

Orange County Local Mitigation Strategy Procedure for Characterization of Proposed Mitigation Initiatives

Purpose

This document is to be used by local jurisdictions and other entities participating in the development and maintenance of the Orange County Local Mitigation Strategy to record information and analyses regarding a proposed mitigation initiative. County-wide use of the standard forms and analysis techniques provide herein will enable the Orange County Mitigation Planning Committee to assure a consistent and valid approach to the final definition and priority ranking of initiatives. The proposed initiatives submitted through this procedure would be those included in the Strategy document itself, and incorporated into the databases to be used by the Steering Committee to assist the local jurisdictions in funding and implementing the initiatives.

Use of the Form, “Characterization of Proposed Mitigation Initiative”

The form provides the information necessary to fully describe any proposed mitigation initiatives developed by the local jurisdiction and intended to be prioritized. The form is to be completed as follows:

General Information

Page 1 of 4

The proposing organization should enter the initiative identification number issued by the Steering Committee following the previous submittal of the shorter form, “Initial Notice of Interest in a Proposed Mitigation Initiative.” It is necessary to have received this identification number from the Steering Committee, for it demonstrates that the proposal has been reviewed to assure its consistency with the purposes of the strategy and that it has been coordinated as needed with other initiatives submitted by other jurisdictions and organizations. If a number for the initiative is not available, prior to beginning additional analytical work on the proposal, the proposing organization should complete the form “Initial Notice of Interest in a Proposed Mitigation Initiative” first, and submit it to the Mitigation Planning Committee for review. This will result in assigning an identification number for the proposal by the Mitigation Planning Committee, and enable the proposing organization to complete the form given here.

Other general information should be provided as indicated on this part of the form.

The Proposal

Page 1 of 4

A narrative describing the proposed initiative in detail should be provided here, and, for structural initiatives, a map of the location of where the initiative would be placed, and the benefited area, should be attached. It would be very helpful to the subsequent planning work of the Mitigation Planning Committee if the

latitude and longitude of all key features of the initiative's location and the area benefited could be included on the map. This will enable the Committee to use GIS capabilities for continuing analysis of the initiative.

The Cost of No Action

Page 1 of 4

The purpose of this section is to define the adverse future damages or impacts that would occur if the proposed initiative is not implemented and the mitigation benefits are not received. Basically, this is actually the benefit of implementing the proposed mitigation initiative: the damages and costs avoided in the future disasters. It is necessary to estimate this value in order to determine if the mitigation initiative is economically worth implementing.

The Mitigation Planning Committee recognizes that most, if not all of the information requested in this section of the form will need to be based on the "best judgment" of the proposing organization's planning group. To answer many of the questions in detail, with a high level of accuracy, would necessitate a very substantial commitment of time and resources. At this point in the planning process, such a commitment to analysis of proposed initiatives is not warranted and the "best judgment" of the Sponsor/planning group is an adequate level of justification for consideration of proposed initiatives in the Orange County Local Mitigation Strategy. When and if necessary, such as during preparation of funding applications, the level of detail initially used in this section could be enhanced if required to successfully obtain funding. Nevertheless, without the results of the preliminary analysis requested in this section, the methodology for prioritization of initiatives to be used by Orange County would not be consistent among participating jurisdictions and organizations.

Begin by including a brief narrative description that summarizes how the initiative would prevent or minimize both the direct and indirect impacts or consequences" of future disasters or emergencies. Direct consequences are those that are due to the immediate physical impacts of the event, such as the costs of property damage, debris removal and cleanup, people injured or killed, emergency response costs, etc. Indirect consequences are those costs that follow from or that are the consequence of physical damage, such as the loss of revenue, payroll and taxes from closure of businesses due to utility outages or decreases in tourism, etc. The narrative should attempt to address the consequences of a reasonable "worst case" situation, e.g., the impact of a Category 5 hurricane.

The additional six questions in this section are intended to allow the proposing organization to use its best judgment in estimating the consequences of the event. These estimates are needed so the proposing organization can estimate at least a preliminary benefit to cost ratio for the initiative, to a level of accuracy that is appropriate for this early stage in the mitigation planning process.

