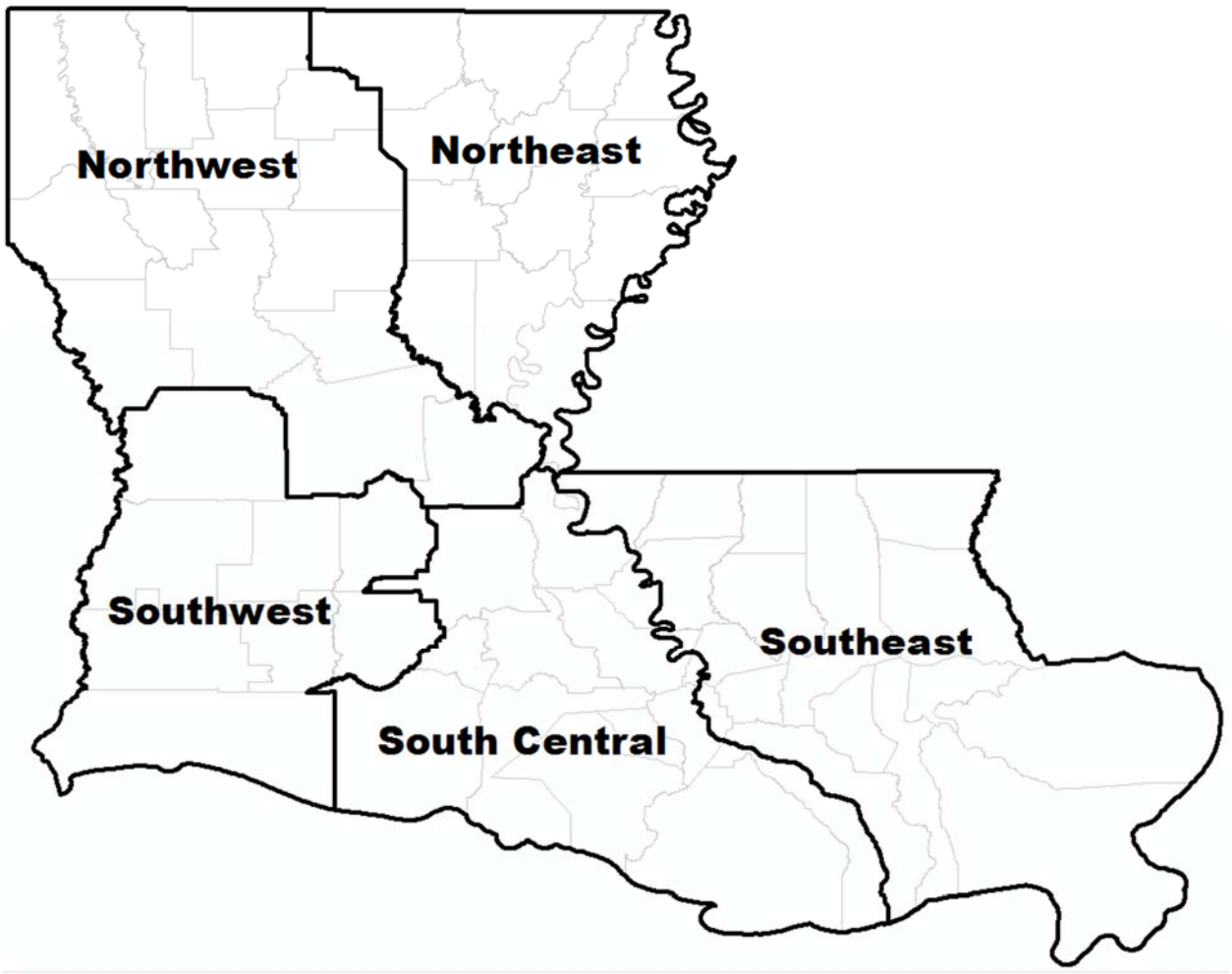
# LOUISIANA STATEWIDE FLOOD CONTROL PROGRAM

## Guidelines and Procedures




Submitted by:

FLOOD CONTROL PROJECT EVALUATION COMMITTEE

(March 1985 Original)
October 2020 Revision

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ERRATA
(As of June 2020)

Act No. 98 of the 1993 Regular Session changed the filing deadline for Applications to the Statewide Flood Control Program to **October 1st**. All references in this document to the application filing deadline are hereby changed to **October 1st**.

Act 999 of the 1999 Regular Session changed the local sponsor's participation from thirty percent to ten percent of construction cost, deleted credit for in-kind work and deleted the treatment of certain expenses for engineering and rights-of-way acquisition as discharge of all or part of the local sponsor's match.

Act 601 of the 2012 Regular Session added the Coastal Protection and Restoration Authority to the list of agencies reviewing applications to the program.

Act 28 of the 2015 Regular Session adds "(j) Any negative and positive impact on adjacent parishes both upstream and downstream from the project" to the information which shall be included in the application.

Act 384 of the 2018 Regular Session created the Rural Grant Opportunity Program to provide a mechanism for a municipality with fewer than 5,000 people or a parish with fewer than 50,000 people located in a rural area ("rural grant opportunity authority" or "authority") without financial ability to provide the local match requirement of the Statewide Flood Control Program to apply for funds.

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# Part I

# INTRODUCTION

## A. The Situation

Louisiana is situated at the terminus of the Mississippi River Drainage Basin, which includes 41 percent of the land area in the United States. The Lower Mississippi River deeply incised its alluvial valley in the coastal plain during the last glacial advance of the Pleistocene Epoch when sea level was several hundred feet lower than present. During and subsequent to this period as the sea level progressively rose, the valley was gradually filled with alluvium deposited by the river. The river, therefore, brought into the state much of the material that is present today and has been a major influence in building and shaping Louisiana's physical environment.

Unlike the upper reaches of the river which have steep slopes and relatively narrow floodplains, the Lower Mississippi has a great, wide floodplain through Louisiana and is relatively unconfined by nature. It must be confined to protect crops and cities along its banks. Without flood control measures, 54 percent of the state would be subject to periodic flooding. Therefore, the current level of economic and social development would not have been possible without the flood control and drainage programs that have been part of man's activities in Louisiana since the earliest days of settlement.

Like the Indian tribes that originally inhabited the area, the first settlers built permanent structures on higher ground, above the flood line, and used flood prone areas for seasonal activities such as hunting and farming. As population increased and the competition for land intensified, more and more development took place in areas subject to periodic flooding. To protect these areas, residents gradually began to develop flood control measures. In the beginning, these measures were rudimentary efforts by individual riparian landholders to protect their own lands from the annual rises of the Mississippi and its tributaries. In time, this responsibility was shared by parish governments, levee districts, the state, and the Federal government.

The multiplicity of efforts was sometimes counterproductive to the extent that each jurisdiction devised a means to displace flooding, rather than to solve the flood problem. As a consequence, floodwaters were simply diverted from one place to another—solving a problem here and causing one there.

The need for a unified flood control system is imperative to ensure safe human habitation in low-lying areas and to reduce flood damages, which escalate annually. In 1983 alone, more than $128 million was paid on over 15,500 flood insurance claims in Louisiana (approximately one-fourth of all claims paid in the U.S. for that year).[1] The Corps of Engineers reported flood damages in Louisiana for fiscal year 1983 to be $651 million.[2]

[1] Federal Emergency Management Agency, December 31, 1984.
[2] Department of the Army, Office of the Chief Engineer, 1984.

B. The Solution

The Statewide Flood Control Program is designed to help solve flood problems through an active, innovative approach. Act 351 of the 1982 Legislature calls for legislative appropriations for projects that provide long-term solutions to flood problems and protect existing developments in flood prone areas without encouraging further development in these areas.

The state is taking the lead in solving its flood problems for three reasons:

1. Reduced availability of Federal funds for flood control

2. Long delays in implementing Federal projects

3. The need for programs that fill the gap between the large-scale Federal programs that eventually get funded and the numerous smaller projects now handled by local agencies.

The Rural Grant Opportunity Program was created by Act 384 of the 2018 Regular Session to provide a mechanism for small rural jurisdictions which lack the financial ability to satisfy the local match requirements to participate in the Statewide Flood Control Program.

C. Eligibility for Participation

1. Statewide Flood Control Program: For a project to be eligible for consideration, its primary goal must be the reduction of existing flood damages. Eligible projects include measures to reduce or eliminate the incidence of flooding or damages in specific areas; for example, channel modifications; levee, canal and spillway construction; stormwater detention; flood proofing of structures; regulation of floodplains; relocation assistance; or other structural or non-structural measures. Ineligible projects include those which: (1) do not reduce existing flood damages; (2) encourage additional development of flood prone areas; (3) increase the likelihood of upstream or downstream flood problems; (4) have a total cost of less than $100,000; (5) have a primary purpose of providing protection against coastal storm surges.

2. Rural Grant Opportunity Program: An Eligible Rural Grant Opportunity Authority is a municipality with a population of fewer than 5,000 people or a parish with a population of fewer than 50,000 people. For a project to be eligible, it must meet all eligibility requirements for the Statewide Flood Control Program. The sponsoring authority shall also provide the following:

    a. A resolution from the authority declaring its financial inability to satisfy the local match required pursuant to R.S. 38:90.9(A)(4).

    b. Financial documentation to support its declaration of financial inability in the resolution shall include a sworn affidavit executed by the authority's private certified public accountant certifying that, after an examination of the authority's financial records, monies are not available out of the accumulated

unreserved earnings generated by the authority to meet the Statewide Flood Control Program's ten percent local match requirement.

D. Process Highlights

Sponsoring authorities at the parish or municipal level must initiate the funding requests for projects. Figure 1 indicates the major steps in processing an application. The steps are as follows:

1. Sponsoring authorities must submit pre-applications to DOTD, Public Works and Water Resources Division, by May 1 to be eligible for the program in the current program approval cycle.

2. The pre-applications are reviewed by the Statewide Flood Control Project Evaluation Committee—which consists of DOTD, Louisiana Geological Survey, and State Planning Office—between May 1 and June 1 to determine:

   a. whether there is documented evidence of flood damages;

   b. whether the sponsoring authority is requesting DOTD assistance in preparing the full application;

   c. whether the proposed solution is eligible for funding under this program; and

   d. whether the sponsoring authority is willing to assume responsibility for its share of the cost, including new rights-of-way, operation and maintenance costs, and other obligations.

   e. Whether the sponsoring authority is requesting participation in the Rural Grant Opportunity Program.

3. Formal applications for projects not eliminated during pre-application review must be submitted to DOTD between June 1 and October 1 of the year in which the pre-application was submitted or within four years of the pre-application submittal.

4. The Evaluation Committee evaluates the applications between October 1 and February 1 and scores each project according to established criteria.

5. The Evaluation Committee submits a preliminary list of recommended projects to the Joint Legislative Committee on Transportation, Highways and Public Works in February.

6. The Joint Legislative Committee conducts public hearings on the preliminary list of recommended projects during February and March. The Evaluation Committee incorporates the public's comments into its evaluation and submits a priority ordered list of projects to the Joint Legislative Committee.

7. The Joint Legislative Committee recommends to the Legislature a construction program to be funded during the regular legislative session.

8. Legislature votes on appropriations during the regular session.

9. Sponsoring authority enters into agreement with DOTD regarding obligations of construction, operation and maintenance.

The process is designed to give locally proposed projects serious consideration for funding and to provide the opportunity to discuss and question in an open forum the relative merits of projects. It guarantees a decision on each funding request in a timely fashion and provides sponsors with information to improve applications for future funding requests.

E. Provisions of Program

The state's share of project funding shall be not less than $90,000. Sponsoring authorities are required to provide a local match equivalent to not less than 10 percent of the project construction cost unless approved for participation in the Rural Grant Opportunity Program as specified in R.S. 38:90.41. The sponsoring authority is required to furnish all lands, easements, rights-of-way, relocations, operation and maintenance costs, and other costs as specified in R.S. 38:90.9.

The program provides for the distribution of funds statewide to a funding group composed of the eleven urban areas (See Figure 4, Page II-4) and the rural areas in the five Statewide Flood Control Program Funding Districts (See Figure 5, Page II-5). The Evaluation Committee recommendations to the Joint Legislative Committee on Transportation, Highways, and Public Works will be within the context of these distributions.

Under Act 351 of 1982, which created the program, the Louisiana Geological Survey was required to review and revise the statewide flood information database for the purpose of developing a systematic evaluation of drainage and flooding problems in the state.

The Louisiana Atlas of Floodplains and Flooding Problems was compiled from existing sources and serves as a reference document for applicants seeking state funds, as well as for reviewers of project applications at the state level. It includes maps of each of the 15 river basins in the state, indicating:

Geologic floodplains

100-year floodplain

Flood prone soils

Land use – land cover

Existing and proposed flood control projects

Flood problem areas

Federal and state lands and scenic streams

F. Number of Applications

No limitation is set on the number of applications that a sponsoring authority may submit. However, the Evaluation Committee may limit its review of applications to a maximum of three per sponsoring authority each program year depending on manpower availability and potential funds to assure equitable distribution of available funds throughout the state. Therefore, sponsoring authorities submitting multiple applications are urged to establish a priority among proposed projects prior to submission of pre-applications.

