

APPENDIX 15-C



Sources of Flooding

APPENDIX 15-C SOURCES OF FLOODING

1. Sources of Flooding As Basis of the FIRM

a. Basis of Zone A16 and Zone A17 Designations

According to the Corps of Engineers (COE), their initial study determined that the existing levees along the south bank of Old River do not provide protection from the base flood because they do not meet FEMA's minimum design, operation and maintenance standards and are not maintained under the jurisdiction of: 1) a Federal or State agency, 2) agency created by Federal or State law, or 3) an agency of a community participating in the NFIP that must assume ultimate responsibility for maintenance.

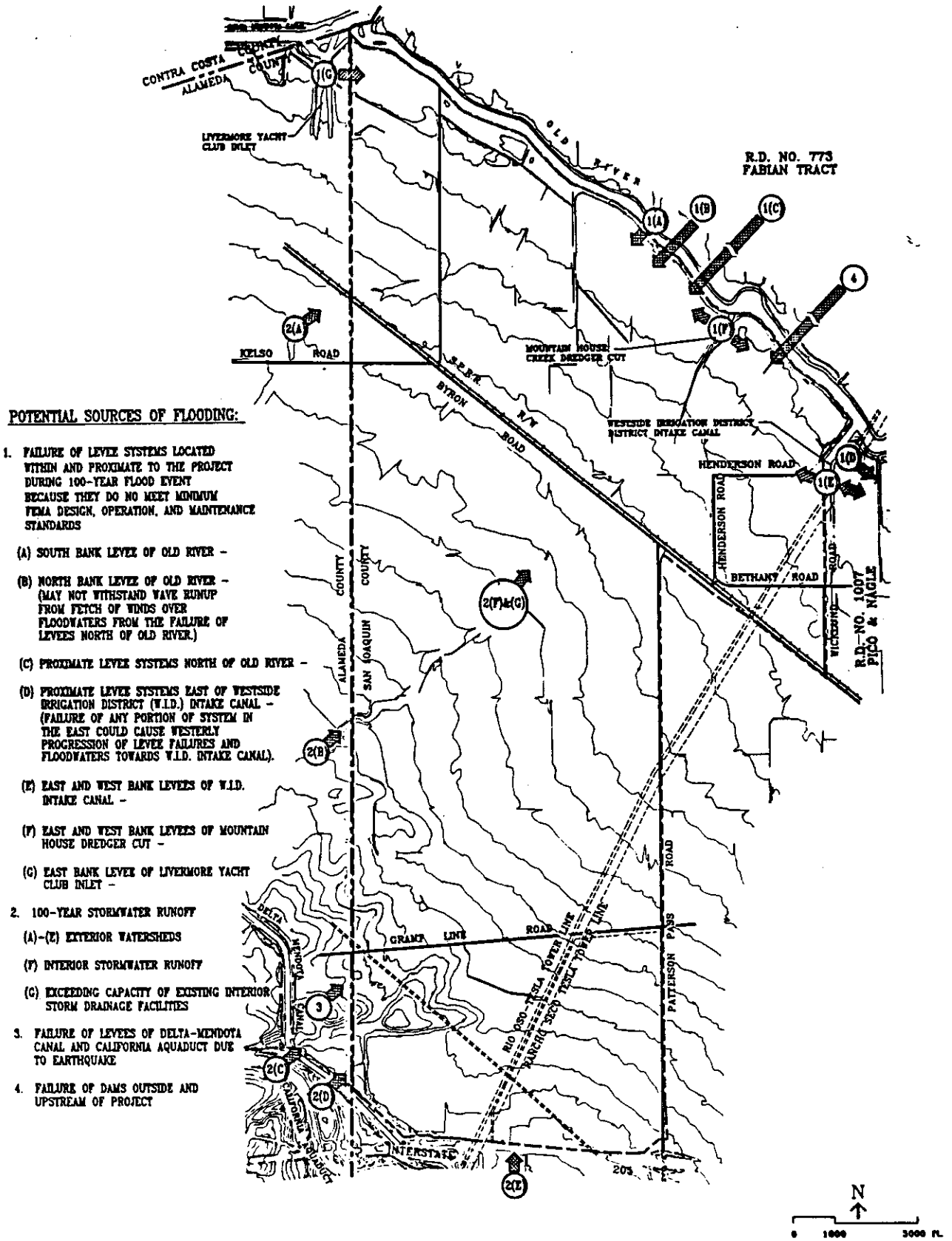
2. Other Potential Sources of Flooding (See attached Master Plan Figure 15.9, Potential Sources of Flooding.)

a. In the preparation of the current FIRM, the discovery of a single deficiency to provide protection from the base flood was sufficient to designate an area to be in a 100-year flood hazard zone. Further study to determine all other potential sources of flooding were not made in the COE's initial study.

b. To obtain a CLOMR from FEMA and for approval of a flood protection plan, a more comprehensive investigation of other potential sources of flooding during a 100-year flood event shall include the following:

- 1) Flooding which may originate from the progressive failure of the known substandard levee systems located outside of and east of the Master Plan area,
- 2) Floodwaters resulting from the predicted failure of existing proximate levee systems, which are located north of Old River, if they do not meet FEMA's minimum design, operation and maintenance standards,
- 3) Flooding from the inability of the adjacent north bank levee of Old River to withstand maximum wave run-up generated from the fetch of prevailing winds over floodwaters which would occur in the event that the existing proximate levee systems located north of Old River fail during a 100-year flood event,

- 4) Flooding from exterior stormwater run-off during a 100-year event originating from the watersheds of the hills southerly and westerly of the Master Plan area and which will necessarily traverse through the Master Plan area towards lower elevations at Old River,
- 5) Flooding from interior stormwater run-off during a 100-year event within the Master Plan tributary area,
- 6) The capacity of existing and proposed stormwater drainage facilities such as pipelines and pumps to handle both exterior and interior stormwater drainage run-off during a 100-year event,
- 7) Flooding as a result of an earthquake upon the existing levees of the Delta Mendota Canal and the California Aqueduct and,
- 8) Flooding as a result of the effect of a dam failure outside and upstream of the project site.



Source: Siegfried Engineering Inc.

Potential Sources of Flooding

November 10, 1994

Chapter Fifteen: Storm Drainage and Flood Protection