

**PAPERWORK REDUCTION ACT**

Public reporting burden for this form is estimated to average 1 hour per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the needed data, and completing, reviewing, and submitting the form. You are not required to respond to this collection of information unless a valid OMB control number appears in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing this burden to: Information Collections Management, U.S. Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington DC 20472, Paperwork Reduction Project (1660-0016). Submission of the form is required to obtain or retain benefits under the National Flood Insurance Program. **Please do not send your completed survey to the above address.**

Flooding Source:

**Note:** Fill out one form for each flooding source studied

**A. THREE-STAGE ANALYSIS (Based on DHS-FEMA Guidelines dated February 23, 2000)**

1. Stage 1 Analysis

- a. The landform is composed of (check one)  alluvial  debris flow deposits.
- b. Source of data used to determine composition, morphology, and location of the landform:
- c. Is there an NRCS soils survey and soil survey map available?  Yes  No  
If Yes, please include a copy of the map and any pertinent sections of the soil survey

2. Stage 2 Analysis

- a. The alluvial fan exhibits  active  inactive  a combination of active and inactive alluvial fan flooding.
- b. Approximate age of inactive fan surfaces (thousands of years):        yrs.
- c. Is there an opportunity for avulsions that could lead channels or sheetfloods across the older fan surfaces?  
 Yes  No
- d. Is there evidence of headcutting that could lead to stream piracy?  Yes  No
- e. Is there geomorphic evidence of past avulsions during the Holocene epoch?  Yes  No
- f. The fan exhibits the following types of flooding (check one):
- Flooding along stable channels
  - Sheetflow
  - Debris flow
  - Unstable flow path flooding

3. Stage 3 Analysis

The boundaries of the 1%-annual-chance floodplain have been determined using (check one):

- Risk-Based Analysis
- FEMA FAN program (if discharge at the apex is different than that given in the effective FIS, then attach MT-2, Form 2 along with a plot of the flood frequency curve on log-normal probability paper and include the drainage area above the hydrographic apex, and the mean, standard deviation, and skew coefficient of the curve)
- Sheetflow Methods
- Hydraulic Analytical Methods
- Geomorphic Data, Post-Flood Hazard Verification, and Historical Information
- Composite Methods

## B. STRUCTURAL FLOOD CONTROL MEASURES

1. The following structural flood control measures are proposed or built (check one):  
 Channelization    Levee/Floodwall    Dam    Sedimentation Basin
2. Do the constructed or proposed structural measures affect flood hazards (including velocity, scour, and sediment deposition) on other areas of the fan?    Yes    No
3. Attach completed Form 3 (Riverine Structures Form).
4. Sediment Transport Considerations:  
Was sediment transport considered?    Yes    No   If Yes, then fill out Form 3, Section F (Sediment Transport).  
If No, then attach your explanation for why sediment transport was not considered.
5. Please attach a copy of the formal Operations and Maintenance Plan.

## C. MAPPING REQUIREMENTS

Attach a certified topographic work map showing the following:

- The boundaries of the alluvial fan including: toe, topographic and hydrologic apexes, and lateral boundaries
- The delineation of the active and inactive portions of the fan as determined by the Stage 2 analysis
- The revised 1%-annual-chance floodplain boundaries, as determined by the Stage 3 Analysis, that tie into the effective floodplain boundaries
- The correct alignment of all structural features
- The map scale