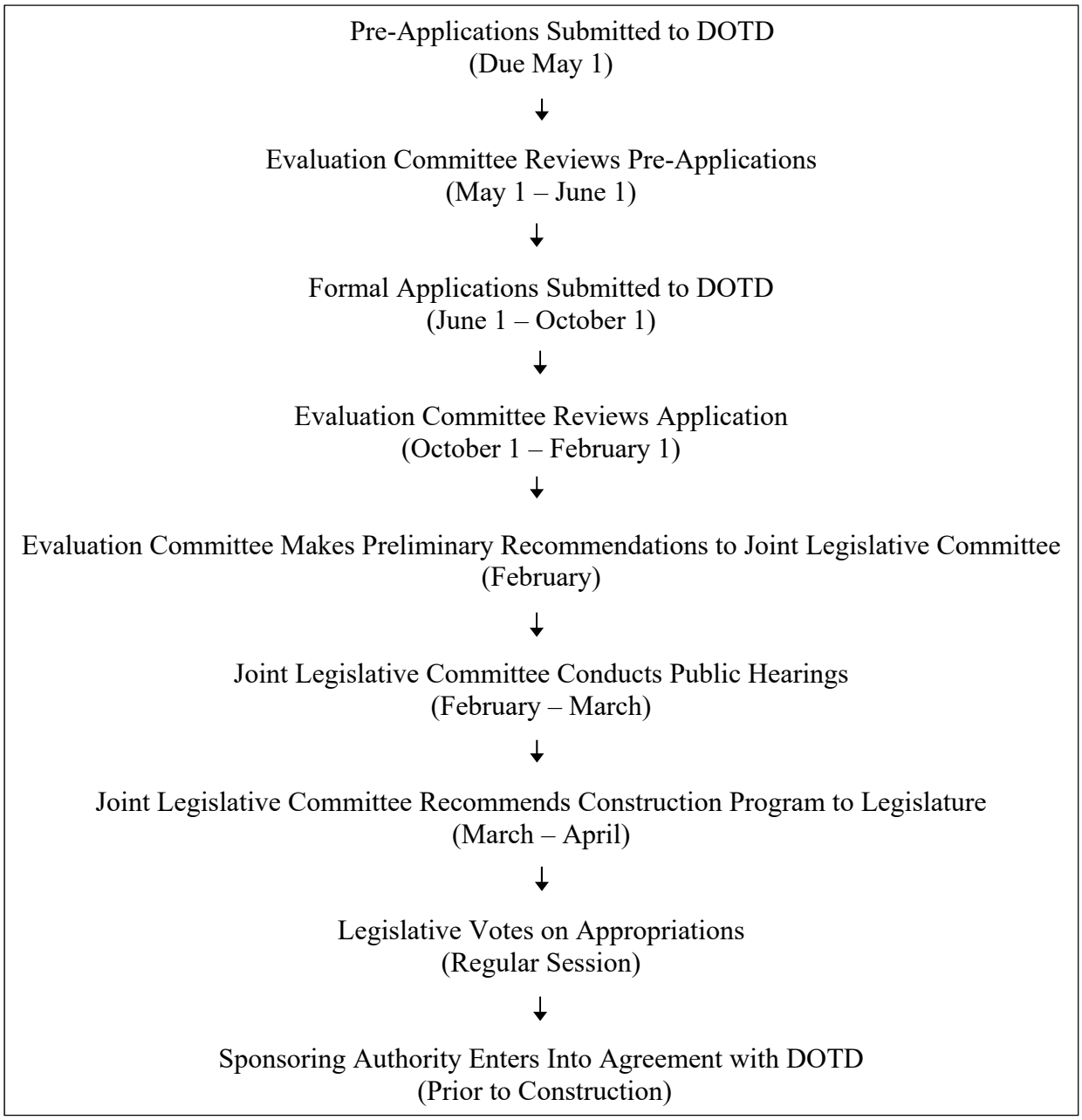


***Figure 1. Major Steps in Processing an Application***

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# Part II

# PROCEDURES FOR IMPLEMENTING STATEWIDE FLOOD CONTROL PROGRAM

This section describes the sequence of events involved in implementing the Statewide Flood Control Program. The sequence begins and ends each year during the regular session of the Legislature. The schedule of events is depicted in Figure 2 on page II-2. Highlights of the program operations are depicted in Figure 3 on page II-3. Specific procedures are described briefly in this section and are presented more fully in parts III, IV, and V of this document.

A. Pre-Application and Resolution (Due May 1)

Sponsoring authorities are to complete the pre-application, and must submit their completed pre-applications and resolutions to the Public Works and Water Resources Division not later than 4 p.m. on May 1. Pre-applications received after May 1 will not be eligible for the program in the current year. Pre-applications must include documentation of the flooding problem in order to be considered.

B. Evaluation Committee Review of Pre-Applications (May 1 – June 1)

Pre-applications will be reviewed and screened by the Evaluation Committee. The reasons for the review are to determine whether there is documented evidence of flood damages; whether the sponsoring authority is requesting DOTD assistance in preparing the full application; whether the proposed solution (if such a solution has been developed at this time) is eligible for funding under this program; and whether the sponsoring authority is willing to assume responsibility for its share of the cost, including new rights-of-way, operation and maintenance costs, and other obligations.

All pre-applications that are determined to be ineligible by the Evaluation Committee will be returned with appropriate comments by June 1 or as soon as possible. All eligible pre-applications will remain on file until a formal application is submitted or for a period of four subsequent funding years. The pre-application evaluation criteria for DOTD assistance are described in Part III (Pre-Application Instructions, Forms, and Evaluation Procedures).

Pre-applications that have been determined to be eligible and that may move on to the application stage include:

1. Pre-applications submitted by sponsoring authorities with a population of more than 50,000.
2. Pre-applications from sponsoring authorities to receive assistance from DOTD in the application stage.
3. Pre-application from sponsoring authorities eligible for assistance from DOTD in the application stage that cannot be handled by DOTD in time for the current funding year that chose to prepare their own applications.

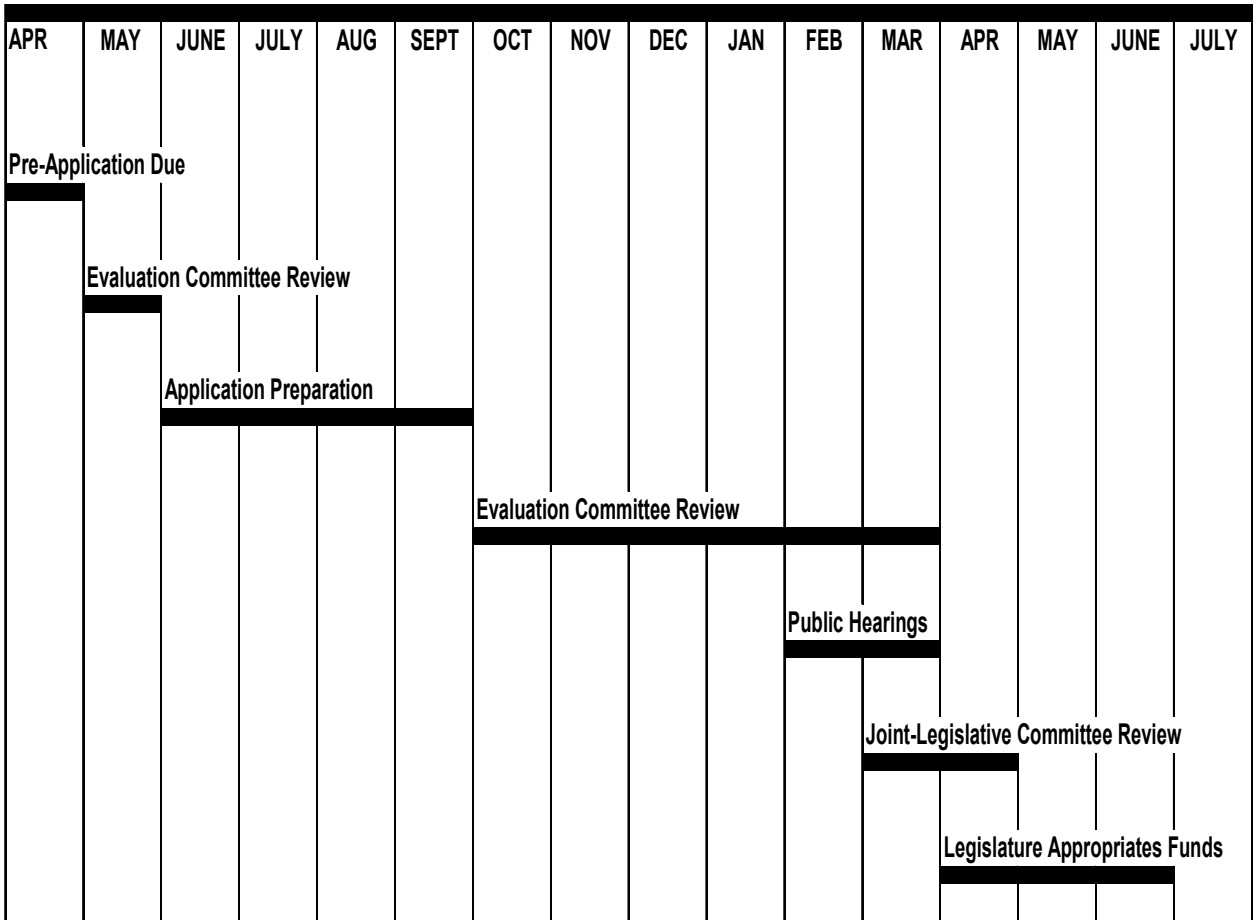


***Figure 2. Program Schedule***

Pre-applications in the third group may be processed in the application stage by DOTD in time for the next year's funding. Applications on which DOTD initiates work will receive increased priority for assistance in application preparation in the following funding years. The sponsoring authorities need not wait for DOTD assistance; however, they may prepare and submit their own applications.

At the end of the pre-application review period, applicants will be notified of the status of their pre-applications. The sponsoring authorities seeking DOTD assistance in preparing an application will be informed by letter whether they: (1) will receive DOTD assistance in time for the current funding cycle; or (2) will not receive assistance at this time and must compete for assistance again the following year.

Authorities completing their own applications may automatically move into the application stage unless the proposed solution is not eligible as a project under the program. If the proposed solution is not consistent with the program's objectives, the Evaluation Committee may suggest alternative solutions which must be addressed in order for the application to be eligible.