Question 1] asks for the proposing organization’s best judgment in determining if the proposed initiative will prevent all of the “worst case” potential outcome, and if not, by what amount the “worst case” outcome will be reduced.

This should be expressed as an estimated percentage reduction in the predicted consequences of the “worst case”. In some cases, an initiative such as relocation of a structure from the hazard area, would prevent 100% of the consequences. In other cases, other proposed initiatives, such as elevation of a structure above a flood or surge level, may only be able to eliminate a portion of the consequences because it does not protect the structure from wind damage. Again, the best judgment of the proposing organization regarding the estimate of reduced or avoided consequences is what is being requested.

Question 2] requests the likely duration that the consequences would last in the aftermath of the event. For a “worst case” scenario, it could be weeks for normal community services to be restored. Because the duration of the consequences is an important component in determining the economic costs incurred as a result of the disaster, it will be necessary for the Sponsor/planning group to use its best judgment to predict this time period. This value will help the group total the economic consequences. For example, in estimating the indirect consequences of a utility outage, closing of businesses may cost \$ “X” per day lost wages, and if the “worst case” outage is estimated at 30 days, then the total cost for this component of the indirect consequences would be \$ “X” times 30.

Question 3] requests the total estimate of the “dollar losses” for both direct and indirect consequences of the “worst case” events. This value is intended to represent all of the consequences that it is reasonable to express in a dollar amount, but not such consequences as loss of life, illness, or damage to an irreplaceable resource, such as a historic structure.

Question 4] requests information on the estimated number of individuals that would be killed, injured, or sickened by the event if the mitigation action is not taken. An estimate for the “worst case” case should be derived and recorded. Proposed initiatives intended to protect people both directly intended to reduce or prevent injury, such as protection of structures from rapid onset events, like tornadoes, or indirectly, such as protecting hurricane evacuation routes, should be considered.

Question 5] asks that the Sponsor/planning group define the number of any highly valuable or irreplaceable environmental, historic, or cultural resources that are to be protected by the initiative. This question is included because the benefit in elevating, say, a historic structure to prevent flood damage goes beyond the benefit of the dollar costs to try to repair the structure and its contents after a flood. The proposing organization will want to consider this type of benefit as well.

The purpose of this section is to further document the benefits of the proposed mitigation initiative, providing both the Mitigation Planning Committee and the Steering Committee with information that will supplement the analysis of the consequences of taking no action, assessed in the preceding section. This section asks for supplemental information to evaluate the benefits on two basic types of facilities and systems: designated “critical” facilities, and all other types of facilities or systems.

Question 1J requests information on the benefits for “designated critical facilities.” This designation is established pursuant to the guidelines of the Florida Division of Emergency Management and the Orange County Division of Emergency Management. If the Sponsor/planning group is unsure of the designation of a facility as a “critical facility,” the Orange County Division of Emergency Management should be consulted. If designated critical facilities are to be benefited, they should be listed here, and the type of facility (e.g., police station) the agency or organization that controls the facility, and the street address of the facility should be listed. Also, the latitude and longitude of the center of the facility, if known, should be given. (This will permit subsequent analysis using GIS based approaches.) The Committee should then provide a brief narrative of the outcome or consequence of the total or partial loss of these facilities should the event occur. An example would be the impact on providing fire protection services if a fire station were to be destroyed, damaged or made inaccessible.

Question 2J asks for a similar analysis for all types of facilities or systems to be protected by the proposed mitigation initiative, including those designated as “critical facilities.” List the total estimated number of people to be directly benefited, e.g., residents or employees in a structure, and indirectly benefited, e.g., customers or individuals who rely on the services provided from a structure. The percentage of the jurisdiction’s or county’s population that this number represents should also be included. The total number of individual structures, and the value of the structures and their contents, should also be estimated and recorded.

In a county such as Orange, the capability to evacuate people out of harm’s way is a very important concern to planners and is a factor in assessing the need for a mitigation initiative. The four questions regarding avoiding the need for evacuation, or protecting the ability to do so, should be answered, if applicable to the proposed initiative.

