individuals must be able to work through the project scoring process relatively rapidly for each project they evaluate; and
- 5) They must be individually well defined and specific. Each individual scoring criteria category must be well defined with the possible points to be awarded broken down in as much detail as possible to eliminate arbitrary variation in how various individuals might score the same category. Examples and guidelines need to be provided to those doing the actual scoring.

The prioritization process will be an ongoing process as the LMS is continually refined and updated. New individuals will be called upon to apply these scoring criteria in the years ahead. The criteria must be such that the new people can step in and apply them in a consistent manor with a minimal learning curve.

Much work has been done in the form of testing, revising, and fine tuning the Project Prioritization Criteria proposed in draft form with the 31 October deliverable. The fourteen originally proposed scoring criteria have been divided up based of three overarching mitigation

requirements. These overarching requirements are as follows:

- 1) Community Benefit The single most important consideration for any mitigation project is “What benefit does the community derive from this effort?” How, and to what extent does this mitigation project benefit the citizens of a community?
- 2) Community Commitment. What is the community’s level of commitment that is proposing this mitigation project? All mitigation projects have to compete for funding. If the community or governmental entity proposing a given project is not willing to commit substantial time and effort to it, this project has less chance of ever being accomplished even if it is a very worthy project. There is no point in ranking a project highly that may never be accomplished even if funds are made available.
- 3) Project Implementation. Is this project technically, financially, and legally feasible? Basically this overarching requirement addresses the ease with which a project can be implemented. How easily can required permits be obtained? What is the time frame for accomplishing this project’s goals? Are there any technical problems that must be overcome to implement this project? There is no point in ranking as “high priority” mitigation projects that have such severe legal, technical, or environmental drawbacks that years of study and/or litigation might be required before they could be implemented.

The rationale for each scoring criterion on the **Project/Initiative Evaluation Score Sheet**, its connections to known funding sources, and directions on specific numbers of points to award are discussed below.

5.1.1 Community Benefit

5.1.1.1 Community Rating System (CRS) Credit - Does the proposed project or initiative facilitate the objective of, or provide points toward improving the community’s CRS Classification?

The CRS rating system determines the discounts community residents receive on flood insurance premiums. Flooding from rain events, tropical storms and hurricanes, and storm surges is one of the most significant hazards faced by residents along the Gold Coast. Activities that reduce the community vulnerability to flooding and at the same time provide points toward improving the community CRS rating have an obvious benefit to the community. In addition, FEMA makes available certain monies specifically for flood mitigation projects. Award of these grants is closely tied to a community’s participation in the CRS program and efforts made to improve their rating. At present, all communities must have an adopted floodplain management plan to be eligible for these FEMA flood mitigation grants. It is our understanding that, once adopted, the LMS will be accepted as fulfilling the floodplain management plan requirement, thus making several more communities within the county eligible for these funds.

CRS points are awarded after a project is completed and reviewed by the CRS coordinator, but we must obviously score this category before that project actually happens. To account for this,

points within our evaluation are awarded based on those activities that have the highest potential point awards from the CRS program. In this case, the breakdown is as follows:

CRS Activity Category	Points Awarded
Flood Damage Reduction	10
Mapping and Regulatory	8
Flood Preparedness	6
Public Information	4

5.1.1.2 Project Benefit - Does the project address critical elements of the community infrastructure?

The critical question addressed here is, does this proposed project help protect the community by hardening some critical element in the community’s infrastructure that will reduce the potential loss of life or property damage sustained by the community if a disaster strikes? Specific programs offering state and federal grant money are available for mitigation projects to make community infrastructure or property critical to public safety more disaster resistant.

Points under this criterion are awarded based on the nature of the facility or infrastructure element being hardened or protected. If the proposed projects mitigate a problem in a primary critical facility such as a hospital, EOC, or emergency shelter it would receive 10 points under this criterion. Primary critical facilities are defined as “Facilities critical to the immediate support of life and public safety.” These are the facilities the community cannot afford to have any loss of function, even for a short period of time.

Flooding produces a widespread direct and indirect danger to large segments of the community, while at the same time damaging or potentially damaging such critical infrastructure elements as roads and storm water drainage systems. Therefore, a project reducing or preventing storm water accumulation and flooding during storm events would receive 8 points under this criterion.

