program uses these values rather than the default values, although the default values are displayed for comparison to the user-entered values.

If data on actual **Functional Downtime** at one observed flood depth are available, then this information may be used to calibrate the user-entered **Functional Downtime Estimate**. In this case, the **Functional Downtime** at the observed flood depth can be set to agree with the observed time and estimated times at other flood depths can be smoothly adjusted to be consistent with the observed **Functional Downtime** data point. However, it is important to note that the **Downtime** in a single flood may or may not be representative of future expected **Downtimes**, depending on whether or not unusual circumstances affected the observed **Functional Downtime**.

Overriding the default **Functional Downtime** estimates is perfectly acceptable, indeed it is required in order to get a valid benefit-cost analysis whenever the default estimates do not accurately reflect the building under evaluation. For example, if local conditions suggest that unusually long or short downtimes are likely, this information should be reflected in the user-entered **Functional Downtime Estimates**.

Value of Lost Services

YELLOW Blocks (Results). The **Default Functional Downtime Estimates**, or, if entered, the **User-Entered Functional Downtime Estimates** are converted into the **Value of Lost Services** based on the **Total Value of Lost Services** per day (from the **LEVEL ONE Data** page) and the estimated days of **Functional Downtime** for each flood depth.

Lost Business Income

YELLOW Blocks (Results). Similarly, the **Lost Business Income** for each flood depth is based on the **Estimated Net Income of Commercial Businesses ($/month)** from the **LEVEL ONE Data** page, and the estimated days of **Functional Downtime** for each flood depth.

COMMENTS: FUNCTIONAL DOWNTIME

Comments

PINK Blocks (Information Only). This comment box should be used to record specific information about the occupants' **Functional Downtime** as it is governed by the building's vulnerability to flood damage or any other information, local conditions, or assumptions which affect the user-entered **Functional Downtime Estimates**.

LEVEL TWO DATA: MITIGATION PROJECT EFFECTIVENESS

Mitigation Effectiveness indicates the estimated percentage of damages and losses **AVOIDED** by the mitigation measure for each flood depth. **Mitigation Effectiveness** estimates are made separately for avoiding building and contents damages.

The following three sections, **Reference Information from Level One Data**, **Mitigation Effectiveness**, and **Comments: Mitigation Effectiveness Estimates**, all pertain to the **Mitigation Project Effectiveness**, the estimated percentage of damages avoided at each flood depth.

The **Mitigation Effectiveness** section of the **LEVEL TWO (Detailed)** benefit-cost analysis is reached via the **NEXT SCREEN** button at the bottom of the **Functional Downtime** screen or the menu tree:

Level Two Data | Mitigation Project Effectiveness.

REFERENCE INFORMATION FROM LEVEL ONE DATA

Carry Over Information

Building Type	2 Story w/o Basement
Total Floor Area (sf)	1,000
Total Building Replacement Value	$75,000
Demolition Threshold Damage Percentage	50%
Type of Mitigation Selected	Elevation
Project Description	Elevate 5 feet
Total Mitigation Project Costs	$50,297

PURPLE Blocks (Carry Over). Information from the **LEVEL ONE Data** page is displayed to identify the building under consideration and to provide reference information and guidance for the **LEVEL TWO (Detailed)** evaluation.

MITIGATION EFFECTIVENESS (percent of damages avoided)

Mitigation Effectiveness Table

	BUILDING DAMAGES			CONTENTS DAMAGES		
Flood Depth (feet)	Building DDF (%)	Default Eff. (%)	User-Entered Eff. (%)	Contents DDF (%)	Default Eff. (%)	User-Entered Eff. (%)
-2	0	100		0	100	
-1	0	100		0	100	
0	5	100		8	100	
1	9	100		14	100	
2	13	100		20	100	
3	18	100		27	100	
4	20	100		30	100	
5	22	77		33	77	

There are seven columns in the **Mitigation Effectiveness** Table. The first column shows the range of flood depths considered, from -2 to 18 feet. The second column shows **Building Depth Damage Function Before Mitigation**, for reference. The third column shows the **Default Building Effectiveness Estimates**. The fourth column is for the user to override the **Default Building Effectiveness Estimates** with **User-Entered** estimates. The fifth column shows the **Contents Depth-Damage Function Before Mitigation**, for reference. The sixth column shows the **Default Contents Effectiveness Estimates**. The seventh column is for the user to override the **Default Content Effectiveness Estimates** with **User-Entered** estimates.