The following two items allow the Committee to further document the benefits of those proposals intended to benefit highly valuable or irreplaceable environmental, historic or cultural resources. If applicable, for valuable environmental resources, the name of the resource, its general location, the approximate acreage involved, and the “status” of the resource should be listed. The “status” refers to any formal designation provided to or proposed for the resource, such as a “municipal open space,” “state conservation lands,” or “county park.” For historic or cultural resources, the name and type (e.g.,

historic or archaeological site, museum, etc.) should be given, with the street address and status. Again, status would refer to any formal designation provided to or proposed for the resource, such as “a registered national historic site.”

This page also provides a opportunity for the proposing organization to describe any benefits that may not have been addressed in the preceding question, or for the group to note any special emphasis that may be needed on a topic previously covered.

The Cost of the Proposal

Page 3 of 4

This section is for the Committee to provide an updated estimate of the total costs or cost impact of the proposal.

Costs to implement the proposal, inclusive of all costs from the start of the project until it is fully in place, as well as the cost per year to operate or maintain the proposal, should be provided. This information would be an update of the annualized cost estimate initially provided on the form, “Initial Notice of Interest in a Proposed Mitigation Initiative.” The Sponsor/planning group should provide a general description of each major activity that was accounted for in the cost estimate, for example: “planning,” “design,” “property purchase,” “permitting,” “construction,” “equipping,” and “annual operations and maintenance.”

If the proposal is expected to have a cost impact stemming from its implementation, this information should be given. A cost impact can be defined as any additional routine costs above the present situation that would be incurred in the community if the proposal were to be implemented as intended. The basis for the cost impact should be identified (e.g., a change to the land development code will require a change in costs to developers to use land in the hazard zone) and, if possible, an estimated annualized cost to the community provided. The most likely audience or population expected to bear these costs should be indicated.

Comparison of the Benefits to the Cost or Cost Impact of the Proposal

Page 3 of 4

This section uses four questions to derive an estimate of the benefit to cost ratio of the proposal, in order to obtain at least a preliminary assurance that the initiative is economically warranted because it will, when implemented, save the community money after the next disaster.

Question 1] asks for the annualized dollar of consequences of the “worst case” situation if the initiative is not implemented. This amount is available in the answer to question 4] of “The Cost of No Action,” given on page 1 of this form.

Question 2] requests the annualized cost and/or cost impact to fully implement the proposed initiative. This amount is available in the answer to “The Cost of the Proposal,” and/or “The Cost Impact of the Proposal,” given at the top of

page 3. If an initiative is anticipated to both cost money to implement and to have a cost impact, then the two values should be summed, and entered on the form in this space.

Question 3] asks the Sponsor/planning group to divide the annualized consequences of the “worst case” situation from question 1] by the annualized cost and/or cost impact from question 2]. This will provide a number representing the economic benefit to cost ratio under the “worst case” disaster situation.

Question 4] asks for the Sponsor/planning group to modify the strictly economic benefit to cost ratio by a factor to account for the non-economic, but highly important, benefits to human health and safety, and/or valuable and irreplaceable resources (“life safety and resource protection”). Using the ratio for the “worst case” situation from question 3], the Sponsor/planning group should, to account for human health and safety benefits, first multiply the ratio by the following factors:

- By 1.5 for health and safety benefits for 100 to 1,000 people,
- By 2.0 for health and safety benefits for 1,000 to 5,000 people,
- By 2.5 for health and safety benefits for 5,000 to 10,000 people, and
- By 3.0 for health and safety benefits for 10,000 people or more.

(This multiplier to the benefit to cost ratio is one of two steps in which the importance of protection of human health and safety is given additional weight in the decision processes used to develop the Orange County Local Mitigation Strategy. The second step is used in the process used to prioritize proposed initiatives.)

These resulting ratio should then be multiplied, if applicable, for the benefits derived from protecting a highly valuable or irreplaceable resource, as follows:

- By 1.1 for a valuable environmental resource of less than 10 acres or for a single structure/site deemed to be a valuable historic and/or cultural resource,
- By 1.3 for a valuable environmental resource of 10 to 50 acres or for two structures/sites deemed to be a valuable historic and/or cultural resource, and
- By 1.5 for a valuable environmental resource of more than 50 acres or for more than two structures/sites deemed to be a valuable historic and/or cultural resource.

