

FLOOD EVENT DOCUMENTATION KIT



**US Army Corps
of Engineers®**
New York District

MATERIALS NEEDED FOR A BENEFICIAL FLOOD ASSESSMENT

1. NAME/LOCATION OF FLOOD
2. PHOTOGRAPHS/VIDEO
3. DATE/WEATHER CONDITIONS
4. GATHERING FLOOD MARKS AND MAPPING LOCATIONS
5. CHRONOLOGY OF EVENTS/ACTIONS
6. DESCRIPTION/ESTIMATE OF DAMAGES
7. COLLECT NEWS CLIPS
8. POINTS OF CONTACT



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1. NAME, LOCATION AND DATE OF FLOOD EVENT

Provide basic information necessary to identify flooding event, the name of the body of water causing the flood, the name of the municipality being affected and the date of the event (See “Flood Event Documentation Sheet” Data Sheet #1).

- Name of the stream, creek, river, etc. where the flood is taking place.
- Name of the town or towns involved in the current flood event.
- Street locations of the flooding.
- Date of flood event.

2. PHOTOGRAPHS AND VIDEO TAPES

Since devastating flood waters can be here today and gone tomorrow, the best way to capture the impact of such an event is on film. Photographs should be taken during maximum flood stage of the stream at various identifiable points along the stream to depict depth and width of the inundation of flood waters.

Suggestions for photographs:

- The photographer should not put himself at risk to improve the viewpoint of the photograph.
- Date and label all photographs with a brief description of where the photograph is being taken and in what direction you are looking. (See Data Sheet #2).
- Photograph emergency crews at work.
- Photograph evacuation procedures.
- Photograph roads, bridges and buildings inundated by flood waters.
- Photograph roads, bridges and buildings after flood waters recede.
- Photograph flood marks at the highest peak you believe the water was at. Use a place that will be retraceable at a later date and include a reference scale when taking floodmark (photo).



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- Photograph damages as they are happening during the flood.
- Photograph obvious obstructions (ice floes, tree trunks, etc.) which might be blocking channels/culverts, etc.

3. DATE AND WEATHER CONDITIONS

To help identify the cause, severity, and type of flooding, the weather conditions leading up to, during, and after the flood event need to be recorded (See Data Sheet #1).

- The date and time when the flooding started, reached maximum stage, and began to recede.
- The weather conditions before, during, and after the flooding.
- Provide newspaper clippings of the weather for the days before, during, and after the flood event.

4. GATHERING FLOOD MARKS AND MAPPING LOCATIONS

Flood control studies are primarily based on hydrologic and hydraulic computer models. In order to calibrate the computer model, high water marks and rainfall data for recent events need to be available (See Data Sheets # 1 and 3).

- While taking photographs, you may use the attached example or one of your own marks to record Flood Marks. (See Data Sheet #4)
- Record Flood Marks at the highest peak you believe the water was at. Use a place that will be retracable at a later date and include a reference scale when taking floodmark (photo).
- Record height of flood level relative to a permanent benchmark, such as first floor elevation, garage slab, sidewalk, curb, catch basin inlet, manhole rim, road surface at center line of intersection, etc..
- Attach permanent flood mark to structures, if possible, such as a nail or bolt fastened to a telephone pole or wall of building, and document on “Flood Mark Data Sheet” (See Data Sheet #3).
- Locations of Flood Marks should be plotted on FEMA Flood Insurance Rate Maps, local road maps, USGS Quadrangle, or other similar maps.



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5. CHRONOLOGY OF EVENTS/ACTIONS

To maintain a record of how fast the flood waters rose and receded and how the town was able to react to the flood, a record of events in chronological order should be kept (See Data Sheet #5). Examples of actions that should be recorded, are as follows:

- When evacuations begin to take place.
- Road closures.
- State of Emergency declared (Enclose copy of document in report).
- Start, peak, and recession of the flood.
- Emergency personnel called, and what they did to help alleviate the flood and damage.
- Methods used to alleviate flood and how successful.