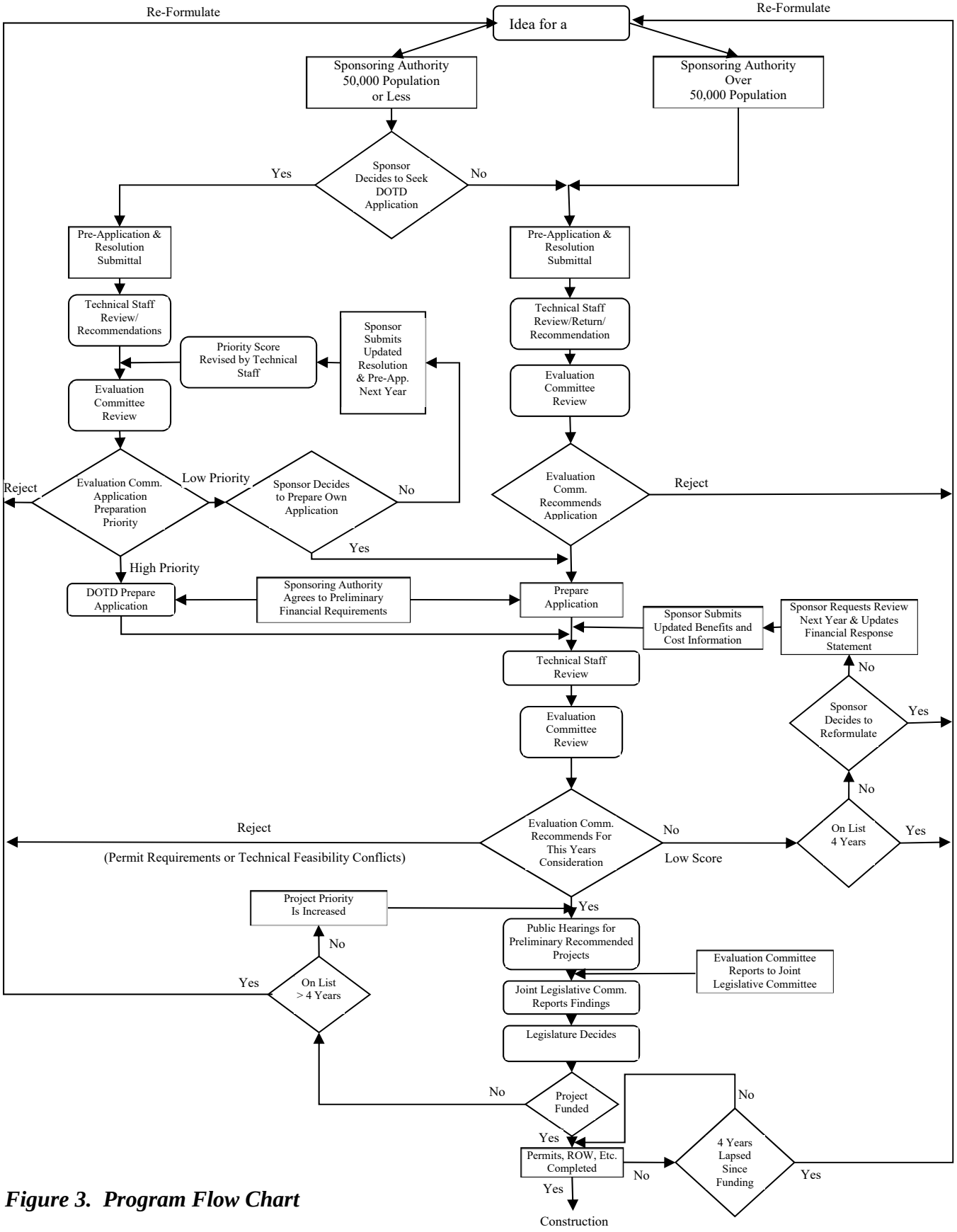


***Figure 3. Program Flow Chart***

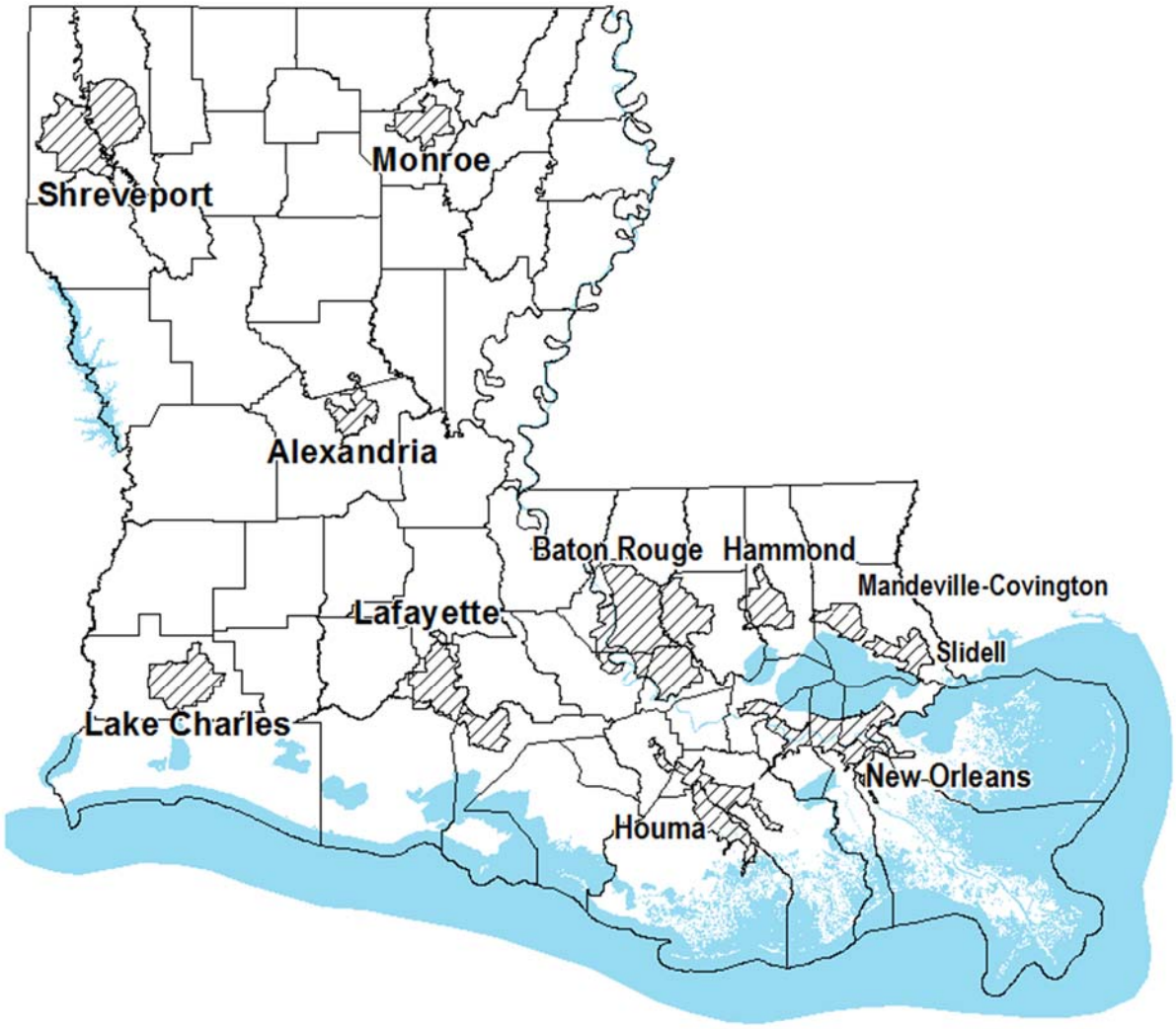


***Figure 4. Eleven Urban Areas Funding Group***

C. Application Preparation (June 1 - October 1)

Applications may be submitted anytime between June 1 and October 1, but must be received by the Public Works and Water Resources Division no later than 4 p.m. October 1, in order to be considered for funding during the upcoming legislative session. Applications received after this deadline will not be eligible for the current year's program. Applications for which pre-applications were received and approved from the previous year(s) may also be accepted during this period, provided all other procedures and deadlines have been met and four years has not lapsed since the pre-application submittal.

On request, DOTD will prepare applications for eligible sponsoring authorities to the extent possible. All applications must adhere to the methodologies described in the instructions contained in Part IV (Application Format and General Instructions).

D. Evaluation Committee Review of Applications (October 1 - April 1)

During this six-month period, the Evaluation Committee will review and evaluate all completed applications in order to make recommendations to the Joint Legislative Committee for funding. Applications will be divided into urban and rural categories. Applications for projects in the eleven urban areas comprise the urban category, as shown in Figure 4, page II-4, and compete against all other urban projects for funding. All other applications will be grouped by funding district as shown in Figure 5. Proposed projects will be evaluated and ranked based on criteria established by the Evaluation Committee as described in Part V.

Projects recommended to the Joint Legislative Committee on Transportation, Highways and Public Works will include a mix of those occurring in rural areas within each funding district as well as those for urban areas of the state. The method for allocating funding percentages within each district and the method for allocating total program funds to the various districts are presented in Part V.

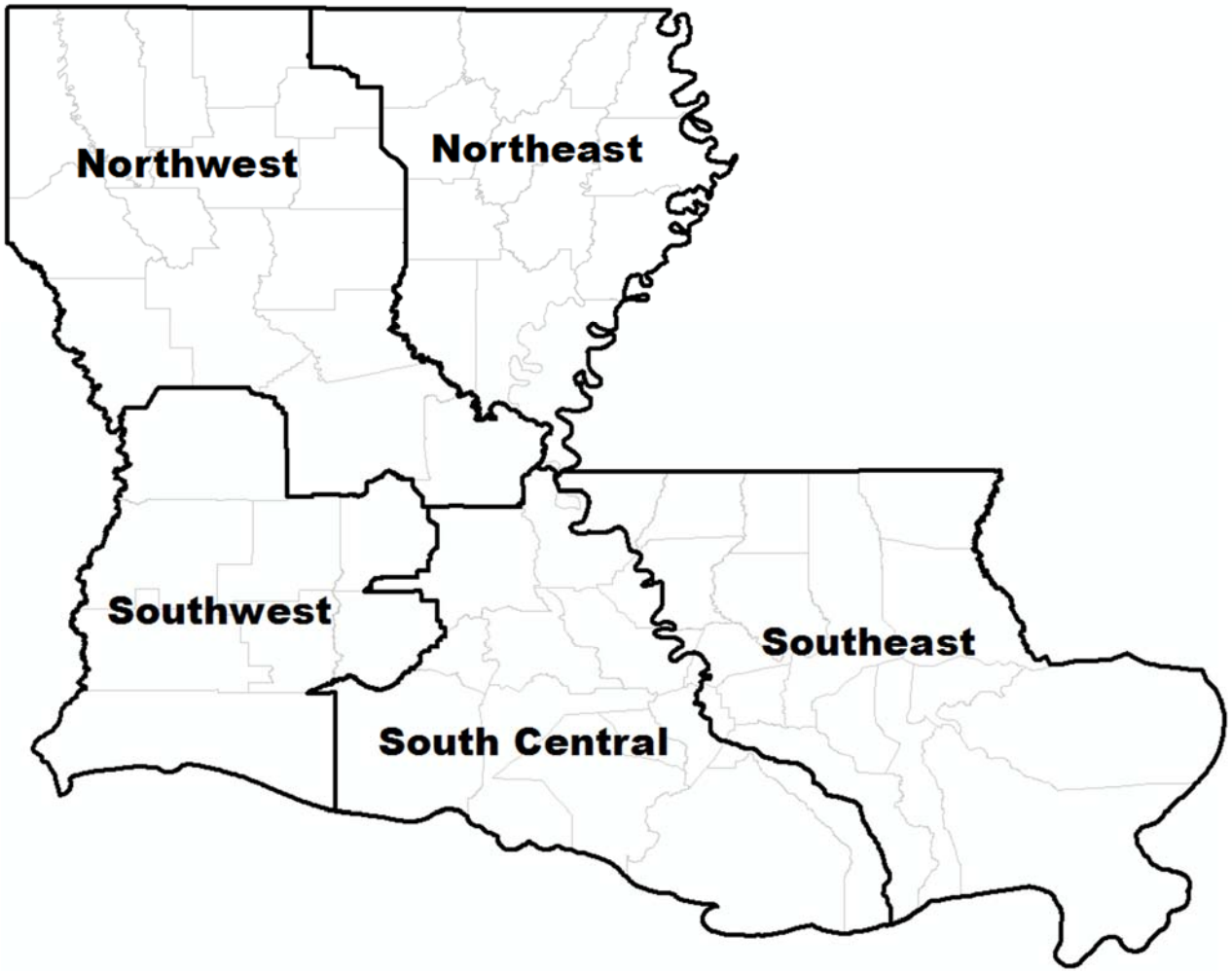


***Figure 5. Five Rural Funding Districts***

E. Public Hearings (February – March)

As part of the application evaluation process, the Joint Legislative Committee will hold public hearings in locations convenient to each funding district. The purpose of the hearings will be to receive comments from the public on the preliminary recommendations of the Evaluation Committee. After the hearings, the Evaluation Committee will incorporate public comments into its evaluation, complete the project evaluations, and submit a priority ordered list of projects to the Joint Legislative Committee.

F. Legislative Process (March – Regular Session)

From the list of projects recommended by the Evaluation Committee, the Joint Legislative Committee will recommend to the Legislature a construction program to be funded during the regular session. Projects recommended by the Evaluation Committee but not funded will remain active and will automatically be included in the recommended projects for the next year and receive additional points in the evaluation scoring procedure. Applications for projects that are not recommended will be returned to the sponsoring authorities with reasons for rejection.

# Part III

# PRE-APPLICATION INSTRUCTIONS AND EVALUATION PROCEDURES (Includes Resolution Form)

Part III contains instructions for completing the pre-application for funding assistance under the Statewide Flood Control Program. The pre-application shall be submitted in the format that is included with the instructions that follow. A sample format for the resolution is provided on the Statewide Flood Control Program webpage and can also be provided via email by request.

Pre-applications and resolutions may be submitted anytime throughout the year but shall be received by the Public Works and Water Resources Division no later than 4 p.m., May 1 to be eligible for consideration of funding in the next program approval. Pre-applications received after this date will not be eligible for the current year's program. All copies, including attachments and maps, must be clearly legible. Pre-applications may be submitted as follows:

Mailed to:
Louisiana Statewide Flood Control Program
Louisiana Department of Transportation and Development
Public Works and Water Resources Division
P.O. Box 94245
Baton Rouge, Louisiana 70804-9245

or

Delivered to:
Louisiana Statewide Flood Control Program
Louisiana Department of Transportation and Development
Room N-528
1201 Capitol Access Road
Baton Rouge, Louisiana 70802

A. Instructions for Preparing Pre-Application

1. General Information

The pre-application is designed to serve as a mechanism to determine if the flood problem area and potential solutions are eligible for assistance under the Statewide Flood Control Program. It is also used for screening requests for DOTD assistance in preparation of the full application. It is anticipated that requests for funding under the Statewide Flood Control Program will exceed the funds available. Requests for DOTD assistance in preparing applications are also expected to exceed manpower capabilities. It is imperative, therefore, that all pre-applications be as complete as possible to ensure that the merits of all proposed solutions or the need there of are adequately portrayed. If the information asked for in a particular line item is not available, or not applicable, the applicant must indicate this. Under no circumstances should any question or portion of the pre-application be left blank. Applicants should keep in mind that the more information they provide, the more accurately their pre-application can be evaluated. In addition, applicants are urged to submit pre-applications as early as possible so that time constraints do not hamper adequate review.

a. Information Sources

Sources of information necessary for completion of the pre-application are included in the instructions for preparing Attachment 2 on Page III-6.

b. Pre-Application Preparation

Sponsoring authorities whose jurisdiction includes a population of 50,000 or more must complete the pre-application form fully and provide all of the information requested.

Sponsoring authorities whose jurisdiction includes a population of less than 50,000 are encouraged to complete the pre-application form to the maximum extent possible; DOTD will assist in completing the form, if requested, and to the extent manpower is available.

c. Pre-Application Review Process

All completed pre-applications will be reviewed by the Flood Control Project Evaluation Committee. Applicants will be notified of the status of their pre-applications by June 1 or as soon as possible.

Applicants whose pre-applications are recommended for further consideration must then complete a detailed application for project funding. Pre-applications will be kept on file until a formal application is submitted or for a period of up to four years.

2. Line Item Instructions

The information requested in the following instructions must be provided by the applicant. Detailed engineering design data is not required at this time. Typical sources of information are indicated in the line item instructions, as well as in the instructions for preparing Attachment 2.

In the top right corner of the pre-application form, indicate the parish in which the proposed project will be implemented. If the proposed project crosses parish boundaries, identify each parish. Provide a project name that will be used for all future reference to the project. The name should have some identifying characteristic of the flood problem area location (i.e., river, stream, etc. as shown on the flood boundary map).

Only an officer of the sponsoring authority, duly authorized to act on behalf of the sponsoring authority, may sign the pre-application form.

1. Name of Sponsoring Authority. Provide the full name and address of the sponsoring authority submitting the pre-application, and the name, title, and telephone number of the authorized representative of the sponsoring authority to whom all questions regarding the pre-application can be addressed. In case of multiple sponsorships, designate a lead sponsor to serve as the contact between the State and sponsoring authorities. Although not a requirement, multiple sponsorship of projects, particularly where upstream and downstream authorities join in a unified effort to combat flooding, are encouraged and will receive additional scoring in the evaluation process at the application stage.

2. Completion Date of Pre-Application. Indicate the date of completion of the pre-application.

3. Problem Area Location: Provide a brief narrative description of the geographic area of the flooding problem. Include name(s) of parish(s), in the case of rural areas the nearest town(s), and in the case of urban areas street names, subdivisions or other points of reference that will assist in identifying the area.

4. Names and District Numbers of Legislative Delegation. List the names and respective district numbers for each of the legislative delegates within the geographic boundaries of the flooded area. Applicants are encouraged to make their legislative delegation aware of their flooding problems and participation in the Louisiana Statewide Flood Control Program by obtaining letters of support from respective delegations. Additional scoring will be awarded for legislative support during evaluation of the pre-application and the final application.

5. Requesting DOTD Assistance. If the sponsoring authority has a population of less than 50,000 and is requesting assistance in completing the application, indicate this request by marking the "yes" blank provided on the pre-application form.

6. Requesting Participation in Rural Grant Opportunity Program. If the sponsoring authority is a municipality with a population of fewer than 5,000 people or parish with a population of fewer than 50,000 people and is requesting participation in the Rural Grant Opportunity

Program, indicate this request by marking the "yes" blank provided on the pre-application form.

7. Description of Flood Damages. Describe each flood occurrence by providing the following data:

    a. Approximate date of the flood occurrence(s)

    b. Estimated number of buildings (residences, commercial, etc.) damaged by flooding

    c. Estimated number of acres flooded

    d. Duration of the flooding in approximate number of days

    In addition, the sponsoring authority may wish to describe the flooding problem further in the space allotted in the "remarks" section.