These multipliers, when applicable, are intended to account for the non-dollar value of the benefits anticipated from a proposed mitigation initiative to ensure that decision-making on the priority for mitigation initiatives is not unwarrantedly based on only the economic value of the mitigation action to be taken.

The Sponsor/planning group should enter the final, adjusted benefit to cost ratios onto the form.

At this point, the Steering Committee should consider all initiatives with a benefit to cost ratio of greater than +1.0 as warranting additional consideration and for which the remainder of this form should be completed, submitted to the Mitigation Planning Committee and used for the prioritization process described below. If, at this point, the adjusted benefit to cost ratio is less than +1.0, the Sponsor/planning group could either reevaluate the assumptions and estimates used to this point and recalculate the benefit to cost ratio, or drop the proposal from further consideration and notify the Steering Committee accordingly.

Feasibility of Implementation

Pages 3 of 4 and 4 of 4

A very important consideration in the development and/or updating of the Orange County Local Mitigation Strategy is to focus on mitigation initiatives that not only are considered worth pursuing based on their anticipated benefits (e.g., have a benefit to cost/cost impact ratio of greater than +1.0), but also are considered feasible to implement. It may not be enough for the proposing organization and its planning group to only consider the benefit to cost ratio if, in the “real world,” there is little or no chance that the proposal could actually be implemented. This section of the “Characterization of Proposed Mitigation Initiative” form is intended to document factors that are typically important to the overall feasibility of actually implementing a proposed mitigation initiative. Eight questions are included to allow for consideration of these factors.

Question 1] asks for the Sponsor/planning group to list any official documents, such as the jurisdiction’s comprehensive plan or capital improvement budget, also includes the proposed project. Projects that are included in other official documents may have already been assessed for their feasibility and/or acceptability. Therefore, being included in another document is an indication that there may already be additional support for implementation beyond that available to initiatives not similarly included in other documents.

Question 2] requests a list of the local, state and federal permits and approvals, if any, that are known to be necessary, or can be anticipated to be necessary, to implement the proposed initiative. The basis for this question is that the more permits and approvals that must be obtained prior to implementation, the more complex and time consuming the effort will be to put the initiative into operation.

Question 3] asks for estimated time periods for the various tasks that will or may be necessary for development and implementation of the proposed initiative. Because there are typically differences between the major planning steps for structural and non-structural initiatives, the relevant section of this question should be completed.

Question 4] requests information or confirmation that the proposed initiative has been used successfully elsewhere. For many types of mitigation initiatives, their technical feasibility and community acceptance has been proven many

times in many different locations. If this is the case, the Sponsor/planning group can interpret this as another factor generally supportive of the feasibility of implementation of the proposed initiative.

Question 5J asks for the best judgment of the Sponsor/planning group on whether the affected population would find the proposed mitigation initiative acceptable. If there is likely to be broad support and/or acceptance within the community for the initiative, then it can be considered to be more feasible to implement than if there is not or if there could even be opposition to implementation of the initiative.

Question 6J is given on the form in recognition that, even if a proposed initiative is generally acceptable to the affected population, there may be influential special interest groups or stakeholders that may not support or oppose implementation of the initiative. Such lack of support or opposition could make the initiative more difficult to implement. This question allows the Sponsor/planning group to consider and record if there are any such stakeholder groups who, in its judgment, could be anticipated to oppose the initiative.

Question 7J asks for the Sponsor/planning group to analyze whether implementation of the same or similar initiatives have previously received significant opposition elsewhere in comparable communities. The basis for this question is that past experience with opposition to the same or similar initiatives may inform both the Sponsor/planning group and the Steering Committee as to the likely outcome of the proposed initiative.