6. DESCRIPTION/ESTIMATE OF DAMAGES

These estimates will be of importance to economic studies of the study area. Record damages that are significant. You don't have to give an exact estimate if it is not available but a good estimate is recommended. The following estimates/descriptions are some examples of what should be listed:

- Listing of residential and commercial structures including contents damaged by floods noting location (addresses) and extent of flooding at each structure relative to the main floor/front entrance (See Data Sheet #6).
- Damages to streets, highways, railroads, sewers, bridges, power lines and other infrastructure (See Data Sheet #7).
- Emergency evacuations, administrative costs for relief assistance, cleanup costs, and increased costs of Department of Public Works, Police, Fire, Ambulance, and other emergency response teams (See Data Sheet #8).
- Duration of road closures, business closures, and other events that would contribute to loss of income.



7. COLLECT NEWS CLIPS

Newspapers are a good source of information. They often document the severity of the flood by writing about the human losses or suffering which occur and the heroic actions of rescue workers and local citizens. Collecting the weather reports for the days prior to, during, and after the flood also provides valuable data. All pertinent information regarding the flood event should be collected such as:

- News clippings
- Photographs
- Televised news reports
- Personal videos recorded by local citizens

8. POINTS OF CONTACT

Since no one person can know everything that is going on at once during the flood event, the names, addresses, and telephone numbers of people that are involved in the flooding situation should be collected (See Data Sheet #9).

Compiling a list of involved parties will facilitate future studies by providing a means of gathering additional information. The list should contain the following people:

- Municipal administrators.
- Chiefs of rescue squads. (police, firemen, Red Cross, etc.).
- Superintendent of Public Works.
- Local utility companies.
- Victims of the storm who suffered the greatest damages.
- Engineers, surveyors, and other scientists involved.
- Those involved in preparing this report.
- A single designated point of contact for coordinating all efforts.



FLOOD EVENT DOCUMENTATION DATA SHEET

(1)

Prepared by: _____ Date: _____

Name of river, stream, creek: _____

Date and Time of high water mark: _____

Site location:
 Street: _____
 Town, Village, City: _____
 County: _____
 State: _____

1. What caused the flooding? (answer all that apply)

Heavy	Snow	Ice	Debris	Sewer
Rain _____	Melt _____	Jam _____	Build-up _____	Back-up _____
Other (Explain) _____				

2. Time and date the flooding reached maximum stage? _____ (A.M./P.M.), ___/___/___ (m/d/y)

3. At what time did the flooding recede? _____ (A.M./P.M.), Date ___/___/___ (m/d/y)

4. What were the weather conditions before the flood?

Heavy	Heavy	Warm, clear
Rains _____	Snows _____	Winter Day _____
Other _____		

5. What were the weather conditions during the flood?

Heavy	Heavy	Warm, clear
Rains _____	Snows _____	Winter Day _____
Other _____		

6. Mark Type of land uses upstream, downstream and at location of flood. (mark all that apply)

	UPSTREAM	DOWNSTREAM	FLOOD SITE
(a) Agriculture (Sparse development)	_____	_____	_____
(b) Forest (Undeveloped)	_____	_____	_____
(b) Urban (Developed)	_____	_____	_____
(d) Wetland (Marsh or Sloughs)	_____	_____	_____
(e) Suburban (moderately developed)	_____	_____	_____
(f) Reservoir/Dams	_____	_____	_____

PHOTO DATA SHEET

(2)