8. Describe Potential Solution. Provide general descriptive information on the proposed solution for the flood problem being addressed if such a solution has been developed at this time.

9. Land Use Description. Describe in general terms the existing land use in the area experiencing flood damages. Indicate the characteristics of the area with respect to land use features such as residential, commercial, industrial, agricultural, forested, public, or other. Also indicate the percentage of land use in each classification.

10. Land Ownership. Describe the land ownership characteristics of the flood problem area. Indicate the approximate number of landowners in the flood problem area and the approximate size of the typical land parcel or lot. List the names of the owners of large land tracts and public lands in the flood problem area.

11. Other Funding. If funding for a project to solve this flooding problem has been sought from another source(s), indicate the other source(s) and the status of the application(s).

12. Part of Approved Project. If a project for the flood problem area has been developed and is a component of a larger project, such as a master drainage plan, explain the necessity or benefits of the component which this pre-application addresses.

13. Anticipated Costs. If preliminary engineering investigations have been developed and estimated costs are available, indicate this estimated cost range, excluding contingencies.

14. Design. If available, provide copies of any previous studies, design or preliminary design information on the proposed solution that are available in order to facilitate review by the Evaluation Committee.

15. Previous Measures. For any previous flood control measures in the flood problem area, the applicant must:

    a. Indicate the project name

    b. Identify the date of completion

    c. Identify the supervising authority

    d. Give a brief description of the available information

    Potential sources of information include:

    a. Louisiana Geological Survey's Louisiana Atlas of Floodplain and Flooding Problems (hereinafter referred to as the Flood Atlas)

    b. Local government

    c. Drainage and levee districts

    d. The Department of Transportation and Development

    e. U.S. Army Corps of Engineers

    f. U.S. Department of Agriculture, Soil Conservation Service

16. Previous Studies. If the flood problem being addressed has been studied before, list each study by name, date of completion, and indicate who conducted the study, regardless of whether action was taken as a result of the study. Copies of the studies should be provided, if available. Studies that have been conducted by Federal, state, parish, or municipal agencies may contain valuable information that can facilitate the review of the pre-application.

B. Instructions for Preparing Attachments

1. Flood Area Location Map (Attachment 1). This map will appear as Attachment 1 to the prepared pre-application and should clearly identify the geographic boundaries of the flood problem area, indicate communities upstream and downstream, and show location of roadways, railways, major utilities and building locations, and major drainage features. Update changes in land use, such as areas of cleared or developed land and other features. Typical scales may range from 1" = 1 mile to 1" = 10 miles, depending on the size of the problem area. Maps useful for this purpose include USGS topographic maps (scale 1:62,500 series or scale 1:24,000 series), parish maps, and maps from the Flood Atlas.

2. Documentation of Existing Flooding Problems (Attachment 2). Potential sources of information necessary for documenting the flooding problems, which will appear as Attachment 2 to the prepared pre-application, include:

    a. Local newspaper accounts

    b. Parish engineer's records

    c. U.S. Geological Survey (USGS) stage and discharge reports

    d. The Flood Atlas

    e. Stage and discharge reports of the U.S. Army Corps of Engineers

    f. Unpublished gage records

    g. Federal Emergency Management Agency insurance claims data

    h. Photographs

    i. Signed statements of damages incurred (letters, personal interviews, etc.)

3. Resolution (Attachment 3). The resolution by the sponsoring authority, or in the case of multiple sponsorship a resolution from each participating sponsor, shall contain (1) the authority's request for funding consideration under the Statewide Flood Control Program, and (2) a statement that the authority will execute an agreement of local cooperation with the State that will include the local obligations set out in R.S. 38:90.9 and 38:90.12 including (1) all new lands, easements, rights-of-way, and spoil disposal areas necessary to construct and maintain the project; (2) all maintenance and operation costs for the project and all future alterations as may be required; (3) all necessary utility and any other facility relocations, alterations, and maintenance; and (4) at least a 10 percent local match for construction of the project or 30 percent of the non-federal share of project costs.

    In case of multiple sponsorships, a copy or description of the agreement to be entered into between the participating authorities acknowledging the responsibilities of each should be attached to the resolution.

4. Checklist (Attachment 4). A checklist of all items of information required by the pre-application. This checklist should be referred to prior to submitting the pre-application, and all items appearing on the checklist must have been addressed in the pre-application. All attachments, including the checklist, must accompany the pre-application.

5. Other Attachments (Attachments 5, 6, etc.). The applicant should include any other information necessary to aid the Evaluation Committee in evaluating the pre-application as Attachments 5, 6, etc. as appropriate.

C. Pre-Application Review and Evaluation Procedure

The Evaluation Committee will be responsible for the review and evaluation of pre-applications. The reasons for reviewing and evaluating the pre-applications are to determine: whether there is documented evidence of flood damages; whether the sponsoring authority is requesting DOTD assistance in preparing the full application; whether the proposed solution (if one has been developed) appears to be eligible for funding under this program; and whether the sponsoring authority is willing to assume responsibility for its share of the cost. If the applicant fails to adequately document that flood damages have occurred, the Evaluation Committee will not evaluate the pre-application and will notify the sponsoring authority accordingly.

Because of time and manpower constraints, DOTD will not be able to provide immediate assistance to all sponsoring authorities requesting assistance in the application stage. In order to objectively prioritize requests for application assistance, pre-applications will be scored. Points will be awarded for the above items in the following manner:

1. Time Elapsed Since Initial Request: Add 1.0 point for each year up to four years since initial request was made.

2. Local Support: Add up to 1.0 point for letters from the entire respective legislative delegation being on file.

3. Existence of Surveying and Engineering Information: Add 1.0 point if vertical control has been established over the project area; 1.0 more point if no additional cross sections need to be taken; and add 1.0 more point if engineering calculations and the design are complete.

4. Severity of Flooding Problem: Add the appropriate number of points based on the following documented information.

| Value | | Occurrence | | Points |
|---|---|---|---|---|
| 0.1 point for each building damaged<br>0.1 point for each 300 acres flooded<br>0.1 point for each landowner affected<br>2.0 points for loss of life | x | Number of occurrences in past 10 years | = | |

NOTE: Priorities will be established for each funding district, effective June 1 of each year. The Public Works and Water Resources Division will identify pre-applications for which it will try to complete applications during the June 1 through October 1 application preparation period.

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# Part IV

# APPLICATION FORMAT AND GENERAL INSTRUCTIONS

This part presents the instructions and format for preparing the application for project funding under the Louisiana Statewide Flood Control Program. Damage valuations for calculating benefits and design standards are presented in Section C, Pertinent Information for Completing Application.

Sponsoring authorities with a population of less than 50,000 may receive assistance from the Public Works and Water Resources Division in preparing their applications. Assistance will be provided as time and manpower limitations permit, based on the evaluation of the pre-application as discussed in Part III.

The application must adhere to the structured format, as indicated in the outline and instructions that follow. Each item in the application must be addressed and numbered corresponding to the format provided herein. Each page must be numbered, including all attachments. Cite all references to studies or reports used in preparing the application.

After receipt of favorable review of the pre-application by the Evaluation Committee, sponsoring authorities may submit their application anytime between June 1 and October1 and within four years of pre-application submittal. In order to be considered for funding in the upcoming fiscal year, the completed application and six copies thereof must be received by the Public Works and Water Resources Division no later than 4 p.m. on October 1. Applications received after October 1 will not be eligible for the current year's program. All seven copies of each map included in the application must be clearly legible or applications will not be reviewed. Applications may be submitted as follows:

Mail to:
Louisiana Statewide Flood Control Program
Public Works and Water Resources Division
Louisiana Department of Transportation and Development
P.O. Box 94245
Capitol Station
Baton Rouge, Louisiana 70804-9245

Or

Delivered to:
Louisiana Statewide Flood Control Program
Public Works and Water Resources Division
Louisiana Department of Transportation and Development
Room N-528
1201 Capitol Access Road
Baton Rouge, Louisiana 70802

A. Format for Application

1. Title Page
   a. Parish
   b. Project Name
   c. Title
   d. Name of Sponsoring Authority
   e. Date of Application
   f. Rural Grant Opportunity Program

2. Project Summary
   a. Name/Address of Sponsoring Authority
   b. Authorized Representative
   c. Previous Correspondence
   d. Project Description
      (1) Project Location
      (2) Design Frequency
      (3) Construction Cost
      (4) Flood Damage Reduction
      (5) Narrative Description of Project
      (6) Structural Density of Benefited Area
   e. Commenting Agencies
   f. Legislative Delegation

3. Design Standards Checklist

4. Application Narrative
   a. Benefited Area Description
      (1) Area
      (2) Population
      (3) Land Use
      (4) Land Ownership
      (5) Soils and Vegetation
   b. Description of Flood Problem
      (1) Relationship to Major Floodplains
      (2) History of Flooding
      (3) Flood Damage
      (4) Threat to Human Lives
      (5) Immediate Need for Project
   c. Alternatives Considered
   d. Technical Feasibility
      (1) Certification by a Professional Engineer
      (2) Project Plans and Design
      (3) Estimated Construction Cost
      (4) Other Costs
      (5) Conjunctive Use
      (6) Compatibility
      (7) Affected Area

(8) Protection and Floodplain Encroachment

e. Project Benefits
   (1) Determination of Benefits
   (2) Inventory of Properties within Benefited Area
      (a) Residential, Commercial, and Public Structures
      (b) Roads
      (c) Agricultural Lands
      (d) Industrial Damages
   (3) Damage Value Calculations
   (4) Prevention of Loss of Life
   (5) Other Tangible and Intangible Benefits
f. Environmental Considerations
g. Summary of and Response to Local, State and Federal Agency Comments
h. Required Permits for Project Implementation
i. Assurances
j. Local Matching Funds

5. Attachments
   a. Land Use
   b. Flood Boundary Map
   c. Project Impact Map
   d. Drainage Area Map
   e. Runoff Calculations
   f. Project Plan
   g. Profile or Stages, Before and After Project
   h. Cross Sections
   i. Hydraulic Calculations, Before and After Projects
   j. Agency Commenting Letters
   k. Permits, if Obtained
   l. Other Letters of Support or Objection to the Project
   m. Rural Grant Opportunity Program Resolution
   n. Other Attachments

B. General Instructions for Completing Application

The application must be prepared according to the application format on the previous pages. Each item must be addressed.

1. Title Page
   The first page of the application must contain the following:

   a. Parish: Place the name of the parish(s) in which the project will be implemented in the upper right hand corner of the title page.

   b. Project Name: Provide a project name consistent with the name used in the pre-application.

   c. Title: The title of the application should read "Application to Statewide Flood Control Program."

d. Name of Sponsoring Authority: Provide the full name of the sponsoring authority(s) for the requested flood control funding assistance.

e. Date of Application: Provide the month and year in which the application is submitted.

f. Rural Grant Opportunity Program Request: If an eligible authority intends to apply for the Rural Grant Opportunity Program, it should be clearly indicated here. If the grant application is approved, the authority will not be required to satisfy the 10% local match for construction described in section j.

2. Project Summary
The following pertinent project information must be summarized:

a. Name and Address of Sponsoring Authority: Provide the full name and mailing address of the sponsoring authority(s) for the requested flood control funding assistance.

b. Authorized Representative: Provide the name, title, and telephone number of the authorized representative. In case of multiple sponsorships, give the authorized representative of the lead sponsor. Any changes from the information provided in the pre-application should be noted.

(1) Rural Grant Opportunity Authority: If applying for the Rural Grant Opportunity Program for this program, the applicant should provide its population as of the latest US Census along with a brief statement of its financial inability to satisfy the local match requirement. A Resolution declaring this financial inability and a sworn affidavit from a private CPA will also need to be attached to the application.

c. Previous Correspondence: Reference all previous correspondence by indicating the completion dates of the pre-application and the resolution.

d. Project Description: Provide a narrative description of the project being proposed sufficient to enable the Evaluation Committee to understand the project's purpose, design, and major components.

(1) Project location

(2) Design frequency

(3) Estimated construction cost (excluding contingencies)

(4) Flood damage reduction (i.e., number of acres, number of structures, dollar value)

(5) Narrative description of the project (including components and their general locations)

(6) Structural density of the benefited area (buildings per square mile) and the acreage usage (i.e., agricultural, forests, low density housing). This information should be in agreement with the information provided in Item 4.e., Page IV-14 (Project Benefits).

e. Commenting Agencies. List those agencies shown in item 4.g, on page IV-17, whose comments have been received regarding the proposed project. Copies of agency comments should be included as Attachment 10.

f. Legislative Delegation. List the names and respective district numbers of all Senators and Representatives within the geographic boundaries of the flood problem area. Points will be given for legislative support during evaluation of the application.