Secondary critical facilities are defined as, “Facilities that will be critical for community recovery and restoration of services.” Projects that help protect these types of facilities will be awarded 6 points.

Public convenience facilities are quality of life facilities such as parks, recreation areas, and non-essential public buildings. Projects protecting these types of public property will be awarded 4 points under this criterion.

5.1.1.3 Community Exposure - Does the project mitigate a frequently occurring problem or a problem to which a community is particularly vulnerable?

This criterion attempts to balance the actual risk of a specific disaster occurring versus the community’s exposure in terms of life and property damage if the disaster does occur. For example, a nuclear power plant meltdown would be catastrophic if it occurred, but the frequencies with which meltdowns occur is unknown in the U.S. and optimistically extremely

low. Therefore, a project proposing to mitigate for possible nuclear power plant meltdown by providing lead lined emergency shelters would score lower than a project which mitigates for a more frequent, but less catastrophic type of disaster, such as the flooding of a library.

Data for this evaluation will come from the Hazard Vulnerability Analysis (HVA) portion of the LMS project, and will be community specific. For example, all communities along the Gold Coast experience thunderstorms, lightning, and frequent localized short term flooding, but in most, the exposure in terms of life and property damage is relatively low. Some specific communities, however, such as mobile home parks, or areas with know drainage problems, have much higher exposures to ill effects from thunderstorm hazards. The entire Gold Coast has a high exposure to damage from tropical storms and hurricanes. Category 1 and 2 hurricanes occur with a relatively high frequency, while category 3, 4, and 5 hurricanes are less frequent. All of these factors must be evaluated in weighing the merits of one mitigation project against another.

Specific guidelines for assigning points under this evaluation criterion are as follows:

Community Exposure # of People or \$ Value of Property	Frequency or Risk of Occurrence	Points Awarded
High	High	10 Points
Moderate	High	8 Points
Low	High	6 Points
High	Moderate	9 Points
Moderate	Moderate	7 Points
Low	Moderate	4 Points
High	Low	5 Points
Moderate	Low	2 Points
Low	Low	1 Points

5.1.1.4 Cost Effectiveness - What is the benefit/cost ratio of the project applying the following Benefit/Cost ratio formula:

$$(\text{Loss Exposure (\$) Before Project} - \text{Loss Exposure (\$) After Project}) \div \text{Cost of the Project}$$

“A key criterion for mitigation projects to be eligible for funding is that they be cost effective.” This is a direct quote from the FEMA 1996 guidelines for determining the cost-effectiveness of mitigation projects. “Mitigation efforts can be justified only to the extent to which the averted losses in terms of life and property exceeds the cost of a given mitigation project or effort.” In other words, if a mitigation project costs more than what it is designed to protect, why do it?

While a positive Benefit/Cost Ratio is an absolute requirement for FEMA funding, it should be a primary consideration in evaluating any mitigation idea. For this reason, it is the single most highly valued component of the project prioritization criteria.

For any mitigation project to receive FEMA money, the mitigation project application will have to include a detailed Benefit/Cost analysis. Depending on the complexity of the proposed project and the amount of funding required, this Benefit/Cost analysis may require engineering drawings and/or evaluation of alternatives. Such a detailed analysis is beyond the scope of the LMS and in most cases beyond FEMA requirements. In 1996, FEMA published a new guideline for mitigation project evaluation titled "How to Determine Cost-Effectiveness of Hazard Mitigation Projects - A New Process for Expediting Application Reviews". The above formula is derived from that publication. It was developed to allow administrators to rapidly screen potential mitigation projects in a three step process:

- 1) Screen the project by reviewing the application data;
- 2) Conduct a quick Benefit/Cost analysis; and
 - (a) If the quick analysis yields a Benefit/Cost Ratio greater than one, continue processing the application; or
 - (b) If the Benefit/Cost analysis is less than one, request additional information from the proposer

An example application of the Benefit/Cost formula is as follows:

A community has an estimated \$90,000 worth of books that may be lost due to storm surge. To shutter the Library will cost \$20,000 and will prevent loss from surges associated with category 1 to 3 hurricanes. Category 1 to 3 storms represent 70% of the hurricanes likely to strike this community so the risk of loss is assumed to be reduced by 70%, leaving a remaining exposure of 30% or \$27,000.