PHOTO No : _____

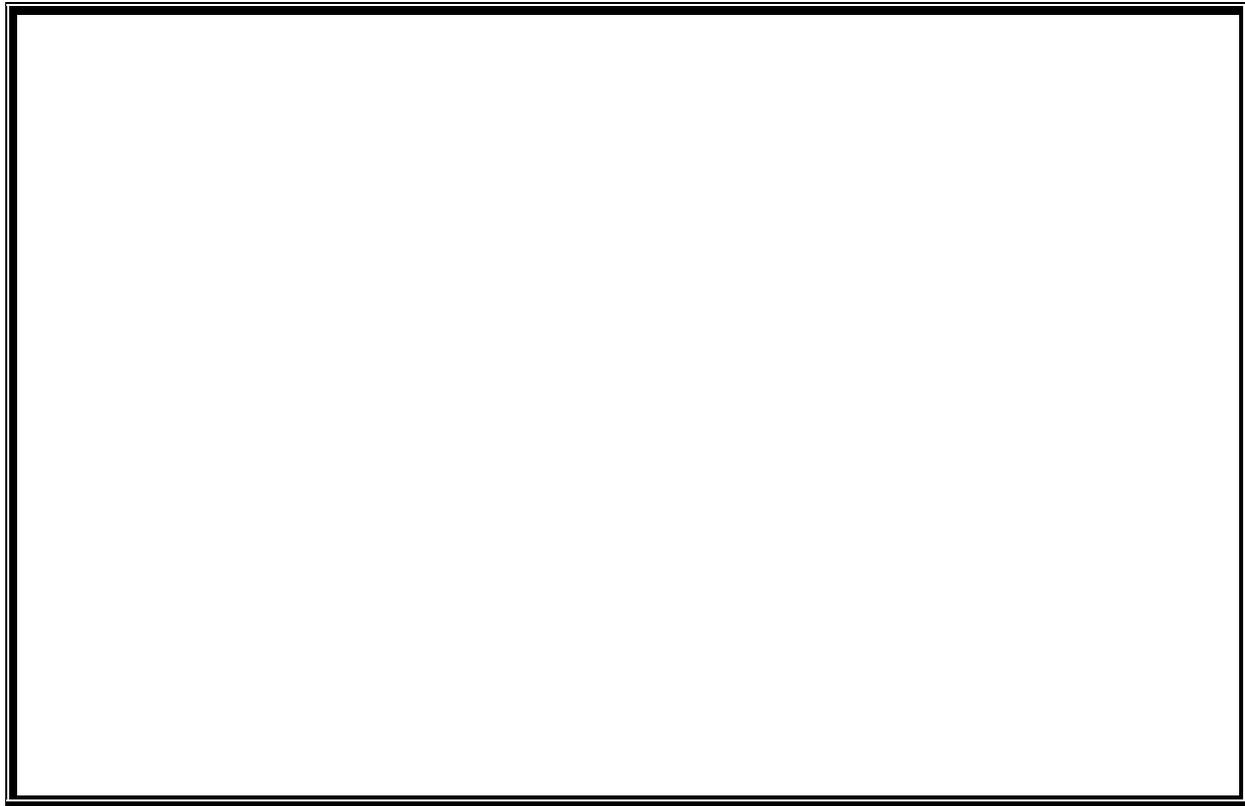
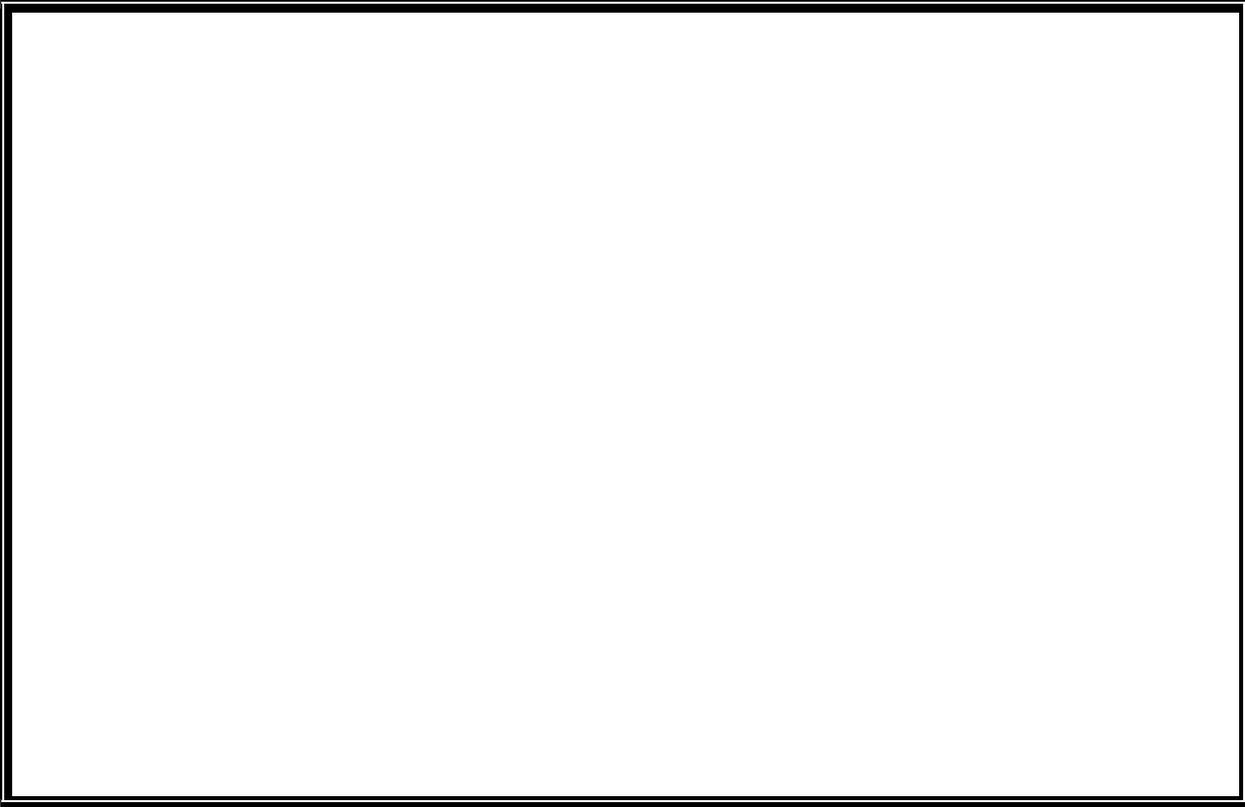