3. Design Standards Checklist

Information relative to the design standards of efforts to reduce flooding is critical to the adequate review of the application. Make certain that all appropriate items for the program or project design described in the application are provided by completing the applicable section(s) of the following checklist. Indicate the page number of the application in which the requested information is presented. Applications for projects requiring a combination of alternatives such as channelization and a pumping station must furnish the required information for both. These design requirements are more fully explained in Section C. of this Part. A copy of the following checklist must accompany the completed application.

a. Non-Structural Alternatives

| | Page No. |
|---|---|
| (1) Acquisition and Relocation | |
| (a) Design Frequency of Protection | _____ |
| (b) Maps Designating Areas of Allocation and Relocation | _____ |
| (c) Description of Existing and Proposed Land Use | _____ |
| (2) Flood Proofing | |
| (a) Design Frequency of Protection | _____ |
| (b) Description of Flood Proofing Techniques Proposed | _____ |
| (c) Affected Structures Depicted on Map | _____ |
| (d) Effect on Flooding of Other Areas Described | _____ |
| (3) Flood Warning System | |
| (a) Criteria for Operation Described | _____ |
| (b) Estimate of Population Served | _____ |
| (c) Methods and Procedures to be Used | _____ |

b. Structural Alternatives

(1) Channel Clearing, Snagging, Alteration or Modifications

(a) Design Frequency, Runoff Calculations, And Hydrologic Method Used _____

(b) Drainage Area Map _____

(c) Drainage Summary Sheet(s) _____

(d) Stream Profile Sheet(s) with Water Surface Profiles for Before and After Project _____

(e) Surveyed Cross Sections of Significant Structures Crossing Channel _____

(f) Surveyed Cross Sections Upstream and Downstream of Structures _____

(g) Supporting Information for Starting Water Surface Elevation _____

(h) Hydraulic Computation for All Water Surface Profile(s) for both Before and After Project _____

(i) Effect of Project on Downstream, Upstream, and Adjacent Areas _____

(2) Lakes/Reservoirs and Other Impoundments

(a) Design Frequency, Runoff Calculations and Hydrologic Methods Used _____

(b) Drainage Area Map and Project Plan _____

(c) Preliminary Design Plans for Major Components _____

(d) Hydraulic and Hydrologic Analyses _____

(e) Preliminary Geotechnical Information _____

(f) Hydrologic Analyses Used to Determine Downstream Effects from a Catastrophic Failure _____

(g) Effect of the Project on Other Areas _____

(3) Levees, Dikes, Floodwalls, and Related Structures

(a) Design Frequency, Hydrologic and Hydraulic Calculations and Methods Used to Justify Free-Boards _____

(b) Preliminary Project Plan _____

(c) Preliminary Geotechnical Information _____

(4) Pumping Stations

(a) Design Frequency, Duration, Hydrologic and Hydraulic Calculations for Pumpage Requirements _____

(b) Drainage Area Map Depicting Components in Affected Area _____

(c) Stage-Area and Stage-Volume Curves for Sump or Storage Areas _____

(d) Sump or Storage Area Depicted on Map _____

(e) Effect of Project on Other Areas _____

(5) Storm Water Detention and Retention Measures

(a) Design Frequency, Hydrologic Calculations and Methods Used for Flood Volumes _____

(b) Project Plan Showing Proposed Improvements _____

(c) Effect on Flooding in Adjacent Areas _____

4. Application Narrative.
This portion of the application must contain a narrative description of the proposed project.

a. Benefited Area Description: Describe in detail the area that would be afforded protection by the project, as indicated on the Flood Boundary Map (item 5.b, page IV-24). Be as specific as possible in addressing the following:

(1) Area: A narrative description of the geographic location of the benefited area is required.

(2) Population: Estimate the number of persons within the benefited area and indicate the source of the population estimate (for example; field survey, Corps of Engineers, etc.) and the date such estimate was made.

(3) Land Use: Describe land use within the benefited area for the following categories: (1) residential, (2) commercial, (3) industrial, (4) agricultural, (5) forested, (6) public, and (7) other.

(4) Land Ownership: Describe the land ownership characteristics by indicating the number of landowners in the benefited area that would be affected, and the size of the typical land parcel or lot. List the owners of large land tracts (representing 10 percent or more of the benefited area). Also list public lands within the benefited area.

(5) Soils and Vegetation: Describe the soils and vegetation of the benefited area. A description and map of soil associations and soil series may be obtained from the U.S. Department of Agriculture, Natural Resources Conservation Service. Information on types of vegetation should be general (e.g., hardwood swamp, mixed forest, pine, etc.) and can be obtained from published reports of the Natural Resources Conservation Service and Corps of Engineers, or from field observation. Cite source and date of information used.

b. Description of Flood Problem: Describe the flood problem in the area to be benefited in sufficient detail for the Evaluation Committee to weigh the urgency of this project against that of competing projects.

(1) Relationship to Major Floodplains: Describe the hydrologic relationship of the benefited area to the 100-year floodplain, other major floodplains, streams, and floodplain areas. That is, describe the relationship of the flooded area to other hydrologic features that may contribute to the current flood problem or which may be affected by the project. Identify the first major discharge point, or outfall, with the project in place. The Louisiana Geological Survey's Flood Atlas is one possible source of this information.

(2) History of Flooding: Based on the records available and consistent with the information provided in the pre-application, describe in detail the history of flood problems in the benefited area. Use all available information to describe and document the number of occurrences, location, date, duration and water elevations associated with previous floods. Explain cause(s) of flooding (i.e., backwater, inadequate outlet, etc.).

(3) Flood Damage: Provide and document from published and unpublished sources the magnitude, in terms of dollar amounts, of historical flood damage to land and improvements in the general location of the benefited area. Flood insurance and crop insurance claims should be used, if available. FEMA information on flood damage insurance claims paid by census city block numbers should be provided.

(4) Threat to Human Lives: If the current flood problem poses a threat to human lives, explain how and indicate the probability of loss. Indicate whether human lives have been lost as a result of previous floods, and the source of the information.

(5) Immediate Need for Project: Provide any other pertinent information not previously requested that would help explain the magnitude of the flood problem or the immediate need for the project.

c. Alternatives Considered for Proposed Project: Floodplain management alternatives fall into two categories: structural and non-structural components. A project may be composed of both structural and non-structural components. A list of the techniques that comprise each category is presented below. For more information, consult the Floodplain Management Plan, State of Louisiana, issued in December 1982 by the Office of Planning and Technical Assistance, Department of Urban and Community Affairs. Two or more alternatives to address the flooding problem should be developed and described in this section. It is desirable that a sufficient number of alternatives be developed to ensure that the project was selected on the basis of an objective analysis. At least one non-structural alternative should be considered. Explain why the proposed project was chosen over other alternatives considered.

(4) Structural: Structural flood control alternatives include public works projects, storm water detention and storm water retention techniques.

(a) Public Works include pump stations, clearing and snagging, channel alterations, channel paving, levees, stream diversions, dams, weirs and reservoirs. If channel paving is to be considered, the need (e.g., lack of right-of-way, soil instability, etc.) must be justified.

(b) Storm Water Detention techniques are those that slow runoff and increase infiltration, such a re-vegetation, grading and terracing practices, use of porous pavements in parking lots, and perforated subsurface drainage pipes.

(c) Storm Water Retention techniques are those that retain runoff, such as the construction of small ponds, impoundments, and cisterns.

(5) Non-Structural: Non-structural flood control alternatives include the formulation of regulations, flood proofing, flood warning systems, and acquisition of property.

(a) Regulations include floodplain regulations, zoning, subdivision regulations, and building, housing and sanitary codes, and detention ordinances. Note, that generally the implementation of regulations will not be eligible for funding; however, they may be an integral part of a solution to a flood problem.

(b) Flood proofing includes elevation of structures, small walls and levees, and modifications to structures. Useful information on flood proofing techniques can be obtained from the LSU Agricultural Cooperative Extension Service.

(c) Acquisition of property entails purchase of floodplain areas and relocation of houses and other structures.

d. Technical Feasibility. For the flood control measure proposed by this application, address the following items:

(1) Certification by Professional Engineer: Submit certification by a professional engineer registered in the State of Louisiana that the cost estimates, preliminary plans, and designs, and other engineering information included in this application conform to accepted engineering practice and the project shall meet the stated design frequency. State the frequency being addressed (see Design Standards, Section C.2, pages IV-25 through IV-28). Any significant deviation from the minimum design frequency as presented in Section C., item 2; must be justified.

(2) Project Plans and Designs: Include a discussion of all preliminary plans and design information describing the project and support the design rationale. The Flood Control Project Evaluation Committee must be able to clearly distinguish each component of the project and recognize the rationale used in developing the plans and designs. This should include a brief description of the methodology used in developing the project. Since various types of projects will have different design components, lists are provided in Design Standards (Section C.2., pages IV-25 through IV-28) for applicants to follow. Address the measure or measures specifically involved in this project. Items required by the Design Standards must be included as attachments. TO DETERMINE PROJECT BENEFITS, IT IS ESSENTIAL TO PROVIDE ENGINEERING INFORMATION FOR CONDITIONS WITH AND WITHOUT THE PROJECT.

(3) Estimated Construction Costs: Estimate the costs of the project, excluding contingencies and those items detailed in "Other Costs" below. The estimate should break out the costs of materials and construction activities to at least the level of detail necessary to verify the estimate. For each project component, provide the name, quantity, unit cost, and item cost. Avoid the use of lump sum costs. Costs should be current at the time of the application. Note: All cost estimates need only be based on preliminary plans and designs.

(4) Other Costs: Estimate the costs of the project that are the sole responsibility of the sponsoring authority under the Statewide Flood Control Program, including: acquisition of new lands, easements, rights-of-way, spoil disposal areas, utility and other facility relocations, alterations and maintenance costs. Sponsoring authorities undertaking the preparation of plans and specifications and the letting of bids for construction and supervision of construction should also include these costs in the cost estimate. Note: All cost estimates need only be based on preliminary plans and designs.

(5) Conjunctive Use: Describe the feasibility of including water retention and distribution features in the project for agricultural irrigation development, recreation, wildlife habitat or other conjunctive uses.

(6) Compatibility: Describe the efforts made to ensure compatibility of the project with other Federal, state, and local projects within the drainage basin. Future plans and design requirements of the Department of Transportation and Development,

Natural Resource Conservation Service, Corps of Engineers, levee boards and local agencies must be considered. The requirements of the Department of Transportation and Development must be met or exceeded at all roadways under the jurisdiction of the state. Thorough consideration must be given to upstream and downstream effects.

(7) Affected Area: Describe area(s) outside of the benefited area upstream and downstream, which includes the project construction site if outside of the benefited area, that may be affected either beneficially or adversely by implementation of the project. The boundaries of the affected area should be distinguished from the benefited area on the Flood Boundary Map. The following items should be addressed:

- Geographic area
- Population estimate (cite source and date of estimate)
- Land use (see item 4.a.(3), page IV-8 for categories)

(8) Protection and Floodplain Encroachment: The project must be designed to protect existing development without encouraging additional urban and agricultural development. Describe the extent to which the proposed project will protect existing development without encouraging additional development in a flood prone area.

e. Project Benefits: The assessment of benefits—both tangible and intangible—is one of the key factors in approval of proposed projects. The major benefit of any flood control project is the reduction of damage to existing property and buildings subject to flooding. The benefits analysis procedure described below must be used in completing the application. Applications that do not follow this procedure cannot be compared to other applications objectively and may jeopardize the application review.

(1) Determination of Benefits: In general the benefits are to be calculated based on an actual field inventory of the structures within the benefited area as determined from the flood boundary map for the design storm and using the appropriate unit damage values. It is not necessary to determine the floor elevation of each structure. If a structure is located within the benefited area, the first floor may be counted. In densely populated urban areas a field investigation of the entire benefited area may not be feasible. In this case aerial photos and field investigations of sample areas may be used.

The applicant must explain the procedure used in determining the buildings, property or acreage protected by the project.

(2) Inventory of Properties within Benefited Area: Based on the design flood, include an inventory of the properties that will be protected as a result of the proposed project (i.e., those properties between the existing and anticipated flood boundary). For residential, commercial, and public structures, indicate total square feet. For roads, indicate lane miles. For agricultural lands, indicate the number of cleared acres. This information should be tabulated by subdivisions and other identifiable

areas and delineated on the Flood Boundary Map. The recommended procedures for developing these data requirements are described below.

(a) Residential, commercial and public structures: By visual inspection, estimate the total number of square feet for each building type for each sub-category by subdivision as listed in Table 1 in Section C.1., pages IV-20 through IV-23. For multistory buildings, only the square footage of the first floor is to be counted. This will require an estimate and tabulation of square footage for each structure. It is not necessary to compute damage value at this time, only the estimate of square footage by building type. Furnish aerial photos if available.

(b) Roads: By visual inspection and approximate measurement from a map, indicate the total number of miles for each category of road (gravel, two-lane, and four-lane) as provided in Table 2 in Section C.1, page IV-24. No field estimate of damage value is required since approximate damage value by mile for each category is provided in the unit damage value tables that follow.

(c) Agricultural land: Consult with the parish Cooperative Extension Agent or Parish Soil Conservation Service Representative to determine the approximate acreage for each crop (including pasture). This could be based on a percentage breakdown by crop for the estimated total number of agricultural acres. Only acreage estimates are needed from the survey since average damage values for each crop are provided in Table 3 in Section C.1, page IV-24.

(d) Industrial damages: Estimates of flood damage to industrial facilities must be based primarily on estimates by the representatives of the facility in question. No attempt should be made to estimate damage without the assistance of an industry representative. Damage must be estimated for inventory, equipment, and structures.

(3) Damage Value Calculations: Section C., item 1, Tables 1 through 3 contain the unit damage values to be used in computing flood control benefits. From the data collected in the inventory of properties within the benefited area and the unit damage values provided in tables 1 through 3, and from estimates of industrial damage, develop a tabulation of total potential damage prevented by the project. Separate tables with appropriate subdivisions are provided for residential, commercial, and public buildings; crops and pasture; and roads. For industrial damage a different procedure is required as discussed in (2)(d) above. After computing flood damage values by category, add the figures for all categories.

(4) Prevention of Loss of Life: Prevention of loss of life are those benefits that enhance public safety by maintaining or providing access to vital services to the community and any neighboring communities which rely on these services, such as emergency medical facilities, fire and police stations and protecting or creating evacuation routes.

(5) Other Tangible and Intangible Benefits: Other benefits both tangible and intangible that have not been quantified to this point must be addressed to the extent possible.

In the case of agricultural irrigation, benefits may be quantified in terms of cost savings under "with project" conditions. Among intangible benefits are environmental quality and aesthetic values. Although it is extremely difficult to estimate the monetary value of such benefits, they should be considered. Proper evaluation can be made by the Evaluation Committee only if the applicant has fully described these benefits. Such benefits may be useful for establishing priority among closely ranked projects. Provide documentation of the benefits identified.

f. Environmental Considerations: Provide an assessment of the environmental effects anticipated as a result of the proposed project during construction and upon completion of construction. A detailed environmental assessment is not required. Parameters that must be discussed include, but are not limited to:

- Water quality
- Habitat modification
- Fish and wildlife resources (including threatened and endangered species)
- Noise and air quality
- Cultural, historical, and archeological features
- Special geologic features

The description should indicate whether the effects are short-term or long-term, direct or indirect, and adverse or beneficial. Applicants must seek comment from appropriate State agencies.

g. Summary of and Response to Local, State and Federal Comments: This section must include a summary of those comments received from the appropriate agencies to identify potential environmental issues and other concerns and the sponsoring authority's response to those comments. Copies of pre-applications must be forwarded to these agencies by July 1 to provide sufficient time for review and commenting prior to the application deadline of October 1. Recommendations of these agencies must be addressed.