Question 8J requests additional information regarding how the proposed initiative could be modified to decrease any lack of support for the initiative or opposition to it, should this be an issue the Sponsor/planning group needs to consider. If applicable, the group should note the most likely modification to the proposal that could be made while nevertheless keeping its original purpose or objective intact. If the only modification is to not implement the project, and the potential for lack of support or opposition of the proposed initiative is a concern, then this should be noted here. This question also requests that, if the modification were to be made, to what extent would the benefits to be derived from the initiative be decreased. In other words, by what percentage should be benefits of the proposal be reduced, so the Steering Committee can have an understanding of the influence of the modification on the estimated benefit to cost ratio of the original proposal.

Completion and Submittal of the Form

The members of the Mitigation Planning Committee involved in the analysis and decision-making process used to complete the form should list their names, titles, and agencies, and then sign the form to indicate their general agreement with its contents.

The original of the form should then be submitted to the Steering Committee, as indicated, with the Subcommittee retaining a copy.

Orange County Local Mitigation Strategy Development
Characterization of a Proposed Mitigation Initiative

Page 1 of 4

(See Attached Instructions for Explanation)

Initiative identification number (Issued by Committee) : _____
Proposing jurisdiction/organization: _____
Contact Individual Name: _____
Agency or organization: _____
Address: _____
Telephone: _____ Fax: _____ email: _____
Date of Submittal of Initial Proposal to Committee: _____

The Proposal -- Provide a narrative describing the proposed initiative:

If proposal is a structural initiative, attach a map of the location of implementation and the area to be benefited. Provide latitude and longitude coordinates of all pertinent features, if possible.

The Cost of No Action -- Provide a narrative describing the possible results or outcomes if the proposal is **not** implemented and answer the questions given. Remember to consider both direct and indirect results or outcomes and describe a reasonably predictable "worst case" situation.

- 1] Will the initiative prevent all of these outcomes? Yes No. If no, by what percentage would the outcomes be decreased? _____%
- 2] What would be the duration of the outcome for the "worst case" ? _____ days.
- 3] What would be the total direct and indirect dollar losses in the "worst case" outcome? _____
- 4] How many people would be injured, sickened or killed in the "worst case" outcome? _____
- 5] How many highly valuable or irreplaceable environmental, historic, or cultural resources could be lost under the "worst case" situation? _____

The Orange County Mitigation Planning Committee

Characterization of Proposed Mitigation Initiative

Page 2 of 4

(See Attached Instructions for Explanation)

The Benefits of the Proposal -- This section is to be used for providing updated, detailed information regarding the benefits of the proposed initiative, or to quantify, to the extent possible, the value of the costs avoided or minimized if the proposal were not to be implemented.

1] If the proposed initiative is specifically intended for protection of designated critical facilities --

Is a designated "critical facility" to be benefited?: No Yes. If yes, provide type, name and address of designated critical facility:

<u>Type</u>	<u>Agency/organization</u>	<u>Street Address</u>	<u>Lat/Long</u>
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Describe the outcome of the total or partial loss of the designated critical facility(ies) affected: _____

2] For all types of projects, including those for protection of designated critical facilities:

Number of people directly benefited: _____ Number of people indirectly benefited: _____

Percentage of jurisdiction's population directly benefited: _____% Percentage indirectly benefited: _____ %

Number of structures to be benefited: _____ Total estimated value of structures and contents: \$ _____

Number of businesses to be benefited: _____ Total estimated number of employees benefited: _____

Is avoidance of evacuation to be an outcome of the proposal?: No Yes. If yes, explain why: _____

Is protection of the ability to evacuation to be an outcome?: No Yes. If yes, explain why: _____

Estimated number of evacuees benefited by proposal: _____

Estimated number of businesses avoiding evacuation by proposal: _____

Valuable environmental resource to be protected: No Yes. If yes, given name, location, acreage and status of resource:

<u>Name</u>	<u>Location</u>	<u>Acreage</u>	<u>Status</u>
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Valuable cultural or historic resource to be protected: No Yes. If yes, given name, location, acreage and status of resource:

<u>Name</u>	<u>Description/Type</u>	<u>Address</u>	<u>Status</u>
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If the preceding information does not adequately describe the benefits of the proposed mitigation initiative, provide additional explanation of the expected benefits here:

The Orange County Mitigation Planning Committee
Characterization of Proposed Mitigation Initiative