PHOTO No : _____

(please add description of photo after the photo no.)

FLOOD MARK DATA SHEET

(3)

Prepared by: _____

Date: _____

Name of river, stream, creek: _____

Date and Time of high water mark: _____

Site location:

Street: _____

Town, Village, City: _____

County: _____

State: _____

Location of Floodmark:

Building	Utility	Tree			
Wall	Pole	Trunk	Vehicle	Other	

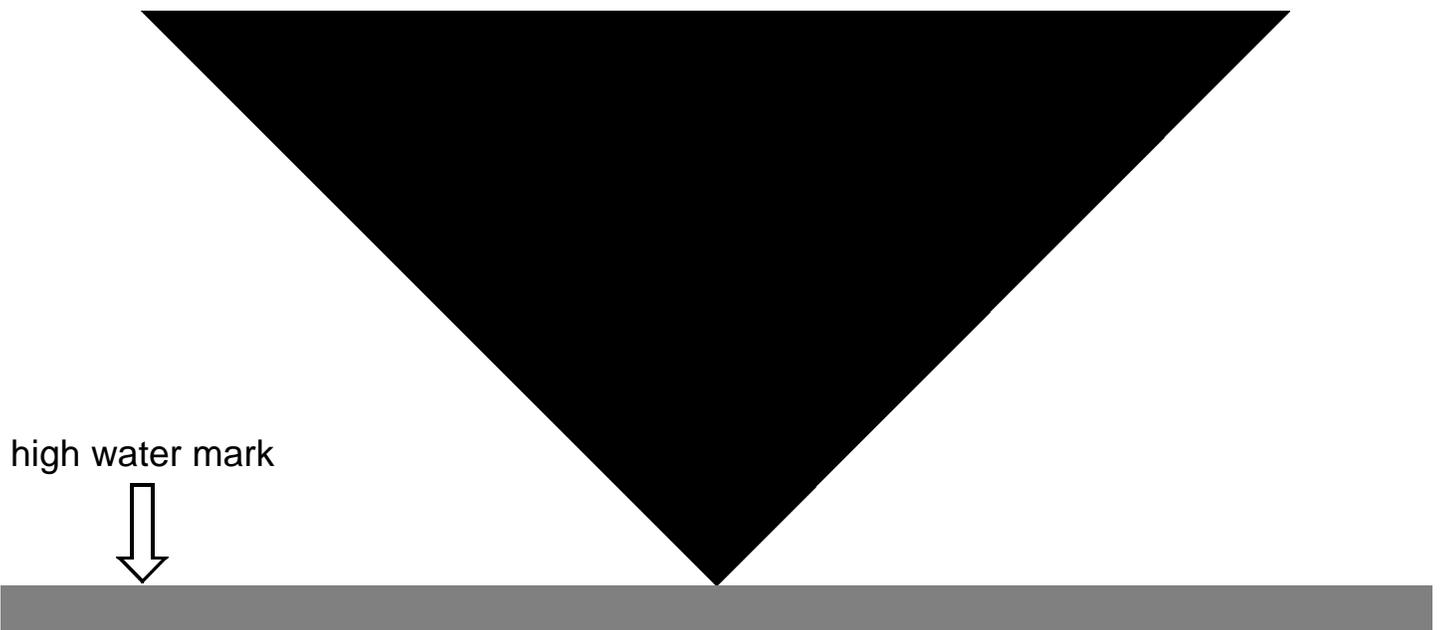
Height above:
(Provide photo if available)