Agencies to be contacted include:

- Department of Natural Resources
- Department of Wildlife and Fisheries
- Department of Culture, Recreation and Tourism, Division of Historic Preservation
- Department of Urban and Community Affairs
- State Soil and Water Conservation Committee
- Department of Environmental Quality
- U.S. Army Corps of Engineers
- U.S.D.A. Soil Conservation Service

Addresses for these agencies can be found in Section C, page IV-33, Primary Contact Agencies.

h. Required Permits for Project Implementation: This section provides a description of the Federal, state, and local permits that may be required to implement the proposed project. Where appropriate, contact phone numbers are provided. The applicant is encouraged to coordinate with the regulatory agencies prior to submitting these permit applications and throughout the permitting process. Processing costs may be associated with certain permit applications. The agencies should be contacted for information concerning these costs and procedures or forms. Applicants do not have to have the permit at this time. Some permitting agencies require fees, and applicants may elect to withhold permit application pending notification of project funding. The Flood Atlas may be useful in permit preparation.

(1) Federal

(a) Section 10 Permits: This permit procedure was authorized by Section 10 of the River and Harbor Act of 3 March 1899 (30 Stat.1151; 33 USC 403). The permit is required for activities occurring in navigable waters of the United States. The regulatory agency is the U.S. Army Corps of Engineers. For areas under the New Orleans District jurisdiction, the Regulatory Branch can be reached at (504)862-2300. For areas under the Vicksburg District jurisdiction, the Regulatory Branch can be reached at (601)631-7071. A minimum 20-day public notice is required for all Section 10 permit applications. The entire permit application procedure usually requires 60 to 120 days.

(b) Section 404 Permit: This permit was authorized pursuant to Section 404 of the Clean Water Act (86 Stat. 816; 33 USC 1344) and is required for the disposal of dredged or fill material in wetlands, including water bodies. The U.S. Army Corps of Engineers is the regulatory agency. Since the definition of "wetlands" often needs interpretation, the Corps should be contacted to determine whether the proposed project area qualifies. Contact telephone numbers are listed in the preceding description. This application requires a 20-day public notice. Approximately 60 to 120 days are necessary to complete the entire application process.

(c) Right-of-Way Easement (Federal Lands): This permit is required by the U.S. Department of the Interior for all activities affecting Federal lands such as national forests and wildlife refuges. The permit application often contains a brief biological impact assessment of the proposed project. The application must be reviewed by the office in Washington, D.C., as well as by appropriate field and regional offices. Usually, 60 to 90 days are required for approval or denial. The area manager of the affected refuge, park, forest, etc. should be contacted for specific instructions and requirements.

(d) Bridge Permit: The U.S. Coast Guard regulates activities that require construction of new bridges or renovation of bridges over navigable waters. The U.S. Coast Guard in should be contacted to determine whether a bridge permit will be required. The U.S. Coast Guard District Contact for the Bridge Programs can be reached at 504-671-2128. Processing normally requires 90 to 120 days.

(2) State

(a) Coastal Use Permit: The Office of Coastal Management 225-342-7591 of the Louisiana Department of Natural Resources oversees this permit which stipulates activities affecting the State's coastal waters and wetlands below five feet mean sea level. This application is a copy of the Section 10/404 permit application; however, the Office of Coastal Management requires a 30-day public notice. Processing time for the coastal use permit is normally within 60 days.

(b) Water Quality Certification: The Louisiana Department of Environmental Quality, Office of Environmental Services – Water Permits Division 225-219-3225 requires water quality certification for any activities that may affect any of the State's streams, lakes, ponds, bays, or other water bottoms. The application is a letter addressed to the Division Administrator, requesting certification. The applicant will then receive from the Water Permits Division a public notice, a request for additional information, and request for the legislatively required fee. The public notice will have to be published in the official journal of the State of Louisiana, legal section and the official parish journal for one day. The applicant is required to bear all publishing costs. Comments are accepted by the Water Permits Division for a period of 10 days after the public notice has appeared in the paper. After review of the requested additional information, applicants are notified soon after of approval or denial. The entire process is usually completed within 45 to 60 days. DEQ charges a fee for this certification and it is not necessary to apply until the project has been funded.

(c) Scenic River Permit: Scenic River Permits are required for all activities on or near System Rivers that may detrimentally impact the ecological integrity, scenic beauty or wilderness qualities of those rivers. These permits, when granted, contain specific conditions aimed at preserving the stream's natural character and quality. The Louisiana Legislature has prohibited certain uses on designated watercourses to preserve, protect, develop, reclaim and enhance their natural and scenic qualities (Act 947 of 1988). Prohibited uses are:

(i) Channelization;
(ii) Channel realignment;
(iii) Clearing and snagging;
(iv) Reservoir construction (impoundment);
(v) Commercial cutting or harvest of trees or timber in violation of the provisions of R.S. 56:1854
(vi) Use of a motor vehicle or other wheeled or tracked vehicle on a designated system stream [see Section 115 for exceptions] and
(vii) Any use requiring a permit where a permit has not been obtained.

Information about the Scenic Rivers Permit Process can be found at http://www.wlf.louisiana.gov/permit-process. The Louisiana Natural and Scenic Rivers Program can be reached at 225-765-2642.

(d) Letter of Comment or No Objection: This letter is required for activities that may affect state lands, water bottoms, or structures (e.g., roads, bridges, etc.). The applicant should address the request to the Assistant Secretary of the Louisiana Department of Transportation and Development, Public Works and Water Resources Division. The request should also contain a copy of the Corps of Engineers permit application(s) and the appropriate plats and maps. This process normally requires 15 to 30 days.

(3) Local

(a) Letter of Comment or No Objection: A letter of comment or no objection must be requested from: (1) levee districts and boards if the proposed project may affect levees or water control projects within a given levee district; and (2) parish police jury for any given parish which will be affected by the proposed project. It should be noted that if more than one levee district and board or parish may be affected, letters of comment or no objection must be requested from each governing body. The request should also contain a copy of the Corps of Engineers permit application(s) and appropriate plats and maps. The request should also contain a copy of the Corps of Engineers permit application(s) and appropriate plats and maps. The applicant is encouraged to check with the parish clerk for information concerning levee districts and boards as well as parish police juries.

(b) Other: Certain parishes have specific permits for activities occurring in these parishes. Appropriate parish authorities should be contacted for further information.

(4) Indicate which permits will be applicable to the proposed project.

_____ Section 10

_____ Section 404

_____ Right-of-Way

_____ Bridge

_____ Coastal Use

_____ Water quality certification

_____ Scenic Rivers

_____ Letters of no objection

i. Assurances. In order to be certain that the sponsoring authority is fully aware of the level of its financial responsibilities, the following must be completed:

The following dollar estimates are based on preliminary plans and design information and are not intended to be exact representations, but merely indications of the magnitude of the sponsoring authority's financial obligations. Do not include any contingency fees in these estimates.

(1) Estimated cost of furnishing all new lands, easements, rights-of-way, and spoil disposal areas necessary to construct and maintain the project $_____

(2) Estimated annual cost of maintenance and operation of the project and all future alterations as may be required $_____

(3) Estimated funds required to accomplish all necessary utility and any other facility relocations, alterations, and maintenance $_____

(4) Estimated funds required to provide a local match for project construction cost. $_____

(5) Engineering design and construction observation cost $_____

**TOTAL FIRST COST [Total lines (1), (3), (4), and (5)]** $_____

**TOTAL ANNUAL COST [Line (2)]** $_____

j. Estimate of Local Matching Share. In order to be eligible for State funding assistance, local sponsoring authorities are required to provide a matching share of at least 10% of the total construction cost. It is an estimate that may affect the cash component of the matching share at some point in the future if the eligible costs are incurred. A sponsor may elect to increase the local matching share to increase the application score as described in section V.A.2. Procedure for Application Evaluation Form—Part B.

Local Matching Share

(1) Total Local Match Required (at least 10 percent of construction cost)

$_____

_____ _____

Date Officer of Sponsoring Authority

5. Attachments

   a. Land Use Map: Provide as Attachment 1 a map which clearly depicts the major land use types in the benefited area as discussed in item B.4.a.(3), page IV-8. Use a scale of 1:24,000 or 1:62,500 if suitable.

   b. Flood Boundary Map: Provide, as Attachment 2, a flood boundary map consisting of topographic contours which show elevations of the area inundated by the design flood under existing conditions. This map should include all areas in which flooding will increase or decrease as a result of the project both within and outside the benefited area. Show both the EXISTING (without project) flood boundary and the ANTICIPATED (with project) flood boundary for the design flood.

   c. Project Impact Map: Provide as Attachment 3 a project impact map. This map should clearly show the location of roadways, railways, major drainage features, major utilities and building locations. (Usually, the most recent USGS topographic quadrangle map, scale 1:24,000 or scale 1:62,500 will provide a suitable base.)

      Identify the location of the project and its major components (e.g., pumping station, levees, Channelization); identify the boundaries of the flood problem within the area, as well as those areas one-half mile upstream, downstream, and adjacent to the benefited area.

   d. Drainage Area Map: Provide as Attachment 4 a drainage area map and all pertinent information as specified for the appropriate structural alternative presented in Section C.2, pages IV-25 through IV-28 (Design Standards).

   e. Runoff Calculations: Provide as Attachment 5 runoff calculations and methodologies used for each alternative considered as specified in Section C.2, pages IV-25 through IV-28 (Design Standards).

   f. Project Plan: Provide as Attachment 6 the preliminary project design plan for the appropriate alternative as specified in Section C.2, pages IV-25 through IV-28 (Design Standards).

   g. Profile or Stages Before and After Project: Provide as Attachment 7 pertinent information on before and after stream profiles and stages for the appropriate alternative as specified in Section C.2, pages IV-25 through IV-28 (Design Standards).

   h. Cross Sections: Provide as Attachment 8 pertinent information on stream cross sections as specified in Section C.2, pages IV-25 through IV-28 (Design Standards).

   i. Hydraulic Calculations, Before and After Project: Provide as Attachment 9 the pertinent hydraulic calculations for both the BEFORE and AFTER project conditions as specified in Section C.2, pages IV-25 through IV-28 (Design Standards).

j. Agency Commenting Letters: Include as Attachment 10 copies of letters of comment from those agencies whose comments were requested in item B.4.g., page IV-13.

k. Permits (If Obtained): Include as Attachment 11 copies of all permits that may have been obtained at this time.

l. Other Letters of Support or Objection to the Project: Include as Attachment 12 copies of any other letters of support or objection to the project.

m. Rural Grant Opportunity Program Resolution: Include, if applicable, as Attachment 13 a resolution declaring financial inability to satisfy the local match requirement described in section 4.j.

n. Other Attachments: Include as attachments any other information necessary to aid the Evaluation Committee in evaluation the application.

C. Pertinent Information for Completing Application

In the following sections pertinent information concerning (1) damage valuations for computing project benefits, (2) design standards for project design, (3) information sources, and (4) primary contact agencies for completing the application are presented.

1. Damage Valuations

The following tables provide the unit damage values to be used in completing item 4.e of the application. Damage values will be adjusted by the Department based on the Construction Cost Index from Engineering News-Record.

**TABLE 1**

**UNIT DAMAGE VALUES FOR RESIDENTIAL, COMMERCIAL, AND PUBLIC STRUCTURES AND CONTENTS**

| Category | Damage Value ($) Per Square Foot |
|---|---|
| Residential | |
| Single Family Dwellings | |
| Metal | 8.10 |
| Brick | 12.79 |
| Wood | 11.86 |
| Apartments | |
| Brick | 12.09 |
| Wood | 11.20 |
| Commercial | |
| Gas Station (gas only) | |
| Metal and Wood | 21.90 |
| Brick | 25.61 |
| Gas Station and Repair Shops | |
| Metal and Wood | 14.82 |
| Brick | 18.53 |
| Food and Drug Stores | |
| Metal and Wood | 21.66 |
| Brick | 24.10 |

| Category | Damage Value ($) Per Square Foot |
|---|---|
| Department Stores | |
| Metal and Wood | 23.82 |
| Brick | 26.22 |
| Hardware Stores | |
| Metal and Wood | 25.36 |
| Brick | 28.41 |
| Barber Shops | |
| Metal and Wood | 21.46 |
| Brick | 23.90 |
| Laundromats and Cleaners | |
| Metal and Wood | 14.75 |
| Brick | 15.25 |
| Convenience Stores | |
| Metal and Wood | 27.85 |
| Brick | 30.90 |
| Fast Food Outlets | |
| Metal and Wood | 43.57 |
| Brick | 49.06 |
| Restaurants/Motels | |
| Metal and Wood | 29.90 |
| Brick | 31.00 |
| Retail and Specialty Shops | |
| Metal and Wood | 34.11 |
| Brick | 37.16 |
| Bars and Liquor Stores | |
| Metal and Wood | 17.98 |
| Brick | 23.78 |

| Category | Damage Value ($) Per Square Foot |
|---|---|
| Recreational Facilities (Bowling alleys, theaters, health clubs) | |
| Metal and Wood | 20.94 |
| Brick | 23.00 |
| Warehouses | |
| Metal and Wood | 10.70 |
| Brick | 14.31 |
| Offices | |
| Metal and Wood | 42.55 |
| Brick | 49.26 |
| Nondescript (Vacant Buildings) | |
| Metal and Wood | 16.14 |
| Brick | 19.75 |
| Public Buildings | |
| Public Schools | |
| Metal and Wood | 9.21 |
| Brick | 11.86 |
| Churches | |
| Metal and Wood | 10.35 |
| Brick | 15.34 |
| Libraries | |
| Metal and Wood | 88.52 |
| Brick | 91.82 |
| City Halls | |
| Metal and Wood | 13.82 |
| Brick | 17.27 |
| Hospitals/Clinics/Nursing Homes | |
| Metal and Wood | 39.24 |
| Brick | 42.70 |

| Category | Damage Value ($) Per Square Foot |
|---|---|
| Fire Stations | |
| Metal and Wood | 9.70 |
| Brick | 10.40 |
| Post Offices | |
| Metal and Wood | 18.86 |
| Brick | 20.29 |
| Service Clubs (Elks, Fraternities) | |
| Metal and Wood | 12.32 |
| Brick | 13.07 |
| Offices (Charities, labor organizations, Unions) | |
| Metal and Wood | 13.82 |
| Brick | 17.27 |
| Other | |
| Metal and Wood | 23.99 |
| Brick | 26.27 |

Sources: Economic Data Report for U.S. Army Corps of Engineers—Lower Mississippi Valley Division's Flood Damage Estimation System, April 1981.