Building Damages Default Effectiveness (%)

ORANGE Blocks (Default). The **Building Damages Default Effectiveness (%)** of the mitigation measure in avoiding building damages is calculated from the mitigation measure selected and the heights where the mitigation measure is 100% and 0% effective. These estimates of the **Mitigation Project Effectiveness** are entered in the Project Data section of the **LEVEL ONE Data** entry (see page 6-15).

For relocation/buyout projects, the **Default Mitigation Effectiveness** of 100% for all flood depths is correct and need not be modified by user-entered input. Similarly, for elevation projects, the default values are generally applicable and probably should not have to be modified by user-entered input.

	For flood barrier projects, there may be more variation in effectiveness depending on the engineering details and thus the default values may or may not accurately reflect the effectiveness of all flood barrier projects. If the **Other** category is selected for the mitigation measure then default estimates based on the heights of 100% and 0% effectiveness may also have to be modified.
Building Damages User-Entered Effectiveness (%)	**BLUE Blocks (Override Default).** Users may override the **Building Damages Default Effectiveness** estimates by entering building-specific estimates in this column. Whenever a user enters a mitigation effectiveness estimate, the program uses these values rather than the default values, although the default values continue to be displayed for comparison to the user-entered values. If the **Building Damages Default Effectiveness** estimates do not accurately reflect the specifics of the building under evaluation, then enter more appropriate estimates based on engineering judgement and common sense. Overriding the **Default Effectiveness Estimates** is perfectly acceptable, indeed it is required in order to get a valid benefit-cost analysis, whenever the default estimates do not accurately reflect the building under evaluation. For example, if the particular mitigation measure under evaluation is expected to be unusually effective or unusually ineffective, this information should be reflected in the **User-Entered Effectiveness Estimates**.
Contents Damages Default Effectiveness (%)	**ORANGE Blocks (Default).** The **Contents Damages Default Effectiveness** of the mitigation measure in avoiding contents damages is assumed to be the same as the **Building Damages Default Effectiveness**. See the **Building Damages Default Effectiveness** section above for a review of these assumptions.
Contents Damages User-Entered Effectiveness (%)	**BLUE Blocks (Override Default)** Users may override the **Default Mitigation Effectiveness** estimates by entering building-specific estimates in this column. Whenever a user enters effectiveness estimates, the program uses these values rather than the default values, although the default values continue to be displayed for comparison to the user-entered values. If the default mitigation effectiveness estimates do not accurately reflect the specifics of the building under evaluation, then enter more appropriate estimates based on engineering judgement and common sense. Overriding the **Default Effectiveness Estimates** is perfectly acceptable, indeed it is required in order to get a valid benefit-cost analysis whenever the default estimates do not accurately reflect the building under evaluation. For example, if the particular mitigation measure under evaluation is expected to be unusually effective or

unusually ineffective, this information should be reflected in the user-entered **Effectiveness Estimates**.

Other Effectiveness Assumptions

The effectiveness of the mitigation measure in reducing **Displacement Time** and **Functional Downtime** is assumed to be the same as the effectiveness in avoiding building damages.

COMMENTS: MITIGATION EFFECTIVENESS ESTIMATES

Comments

PINK Blocks (Information Only). This comment box should be used to record specific information about the mitigation measure's effectiveness for both the building and content damages or any other information or assumptions which affect the **User-Entered Mitigation Effectiveness Estimates**.