Page 3 of 4

(See Attached Instructions for Explanation)

The Cost of the Proposal -- Provide an updated annualized cost to implement the proposal: \$ _____ per year

Briefly explain the components considered in estimating the annualized cost to implement: _____

The Cost Impact of the Proposal -- If the proposal is anticipated to have a cost impact, provide an updated explanation of the basis for the impact and the anticipated annual amount (\$/yr): _____

Estimated annual cost impact _____ \$/yr

Define the audience most likely to bear the cost impact (Check as many as applicable) :

- | | | |
|--|--|---|
| <input type="checkbox"/> The general public | <input type="checkbox"/> Educational institutions/programs | <input type="checkbox"/> Health care facilities/services |
| <input type="checkbox"/> Buyers of property | <input type="checkbox"/> Retail businesses | <input type="checkbox"/> Local/regional governments |
| <input type="checkbox"/> Developers/builders | <input type="checkbox"/> Service businesses | <input type="checkbox"/> Public safety agencies/organizations |
| <input type="checkbox"/> Property owners | <input type="checkbox"/> Manufacturers | <input type="checkbox"/> Other. Explain: _____ |
| <input type="checkbox"/> Transients/tourists | <input type="checkbox"/> Tourism-related businesses | _____ |

Comparison of the Benefits to the Cost and/or Cost Impact of the Proposal --

- 1] Give the total annualized dollar cost of the "worst case" outcome: \$ _____ per year.
- 2] Give the total annualized dollar cost to implement the initiative: \$ _____ per year and/or the total annualized cost impact: \$ _____ per year
- 3] Divide the \$/yr in 1] by the \$/yr in 2] to derive the benefit to cost ratio. Give the ratio for the "worst case": _____
- 4] Provide adjusted benefit to cost ratios for life safety and resource protection (See instructions): For the "worst case" _____

Feasibility of Implementation -- Provide an updated analysis of the feasibility of implementation by answering these questions:

1] List the supporting documents, if any, in which this proposal is described (Give date, edition and section of the documents) :

- A) _____
B) _____
C) _____

2] List the permits/approvals most likely to be needed for full implementation and from whom:

- A) Local: _____
B) Regional/State: _____
C) Federal: _____

3] Provide an estimate of the time needed for implementation (in years or fractions of years), using the time necessary for each component step that is applicable:

For structural initiatives:

Funding: _____ Design: _____ Local government approval: _____
State/Federal Approval: _____ Property purchase: _____ Construction: _____
Final construction inspection/sign off: _____ TOTAL TIME NEEDED: _____ years

For non-structural initiatives:

Funding: _____ Development: _____ Government or organizational approval: _____
Duration until initial effectiveness achieved: _____ TOTAL TIME NEEDED: _____ years

The Orange County Mitigation Planning Committee

Characterization of Proposed Mitigation Initiative

Page 4 of 4

(See Attached Instructions for Explanation)

Feasibility of Implementation (Con't):

4] Has the proposed initiative been used elsewhere for the same purpose?: No Yes. If yes, give the following information:

Where: _____ In what time frame: _____

Was the initiative successful in achieving the intended purpose?: Yes No. If no, why not?:

Name of contact agency, organization or individual familiar with the initiative: _____

5] Is this proposed initiative likely to be generally acceptable to the affected population?: Yes No. If no, explain: _____

6] If acceptable to the affected population, are there special interests groups or stakeholders who would oppose the initiative?: No Yes. If yes, identify the most likely groups or stakeholders and explain the most likely source of their opposition: _____

7] Have any similar proposed initiatives implemented elsewhere encountered significant public controversy or opposition from special interests groups or stakeholders?: No Yes. If yes, explain the outcome of the controversy or opposition in those cases: _____

8] Are there modifications to the initiative that could decrease any opposition to the proposal?: No Yes. If yes, describe these modifications: _____

Would these modifications decrease the mitigation effectiveness of the proposal?: No Yes. If yes, describe these decreases and estimate the percentage of benefits lost with the modifications: _____

Name and title of Individual(s) responsible for completing form:

Name

Title

Agency

Signature