	Adj. curb/	Adjacent	Road		
Floor	Sidewalk	Ground	Surface	Other	

Elevation of Floodmark: _____ NGVD/(ft)
(By survey if available)

Provide Photograph or Location Sketch of Flood Mark in this Area:

FLOOD MARK



DAMAGED BUILDING DATA SHEET

(6)

Prepared by: _____

Date: _____

Name of river, stream, creek: _____

Date and Time of flood: _____

Building location:

Street: _____

Town, Village, City: _____

County: _____

State: _____

1. Type of structure affected by Event:

Residential _____ Commercial _____ Municipal _____ Other _____

2. Class of construction:

Economy _____ Average _____ Custom _____ Luxury _____ N/A _____

3. Building size: Length _____ ft. Width _____ ft.

4. Structure type:

1 Story _____ 1.5 Story _____ 2 Story _____ 2.5 Story _____ 3 Story _____
3-5 Story _____ 5-10 Story _____ 10+ Story _____ N/A _____

5. Configuration:

Detached _____ Town/Row House _____ Semi-Detached _____
Mobile Home _____

6. Basement:

No Basement _____ Finished Basement _____ Unfinished Basement _____ N/A _____

7. Elevation of lowest opening of the structure. _____ ft.

8. Occupancy:

One Family _____ Two Family _____ Three Family _____ Other _____

9. Exterior: Wood Siding-Wood Frame _____ Brick Veneer-Wood Frame _____
Stucco-Wood Frame _____ Painted Concrete Block _____
Solid Masonry (avg. & custom) _____ Stone Ven-Wood Frame _____
Solid Brick (luxury) _____ Solid Stone (luxury) _____
Other _____

10. Description of damages to the structure.

11. Depth of Flooding _____ ft. Location of benchmark _____

INFRASTRUCTURE DAMAGE DATA SHEET

(7)

Prepared by: _____

Date: _____

Name of river, stream, creek: _____

Date(s) and Time(s) of Flood Event:

Site location:

State: _____

County: _____

Town, Village, City: _____

Street: _____

- | | | |
|-------------------------|--------------------------------------|--|
| Damage Description Nos: | 1) Culverts, catch basins, headwalls | 6) Utility lines-sewer, water, gas, electric |
| | 2) Bridges | 7) Water treatment/wastewater treatment plant |
| | 3) Dams | 8) Pump stations |
| | 4) Levees/floodwalls | 9) Parks, ballfields, play ground equipment, landscaping |
| | 5) Roadways/sidewalks/railroads | 10) Docks, marinas |
| | | 11) Other |

1. Damage description number:_____ If (11) describe_____

2. Size of Facility (you may give approximate dimensions)

3. Is this a Public facility?

4. Type of construction.

5. Description of damage.

6. Approximate estimated cost of damage.