Applying the formula:

$$(\$ 90,000 - \$ 27,000) \div \$ 20,000 = 3.15$$

This project has a Benefit/Cost ratio of 3.15.

The community is also considering raising the floor of this library building by 2 ft at a cost of \$75,000. Such a project would protect the books from storm surge under all but category 5 hurricane conditions, or approximately 85 % of the time. The residual exposure associated with this plan would be 15 % or \$ 13,500.

Applying the formula:

$$(\$ 90,000 - \$ 13,500) \div \$ 75,000 = 1.02$$

The benefit/cost ratio on this plan is only 1.02. While this is still a positive ratio, the better return on dollars invested is achieved under the first alternative, shuttering the Library.

The higher the Benefit/Cost ratio, the better return per dollar invested is achieved. Under the first example the community is receiving \$3.15 return in terms of lost prevention for every dollar invested. Under the second example the community is receiving only \$ 1.02 return in terms of loss reduction for every dollar invested.

Points under this criterion will be awarded as follows:

Benefit/Cost Ratio	Points
4.0 or greater	20 Points
3.0 to 3.9	16 Points
2.0 to 2.9	12 Points
1.0 to 1.9	8 Points
<1.0	0 Points

5.1.2 Community Commitment

5.1.2.1 ***Contained Within the Existing Comprehensive Growth Management Plan (CGMP) - Is the project or initiative consistent with or incorporated in the existing Comprehensive Growth Management Plan?***

Projects which are already contained within the approved Capital Improvements or other sections of an existing Comprehensive Growth Management Plan have already been designated as both needed and wanted within a community and are already approved by the community's elected representatives. They have the force of law behind them. Ten points will be awarded to projects falling into this category.

Points will be awarded under this criterion in the following manner:

Contained within a specific "Policy"	10 Points
Contained in "Goal" with proposed "Policy" amendment	8 Points
Contained within a broad "Goal"	5 Points
Contained in a proposed amendment	3 Points
Not in conflict with the CGMP	1 Point

5.1.2.2 Contained Within an Existing Emergency Management Plan or Other Functional Plan Developed by an Official Local Governmental Entity - Has this project or initiative already been proposed as a management initiative or structural improvement in any emergency or growth management plan proposed or adopted by County or local jurisdictions?

This applies to both officially adopted plans and to those plans or amendments to plans which have been proposed but not yet officially adopted. One of the objectives of the LMS is to encourage local governments to officially adopt mitigation measures into their Comprehensive and Emergency Management Plans. If a community wants to improved the score of a proposed mitigation project or initiative it can propose and amendment to its CGMP or CEMP containing the measure.

Points will be awarded under this criterion in the following manner:

Officially adopted	10 Points
Proposed/Not officially adopted	6 Points
Not in conflict with any plan	2 Points

5.1.2.3 Public Support - Is there demonstrated public support for this project or recognition of this problem?

The question of how “public support” should be demonstrated has caused much discussion. It has been decided that points under this criterion should be awarded as follows:

Has this project or problem been the subject of:

- a) An Advertised Public Meeting = 3; and
- b) Written evidence of public support = 2.

Has the project or problem been the subject of both:

- a) an advertised public meeting, and
- b) written evidence of public concern or support.

If so award 5 points.

5.1.3 Project Implementation

5.1.3.1 Consistency with Existing Regulatory Framework - Is the project consistent with existing legal and regulatory and environmental/cultural framework?

Does the proposed project require any changes or waivers in existing building, zoning, or environmental statutes or ordinances? If changes or waivers are required, there will be an extra step in implementing such a project and the timeline to accomplish the project must be extended accordingly. Projects which are consistent with the existing legal and regulatory framework will receive 5 points. Projects which are in conflict with some aspect of the existing

regulatory framework will receive lower point scores depending upon the seriousness and numbers of regulatory barriers to be overcome in implementing the proposed project.