**TABLE 2**

**UNIT DAMAGE VALUES FOR ROADS**

| Type of Road | Damage Value ($) Per Mile |
|---|---|
| Gravel | 148.00 |
| Two-Lane | 354.00 |
| Four-Lane | 796.00 |

Sources: Economic Data Report for U.S. Army Corps of Engineers— Lower Mississippi Valley Division's Flood Damage Estimation System, April 1981; New Orleans District, Corps of Engineers; the Federal Insurance Administration; and Gulf South Research Institute.

**TABLE 3**

**UNIT DAMAGE VALUES FOR AGRICULTURAL LANDS, BY CROP***

| Crop | Damage Value ($) Per Acre |
|---|---|
| Cotton | 143.56 |
| Corn | 57.10 |
| Soybeans | 60.60 |
| Sugarcane | 143.25 |
| Wheat | 34.40 |
| Rice | 115.03 |
| Grain Sorghum | 46.86 |
| Pasture (cow/calf) | 24.48 |

*Figures are based on average prices for the years 1977 to 1980.

Sources: Development of Use Value Estimates for Agricultural, Horticultural and Marsh Lands, Louisiana Tax Commission, December 1982; Selected Enterprise Budgets Useful in Farm Planning (1977-1980), Louisiana State University Cooperative Extension Service; and Gulf South Research Institute.

2. Design Standards

Maps, plans, profile sheets and cross section sheets submitted with the application shall be consistent with accepted engineering practices. In order to facilitate review of the applications, use scales consistent with a multiple of 10 or those listed below:

| | | |
|---|---|---|
| 1" = 1 ft. | or | 1" = 1 mile |
| 1" = 2 ft. | | 1" = 2 miles |
| 1" = 4 ft. | | 1" = 4 miles |
| 1" = 5 ft. | | 1" = 5 miles |
| 1" = 10 ft. | | 1" = 10 miles |
| 1" = 20 ft. | | 1" = 20 miles |
| etc. | | etc. |

Standard-sized sheets of 24" x 36" shall be used for cross section sheets, plans and profile sheets. Maps shall conform to the scales listed above.

All maps, plans, profile sheets, cross section sheets, and other exhibits shall include a standard title block that identifies the application, applicant, preparer, name of the exhibit and number of sheets, if applicable.

All elevations should reference mean sea level (National Geodetic Vertical Datum of 1929). The applicant is encouraged to make use of available information.

a. Non-Structural Alternatives. The following information must be provided for non-structural projects.

(1) Acquisition and Relocation

(a) Design frequency of protection

(b) Maps designating areas of acquisition and relocation

(c) Description and valuations of land and structures proposed to be acquired

(d) Descriptions of existing and proposed land use

(2) Flood Proofing

(a) Design frequency of protection

(b) Description of flood proofing techniques to be employed

(c) Maps designating locations of affected structures

(d) Effect on flooding in upstream, downstream and adjacent areas

(3) Flood Warning

(a) Criteria for operation of system

(b) Estimate of the population served

(c) Methods and procedures to be used

b. Structural Alternatives

A 25-year design frequency should be used as a minimum level of protection for flood control alternatives. Compatibility with other Federal, state, or local agency requirements must be met as discussed in the application instructions.

(1) Channel Clearing, Snagging, Alterations or Modifications

NOTE: For storm sewers, provide (a), (b), (c), (d), (g), (h), and (i).

(a) Indicate design frequency and hydrologic method used (typical methods include, but are not limited to: USGS Floods in Louisiana, Magnitude and Frequency, 1976; USDA Soil Conservation Service Technical Release No.'s 20 and 55; U.S. Army Corps of Engineers' HEC-1, the Rational Method).

(b) Provide a drainage area map on USGS topographic maps or the best available topography and a project plan with stream profile stationing, cross section locations and orientation, proposed spoil disposal areas and other construction activities identified.

(c) Provide drainage summary sheet(s) consisting of stream station locations, cumulative drainage areas to each design locus, design discharge (provide both "without project" and "with project," if different); indicate locations of tributary streams; cross reference stream identifications and stationing with project plan.

(d) Provide stream profile sheet(s) including existing and proposed channel grades, low bank profiles, existing and proposed bridges, culverts and other structures, proposed channel dimensions (bottom width and side slopes) location of tributaries, existing and proposed water surface profiles for the design flood, stream stationing consistent with the stationing on the project plan and surveyed cross section locations identified.

(e) Provide surveyed cross sections of all significant structures crossing the channel, showing all dimensions of the channel and structure including shape and position of conveyance openings; the size, shape and placement of bridge piles, wing walls, and handrails; the crest of the adjacent roadway; the decks and low beams of bridges; materials of construction; and other features necessary to adequately define the hydraulic characteristics of the structure and

adjacent roadway. It is suggested that available information be used wherever possible.

(f) Provide surveyed cross sections along the stream and upstream and downstream of the structures at frequent enough intervals to identify transitions in the size and shape of the channel and overbank areas.

(g) Provide supporting information to justify the starting water surface elevation used in the hydraulic computation for each water surface profile presented.

(h) Provide hydraulic computations, including runoff calculations, to justify all of the water surface profiles(s) shown on the stream profile sheet(s); furnish complete input and output listings of all computer programs used. If hand calculations are presented, provide in tabular fashion for each reach of the stream: stationing, slope, depth, cross sectional area, hydraulic radius, and velocity and flow of the channel and each of the overbank areas; and for all structures, calculations of the flow through, over and around the structures and the basis of the calculations (formulas, monographs, etc.) and references of the methods employed (HEC-RAS, SMS, Manning's Equation, HDS No. 1, etc.).

(i) Evaluate the effect of the proposed project on flooding downstream, upstream and in adjacent areas.

(2) Lakes, reservoirs, and other impoundments

(a) Indicate design frequency and hydrologic methods used and their sources (Corps of Engineers, SCS, or USGS, etc.).

(b) Provide a drainage area map and project plan identifying all existing and proposed embankments, spillways, outlet chutes, and other components of the dam and reservoir.

(c) Provide preliminary design plans for major components, identifying proposed dimensions, materials, slopes, grades, seepage prevention methods, erosion control measures, and power generation facilities, if any.

(d) Provide hydraulic and hydrologic analyses, including runoff calculations, flood routing and water surface profile calculations for the design flood, for "with project" and "without project" conditions.

(e) Provide preliminary geotechnical information, including soil borings to verify the suitability of proposed construction methods.

(f) Provide hydrologic analyses to determine the downstream flooding effects from a catastrophic failure of the dam during a flood of extreme magnitude. The flood volume should be related to the probable maximum flood and based on the hazard category of the proposed dam in accordance with the Dam Safety Program of the Public Works and Water Resources Division.

(g) Evaluate the effect of the project on flooding upstream, downstream, and in adjacent areas.

(3) Levees, dikes, floodwalls, and related structures

(a) Provide design frequency, hydrologic and hydraulic calculations, methods used to evaluate the flood levels and wave heights, and justify the free board levels used.

(b) Provide preliminary project plan showing proposed improvements, existing and proposed grades and slopes and the relationship of the proposed improvements to other flood control works in the vicinity.

(c) Provide preliminary geotechnical information, including logs of soil borings, to determine the suitability of the proposed construction methods.

(4) Pumping station

(a) Provide the design frequency, duration, hydrologic and hydraulic calculations used to estimate required pumping capacities.

(b) Provide drainage area map and project plan identifying all existing and proposed embankments, outlets, and other components.

(c) Provide stage-area and stage-volume curves for sump or storage areas utilized.

(d) Provide topographic maps showing the sump or storage areas.

(e) Evaluate the effect of the project on upstream, downstream, and adjacent areas.

(5) Storm Water Detention and Retention Measures

(a) Provide design frequency, hydrologic calculations, documentation of methods used to evaluate the modification of flood volumes, and drainage area maps as appropriate.

(b) Provide project plan showing proposed improvements.

(c) Provide a quantitative evaluation of the effect on flooding in adjacent areas.

3. Information Sources

Information that might prove useful in completing the application is available from a number of sources, including the records of parish engineers, newspaper accounts, published and unpublished water resources reports, and data collected by Federal, state, and local agencies. Selected references are listed and described below. Many of these

references are available for inspection at one or more of the primary contact agencies listed in Section C.4., pages IV-33 and IV-34.

Louisiana Geological Survey, 1983, *Louisiana Atlas of Floodplains and Flooding Problems*: Louisiana Department of Natural Resources, Baton Rouge, Louisiana.

An atlas of 96 maps depicting the following information for each of the state's 15 major river basins:

(1) Geologic floodplains

(2) Flood prone soils

(3) Existing and proposed flood control projects

(4) Areas benefited by existing and proposed Natural Resources Conservation Service PL-566 projects

(5) Flood insurance claims and policies

(6) Flood problem areas

(7) Land use and land cover

(8) Hydrologic boundaries

(9) 100-year floodplain

(10) Miscellaneous maps including scenic streams, Federal and State lands, major waterfowl habitat, and others.

Neely, B.L., U.S. Geological Survey, 1976, *Floods in Louisiana, Magnitude and Frequency*, 3rd ed.: Louisiana Department of Highways (now the Louisiana Department of Transportation and Development), Baton Rouge, Louisiana.

Presents data on annual peak floods for all published gauging records in Louisiana (through 1974) and describes techniques for estimating magnitude and frequency of peak discharges on streams in Louisiana.

U.S. Geological Survey, Water Resources Division, 1982, *Water Resources Data Louisiana, Water Year 1981*, 3 vol.: Baton Rouge, Louisiana.

> One of annual series by USGS. The presented data represents that part of National Water Data System operated by the USGS and cooperating State and Federal agencies in Louisiana. Included are stage records of streams, lakes, and reservoirs; discharge records at stream-gauging stations; water levels in observation wells, water quality records in streams, lakes, reservoirs and observation wells; and additional miscellaneous information.

U.S. Army Corps of Engineers, 1977, *Stages and Discharges of the Mississippi River and Its Tributaries, 1977*, New Orleans District, Vicksburg District.

> One of annual series published by Corps of Engineers district offices, indicating stage and discharge for the designated river basins.

Federal Emergency Management Agency (or, prior to 1979, U.S. Department of Housing and Urban Development, Federal Insurance Administration), various dates, Flood Insurance Studies, various communities. (Department of Urban and Community Affairs in Baton Rouge is a repository for this information.)

> A series of studies mapping floodplain boundaries, floodways, and flood zones to be used for insurance purposes, based on application of detailed and approximate methods of analysis. They supersede earlier or less detailed investigations conducted for same locations. Also includes expected water surface elevations for floods of 10-, 50-, 100-, and 500-year recurrence intervals.

Federal Emergency Management Agency (or, prior to 1979, U.S. Department of Housing and Urban Development, Federal Insurance Administration), various dates, Flood Hazard Boundary Maps, various communities. (Department of Urban and Community Affairs is a repository for this information.)

> A series of maps prepared for many areas of the state to establish flood insurance rate zones prior to completion of detailed flood insurance studies. These maps are usually based on approximate delineations of flood boundaries, and are superseded by FEMA flood insurance studies, where available.

U.S. Geological Survey, various dates, *Maps of Flood Prone Area*, various locations statewide.

> A series of maps indicating floodplain boundaries throughout the state, drawn from base maps of USGS (15 min. and 7.5 min. topographic quadrangles) and including data from historical flood records.

Louisiana Department of Urban and Community Affairs, Office of Planning and Technical Assistance, 1982, *Floodplain Management Plan, State of Louisiana*, Baton Rouge, Louisiana.

> Discusses flood hazards and damages and aspects of floodplain management; evaluates structural and non-structural flood hazard mitigation measures; describes flood disaster preparedness and response; and presents legal aspects of floodplain management.

Federally sponsored computerized data information systems include:

> WATSTORE, U.S. Geological Survey
>
> STORET, U.S. Geological Survey and U.S. Army Corps of Engineers
>
> NAWDEX, U.S. Geological Survey

A computerized resource information system is operated in Louisiana by the State Planning Office. The Louisiana Areal Resources Information System (LARIS) includes:

- Land use classifications
- Soil associations
- River basin boundaries
- Surficial geology
- Government land management boundaries
- Political subdivisions
- Census data
- Stream hierarchy and basin areas and other physical resources organized by areal polygons with a minimum resolution of 10 acres in urban areas and 40 acres in rural areas.

4. Primary Contact Agencies

Louisiana State University
Louisiana Geological Survey
3079 Energy, Coastal and Environment Building
Baton Rouge, Louisiana 70803
(225) 578-5320

Louisiana Division of Administration
Office of Community Development
P.O. Box 94095
Baton Rouge, Louisiana 70804-9455
(225) 342-7412

Louisiana Division of Administration
Office of Facility Planning and Control
P.O. Box 94095
Baton Rouge, Louisiana 70804
(225) 342-0820

Louisiana Department of Culture, Recreation and Tourism
Division of Historic Preservation
P.O. Box 44247
Baton Rouge, Louisiana 70804
(225) 342-8160

Louisiana Department of Environmental Quality
P.O. Box 4301
Baton Rouge, Louisiana 70821-4303
(866) 896-5337

U.S. Department of Agriculture
Natural Resources Conservation Service
3737 Government Street
Alexandria, Louisiana 71302
(318) 473-7751

U.S. Geological Survey
Louisiana Water Science Center
3535 South Sherwood Forest Blvd
Baton Rouge, Louisiana 70816
(225) 298-5481

U.S. Army Corps of Engineers
New Orleans District
P.O. Box 60267
New Orleans, Louisiana 70160
(504) 862-2201

U.S. Army Corps of Engineers
Vicksburg District
P.O. Box 60
Vicksburg, Mississippi 39180
(601) 631-5000

# Part V

# EVALUATION OF PROPOSED PROJECTS AND DISTRIBUTION OF FUNDS

A. Project Evaluation Procedure

The Evaluation Committee will compile a priority ranked list for the projects in rural areas within each district and projects within urban areas each funding year. For evaluation purposes, the project classifications concern the characteristics of the benefited area, not the design criteria or the contributing drainage area. The project classifications are urban and rural. The urban category includes projects located in the Shreveport, Monroe, Alexandria, Lake Charles, Lafayette, Baton Rouge, Houma, Hammond, New Orleans, Mandeville-Covington, and Slidell urban areas as shown in Figure 4, page II-4. Rural projects are those located outside of the eleven aforementioned urban areas. The evaluation will be based on a combination of rating procedures described hereinafter.