Points will be awarded under this criterion as follows:

No regulatory issues	5 Points
Local issues	4 Points
Regional issues	3 Points
State issues	2 Points
Federal issues	1 Point

5.1.3.2 Funding Availability - Is there a funding source currently available for this particular project?

Ten points will be awarded to any project for which funding is currently available. If funding is anticipated but currently not available, points will be awarded as follows:

Funds available now	10 Points
Available in 1 year	8 Points
Available in 2 years	6 Points
Available in 3 years	4 Points
Available in 4 years	2 Points
Available in 5 years+	1 Point

5.1.3.3 Matching Funds - Are matching funds or in-kind services available for this project?

This criterion has been added because many, if not most, funding sources require local sponsors to put up some form of match either in terms of funds or services.

Points will be awarded under this criterion as follows:

Match of 50% or more	5 Points
40 to 49%	4 Points
30 to 39 %	3 Points
20 to 29 %	2 Points
1 to 20 %	1 Point

5.1.3.4 Timeframe for Accomplishing Objectives - How long will it take for the proposed mitigation project to accomplish its stated goals?

Projects which can be accomplished quickly have an inherent advantage over long-term projects, although long-term projects may ultimately be more beneficial to the community. The following weighted scale assigns points to proposed projects based on the length of time that will be required before a community begins to receive benefits from the project.

1 Year	5 Points
2 Years	4 Points
3 Years	3 Points
4 Years	2 Points
5 Years +	1 Point

In order for the individuals scoring mitigation projects to perform their jobs adequately and in a meaningful time frame it is critical that those proposing a mitigation project or projects provide as much of the critical information required for scoring as possible when they submit their projects. To help with this the attached **Mitigation Project Proposal Form** has been developed. **Appendix G** contains four examples showing how this scoring process is applied in ranking proposed mitigation projects.

5.2 TIE-BREAK PROCEDURE

In the case of tie scores, three questions may be applied.

- Ties decided by #1 will be so ranked: remaining ties not broken with question #1 will have question #2 applied.
- Ties decided by question #2 will be so ranked; remaining ties not broken will have question #3 applied.
- Ties decided by question #3 will be so ranked; remaining ties not broken with question #3 will be ranked in the order of the magnitude of effect on the community - these projects will be ranked in accordance with the number of people that will be helped by the project, largest first.

Question #1: Which project has the highest Community Benefit score?

Question #2: Which project has the highest Community Commitment score?

Question #3: Which project mitigates for the most frequently occurring hazard?

5.3 LMS EVALUATION PANEL

The Evaluation Panel is responsible for reviewing and scoring proposed projects submitted to the LMS as a basis for prioritization. A minimum of 5 people serve on the Panel at any given time. Panelists are solicited by the LMS Coordinator on behalf of the Steering Committee based on LMS member recommendations and are subject to approval by the Steering Committee. Volunteers are also eligible for consideration.

Candidates must possess a technical and administrative understanding of the LMS program and its goals and objectives. In addition, candidates are expected to exercise objectivity and independent judgment in their evaluations and scoring.

5.3.1 Eligibility for Federal Funding

In order to be deemed eligible for federal monies projects must:

- Produce a Benefit Cost Analysis ratio greater than 1, and
- Meet additional program requirements, including being judged to be “environmentally sound” and “technically feasible.”

Federal funding may require additional applications or supporting documents which will be requested based upon each individual federal program.

The LMS Coordinator and County Division of Emergency Management serves as staff for the Evaluation Panel.

5.4 PROJECT PRIORITIZATION UPDATING PROCESS

STEP 1 Each year in January and July, the existing unified, countywide Project Prioritization List (PPL) will be updated. The approved PPL will be in effect until a new PPL has been adopted by the Palm Beach County LMS Steering Committee.

The Palm Beach County DEM staff will activate the update process by distributing "Project or Initiative" Proposal Forms to local governments, as well as to non-profits and other entities seeking funding for hazard mitigation-type projects, and by notifying all Evaluation Panel members that the PPL ranking process is being initiated. All applicants will have to submit their proposed projects/initiatives by the submission date in order to have their proposed projects considered for inclusion in the updated PPL. In addition, at the time an applicant submits their proposed projects, they must also identify which of their projects that are already on the existing, adopted PPL have been completed or for which funding is in process.