The priority ranking of each project will be based on the sum of the scores of parts A and B of the Application Evaluation Forms. Using the combined scores, the Evaluation Committee will produce a program priority list. The priority list will be forwarded to the Joint Committee on Transportation, Highways and Public Works.

1. Procedure for Application Evaluation – Part A

   The following guidelines will be used by the Evaluation Committee to rate applications to the Statewide Flood Control Program. This scoring procedure pertains to projects, which meet the legislative intent of the program. Projects that are technically unsound, cause unreasonable flooding in other areas, cause unacceptable or unmitigable environmental damages or otherwise do not meet the objectives of the program will not be scored.

   a. Documentation of the Flood Problem (20 points maximum)
      This category takes into consideration the adequacy of documentation which demonstrates the existence and severity of flood damages.

   b. Local Support (5 points maximum)
      This category takes into consideration the following:

      (1) Letters of support on file from the respective legislative delegation
      (2) No letters of objection from public officials, neighboring authorities, citizen groups, etc.
      (3) Multiple sponsorship

   c. Technical Feasibility (45 points maximum)
      This category takes into consideration the following:

      (1) Completeness of project design

(2) Due consideration of alternatives (structural and non-structural)
(3) Compatibility of the project to other Federal, state, and local projects
(4) Impact on flooding in areas upstream, downstream, and adjacent to the benefited area

d. Prevention of Loss of Life (5 point maximum)
This category takes into consideration the following:

(1) Historical losses of life that may have been prevented by the project.
(2) The degree of success of the project at maintaining access to vital services (e.g., hospitals) and protection of evacuation routes

e. Environmental Effects and Impact on Development (15 point maximum)
The category takes into consideration the following:

(1) No letters of objection from public agencies
(2) No impact on special historical, archeological, geological features, or environmentally sensitive areas
(3) Not in a wetlands area
(4) Effectiveness of the project in relation to encroachment into flood prone area (i.e., 100-year floodplain)

f. Projects Recommended But Not Funded (10 point maximum)
Add points for each year (up to a four year maximum) that the proposed project has been on the list of recommended projects but has not received funding.

**TABLE 4**

**APPLICATION REVIEW FORM**

| Category | Points | | Comments |
|---|---|---|---|
| | Maximum | Credited | |
| Documentation of flood problem | 20 | | |
| Local Support | 5 | | |
| Technical Feasibility | 45 | | |
| Prevention of loss of life and improved public safety | 5 | | |
| Environmental effects and impact on development | 15 | | |
| Project recommended but not funded | 10 | | |
| TOTAL FROM PART A | 100 | ----- | |

2. Procedure for Application Evaluation Form—Part B.

Part B scores are computed on the basis of potential damage reductions associated with the design flood and do not include efforts to annualize benefits and costs. Similar to Part A, projects are given and adjusted raw score and a final score. The project with the highest adjusted raw score is awarded 100 points and competing projects are awarded points based on the ratio of their raw scores to the raw score of the highest scored project multiplied by 100.

The same formula is to be used for rural projects and urban projects. The Part B raw score is determined using the following formula:

$$Part\ B\ \ Score = \frac{Total\ Damages}{Construction\ Cost}$$

Total damages are any damages from the design storm which will be prevented by the flood control project, as defined by Section IV.C.1.

To determine the adjusted raw score, the raw score is multiplied by the Part B Score Adjustment, which is determined using the following equation, where PLS is the percentage of the local share of the cost of construction:

$$Part\ B\ Score\ Adjustment = \frac{90}{90 - (PLS - 10)}$$

For projects seeking participation in the Rural Grant Opportunity Program, a Part B Score Adjustment factor of 1.0 will be used.

In the Part B scoring process, projects are separated into their appropriate categories (i.e., rural and urban). Within each category, the project with the highest raw score is awarded 100 points. The other projects are awarded points based on the ratio of their raw score compared to the score of the highest project multiplied by 100.

3. Example of Evaluations

The Evaluation Committee will add the scores from Parts A and B to derive the total score for each project. The priority ranking will be determined by adding the total scores from Parts A and B for each project. In the following example hypothetical information is used to compare three projects.

a. Part A

The three projects are first scored using the Application Evaluation Form—Part A. Results for the three projects are summarized in the following table. Projects are given both a raw score and a final score. The project with the highest raw score is awarded 100 points and competing projects are awarded points based on the ratio of their raw scores to the raw score of the highest scored project multiplied by 100.

**TABLE 5**

**TABULATION OF PART A SCORE (EXAMPLE)**

| Category | Maximum Points | Points Awarded | | |
|---|---|---|---|---|
| | | Flat River | Danville | Sunnydale |
| Documentation of Flood Problem | 20 | 12 | 17 | 13 |
| Local Support | 5 | 4 | 5 | 4 |
| Technical feasibility | 45 | 36 | 40 | 27 |
| Prevention of Loss of Life & Improved Public Safety | 5 | 3 | 3 | 2 |
| Environmental effects & impact on development | 15 | 1 | 3 | 2 |
| Project recommended but not funded | 10 | 2.5 | 0 | 0 |
| Raw Score | 100 | 58.5 | 68 | 48 |
| Part A Score | | 86 | 100 | 71 |

b. Part B

The following tables demonstrate the Part B evaluation procedure for the same three projects (assumed to be in the rural category). The benefits data presented in the first table would be taken from the applications.

The damage reductions and cost data for each category shown in the following table are used to compute the raw scores shown in Table 7 - Tabulation of Part B Score. The project with the highest adjusted score receives 100 points; others receive a percentage of 100 points based on their adjusted score relative to the project with the highest adjusted score.

**TABLE 6**

**TABULATION OF BENEFITS (EXAMPLE)**

| | Project Damage Reduction (Dollars) | | |
|---|---|---|---|
| Category | Flat River | Danville | Sunnydale |
| Agricultural | 118,746 | 600,000 | 40,000 |
| Residences | 4,797,000 | 1,000,000 | 350,000 |
| Commercial/Industrial Buildings | --- | 50,000 | 1,100,000 |
| Other Buildings | --- | 100,000 | 700,000 |
| Farm Structures | --- | 200,000 | 100,000 |
| Total Damage Reduction | 4,915,746 | 1,950,000 | 2,290,000 |

**TABLE 7**

**TABULATION OF PART B SCORE (EXAMPLE)**

| | | Flat River | Danville | Sunnydale |
|---|---|---|---|---|
| Total Damage / Construction Cost | = | $4,915,746 / $1,300,000 | $1,950,000 / $500,000 | $2,290,000 / $700,000 |
| Raw Score | = | 3.78 | 3.55 | 3.27 |
| 90 / (90 – (PLS – 90)) | | 90 / 90-(10-10) | 90 / 90-(30-10) | 90 / 90-(10-10) |
| Funding Adjustment | = | 1.00 | 1.29* | 1.00 |
| Raw Score x Funding Adjustment | | 3.78*1.00 | 3.55*1.29 | 3.27*1.00 |
| Adjusted Raw Score | = | 3.78 | 4.56 | 3.27 |
| | | 3.78 / 4.56 | 4.56 / 4.56 | 3.27 / 4.56 |
| **Part B Score **** | **=** | **83** | **100** | **72** |

* *In this case, Danville has increased the local share of the cost of construction to 30% and therefore receives a higher score.*

c. Priority Score

The point totals from parts A and B are added in the following table to establish scores for the priority ranking of projects to be recommended for funding.

**TABLE 8**

**FINAL PRIORITY SCORES (EXAMPLE)**

| | Project | | |
|---|---|---|---|
| Form | Flat River | Danville | Sunnydale |
| Part A | 86 | 100 | 71 |
| Part B | 83 | 100 | 72 |
| Total | 169 | 200 | 143 |
| Rank | 2 | 1 | 3 |

If these three applications were in the same district and they were all in the rural category (as previously stated), the Evaluation Committee would recommend them for funding in the following order: (1) Danville, (2) Flat River, and (3) Sunnydale.

B. Project Application Review and Public Hearings

The Flood Control Project Evaluation Committee will review applications between October 1 and the following April 1. During the review period, public hearings will be conducted in locations convenient to each Statewide Flood Control Program funding district by the Joint Legislative Committee on Transportation, Highways, and Public Works to solicit comments on the projects being considered for funding.

During this time, the Evaluation Committee will also receive from the Joint Legislative Committee on Transportation, Highways, and Public Works a projected funding level for the construction program of the coming year.

Based on the information gathered at the public hearings and the application evaluations, the Evaluation Committee will submit a list of recommended projects to the Joint Legislative Committee, on the basis of the distribution of funds described below.

C. Distribution of Funds

The distribution of program funds is based on a two-tiered system including: (1) the eleven major urban areas in Louisiana as shown in Figure 4, Page II-4; and (2) the five funding districts shown in Figure 5, Page II-5. Forty-five percent of total program funds is allocated to project areas within the eleven designated urban areas.

Projects within urban areas must compete for funding with projects from all urban areas. Urban funding shall be distributed evenly among urban jurisdictions with outstanding funding obligations. The urban areas included are Shreveport, Monroe, Alexandria, Lake Charles, Lafayette, Baton Rouge, Houma, Hammond, New Orleans, Mandeville-Covington, and Slidell urban areas. The boundaries of the urban areas are consistent with the Federal Highway Administration's Adjusted Urban Area Boundaries.

Fifty-five percent of total program funds are allocated to rural projects in the five funding districts. Table 9 on the following page presents the funding allocation percentage for each of the five districts.

The total annual funding provided to projects under the Rural Grant Opportunity Program shall not exceed 25 percent of the total annual funding provided to the Statewide Flood Control Program.

**TABLE 9**

**ALLOCATIONS FOR RURAL PROJECTS BY FUNDING DISTRICT**

| | Percentage of State Total | | |
|---|---|---|---|
| Funding District | Rural Land Area | Rural Population | Funding Allocation |
| Northwest | 28.589 | 25.745 | 27.167 |
| Northeast | 19.644 | 13.948 | 16.796 |
| Southwest | 18.199 | 18.537 | 18.368 |
| Southeast | 16.907 | 22.824 | 19.866 |
| South Central | 16.661 | 18.964 | 17.803 |
| Total: | 100.0 | 100.0 | 100.0 |

Table 10 presents the funding distribution for a hypothetical $20 million construction program allocation.

**TABLE 10**

**DISTRIBUTION OF HYPOTHETICAL $20 MILLION CONSTRUCTION PROGRAM**

| | Total ($Million) | | |
|---|---|---|---|
| Urban Areas | 9 | | District Total (Rounded) |
| Rural Districts | 11 | Northwest | 2.988 |
| | | Northeast | 1.848 |
| | | Southwest | 2.020 |
| | | Southeast | 2.185 |
| | | South Central | 1.958 |
| | 20 | | 11 |

D. Redistribution Procedure

If there are insufficient approved rural projects for a particular district to utilize the funding allocation in a particular year, then the excess funds shall be allocated to fund rural projects in the other funding districts which have been approved but not funded. All excess funds shall be redistributed to other districts on a pro rata basis based on each funding district's percentage of rural project funds (Table 9).

If funds allocated to the five funding districts are remaining after all approved rural projects have been funded, any remaining funds may then be used to fund approved but unfunded projects in urban areas. Similarly, any funds remaining after all approved urban projects have been funded may then be used to finance rural projects in the funding districts and shall be allocated in the same fashion as any funds initially allocated to these districts.

In the event that funds become available due to the expiration of the four-year period allowed sponsoring authorities to generate local matching funds, those funds previously set aside will be redistributed in the same manner as described above. The first priority shall be for these funds to remain in the same funding category and area as the original project for which the funds were allocated.

E. Legislative Process

The Joint Legislative Committee on Transportation, Highways and Public Works will submit to the Legislature a construction program. As specified by Act 351, the Legislature may delete any project that it believes was not selected in accordance with the guidelines of the Act. The Legislature may not make any additions or substitutions to the construction program.

Projects recommended by the Evaluation Committee but not funded by the legislature will remain on the Evaluation Committee's recommendation list for a period of up to four years. These projects must compete with all other remaining projects from previous funding years (up to four years) and new projects in subsequent funding years. However, projects recommended but not funded will be awarded 3.3 points (10 points maximum) for each year since the first filing of the project application.

F. Construction and Operation

Each sponsoring authority designated as a recipient of program funds must enter into an agreement with the Department of Transportation and Development, Public Works and Water Resources Division prior to the initiation of construction of a project and awarding of funds. This agreement stipulates procedures that must be followed during all construction phases of the project, operation and maintenance, as well as the sponsoring authorities' obligations under R.S. 38:90. Policies and procedures that must be adhered to are detailed in the *Statewide Flood Control Program Procedural Manual for Funded Projects* made available to all sponsoring authorities designated to receive program funding.

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# PART VI

# TIME SCHEDULE FOR FUNDED PROJECTS

The requests for Statewide Flood Control Program funds far exceed the amount of money made available each year. In an effort to best utilize the available funds, the following time schedules shall be incorporated into project development:

| TASK | MAXIMUM TIME (YEARS) |
|---|---|
| 1. Execution of Agreement Between DOTD and Sponsor | ½ |
| 2. Application for Permits | 1 |
| 3. Submittal of preliminary plans | 2 |
| 4. Submittal of Draft Final Plans, Specifications and Cost Estimate | 3 |
| 5. Acquisition of Rights-of-Way, Permits and Utility Relocation and securing the funding for the Sponsor's portion of the project | 3 ½ |
| 6. Advertising for Bids and Awarding of Contract | 4 |

The date of the letter from the Department advising the sponsor that his project has been funded shall be used as the beginning point in determining the amount of time that has elapsed.

In the event a task is not completed within the maximum time allotted, the agreement between the Department and the sponsor shall be canceled and the state funds that were allocated for the proposed project shall be reallocated.