All proposals will be submitted to the DEM office, on the "Project or Initiative" Proposal Form by the submission date identified in the letter of solicitation. For a project/initiative to be considered, Proposal Forms must be filled out completely.

The contact person and fax number listed on the Proposal Form will serve as the official point-of-contact for the applicant.

- STEP 2 Once the proposals have been received, DEM staff will review each proposal for completeness. DEM staff will notify, in writing via fax, those applicants who's Proposal Form(s) have not been completed fully. The applicant will be notified that they have one week from the date of receipt of the notification fax to submit additional information. If supplemental information is inadequate or no new information is submitted, the proposer will be notified in writing that their project will not be eligible for inclusion on the PPL this cycle.
- STEP 3 DEM staff will schedule a meeting of the Evaluation Panel. DEM staff will compile copies of the proposals (includes supporting materials), and transmit copies to the Evaluation Panel members no later than four weeks prior to the scheduled Evaluation Panel meeting.
- STEP 4 Each Evaluation Panel member will score only that portion of the "Project or Initiative" Proposal Form for which their Panel subgroup has responsibility, such as Community Benefit, Community Commitment, or Project Implementation. Each member will fax and/or mail copies of their scored "Project or Initiative" Proposal Forms to DEM staff, no more than 14 days after they received the forms. For the scoring to be valid, three of five members of each subgroup will have to score their particular section of the "Project or Initiative" Proposal Form.
- STEP 5 DEM staff will average the attribute scores for each project received from each subgroup Evaluation Panel member. DEM staff will create a summary sheet that documents the results of the scoring. A "new" *Draft* PPL will be generated based on the scores received from the Evaluation Panel.
- STEP 6 DEM staff will provide each applicant the "new" *Draft* PPL prior to the LMS Evaluation Panel meeting, and invite applicants to attend and provide comment. To ensure that there will be adequate space for the Evaluation Panel meeting, and to gain an understanding of how long the meeting might last, applicants will be asked to notify DEM staff seven (7) calendar days prior to the meeting if they intend on objecting to the "draft" ranking.
- STEP 7 The Evaluation Panel will hold a meeting to review the scoring and finalize the *Draft* PPL. (To conduct an official meeting, a quorum of the Evaluation Panel must be present. Nine (9) members of the fifteen [15] member Evaluation Panel will constitute a quorum.) During the meeting, Panel members will discuss possible inaccuracies and/or reliability of information used by proposers, such as obsolete cost data, questions regarding project feasibility, and project tie-breakers (see Project Tie-Break Procedure). Before the meeting concludes, the Panel will vote approval of the "new" *Draft* PPL as submitted by the Evaluation Panel or as modified. DEM staff will transmit a copy of the approved "new" *Draft* PPL to the Steering Committee for approval.

As its last act of the meeting, the Panel will select a Chair for the coming cycle.

STEP 8 The DEM staff will schedule a meeting of the Steering Committee. One week in advance of the scheduled meeting, the "new" *Draft* PPL will be distributed to the Steering Committee membership along with a listing of applicants planning to attend to object to the "draft" ranking.

STEP 9 At the scheduled Steering Committee meeting, the *Draft* PPL will be presented. (For only the purpose of adopting the PPL, eleven (11) members of the Steering Committee must be present to constitute a quorum).

Project applications received after the submission deadline, but before the next project prioritization updating process, may be accepted by the Steering Committee as UNRANKED projects. Prior to the PPL adoption vote, such projects will be presented for consideration. The Steering Committee may vote to include any or all of these projects on the draft PPL as "unranked." Unranked projects will be listed on the PPL under the sub-heading of Unranked Projects which will appear immediately following the list of ranked projects. Unranked projects will automatically be ranked in the next ranking cycle.

Following discussion of the *Draft* PPL, the Steering Committee will adopt it as submitted or with modifications. Specific justification is required for any modification to the ranking of the projects as submitted by the Evaluation Panel, excepting inclusion of unranked projects.

STEP 10 DEM staff will distribute copies of the new revised PPL to all appropriate entities.