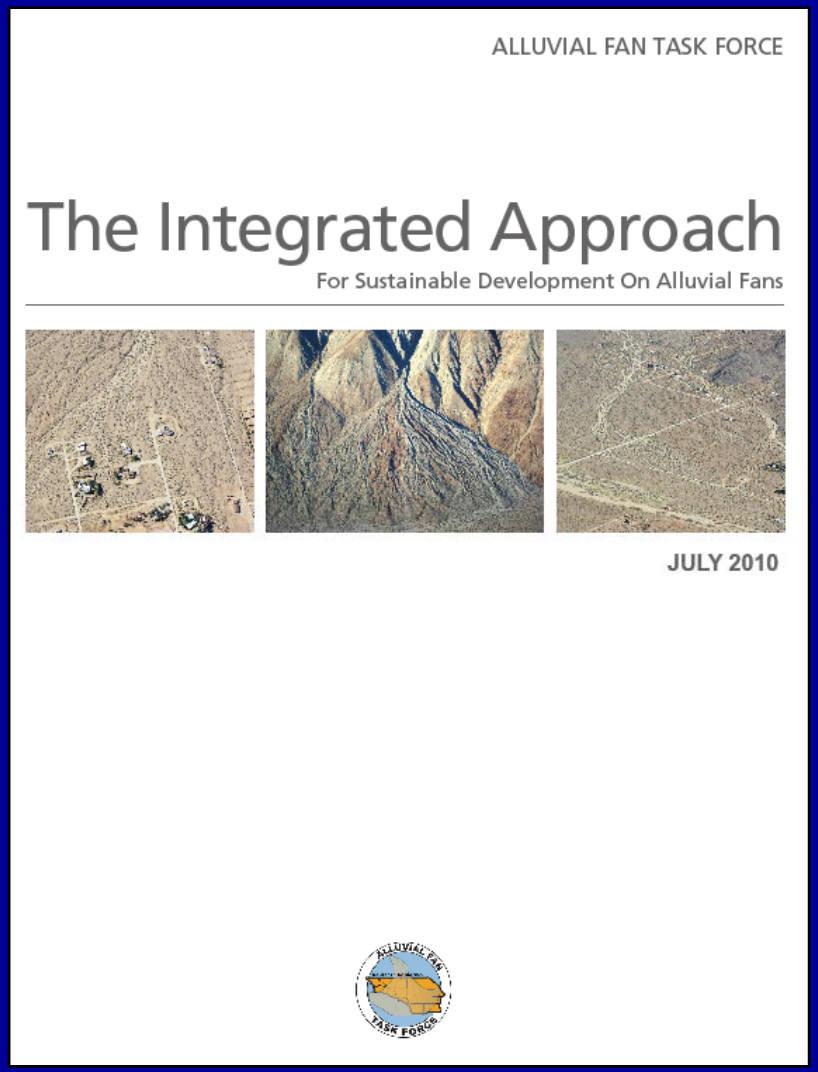

The Integrated Approach for Sustainable Development on Alluvial Fans

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The Integrated Approach for Sustainable Development (or *Integrated Approach*) is designed to assist local communities that need to plan for and evaluate future development proposals on alluvial fans. **In keeping with local control of land use, the *Integrated Approach* is:**

1. **Non- prescriptive:** flexible designed for local governments to adapt to their own conditions

2. **Implementable:** does not expand, duplicate, or reduce the legal requirements under existing state and federal laws

3. **Sustainable:** encourages multiple benefits ensuring future generations can meet their needs

4. **Tool-based:** methods are unique to the alluvial fan environment and offered to local governments and flood management agencies to use at their discretion in working with developers and property owners

***The Integrated Approach* consists of a suite of local planning tools for <u>pre-project screening</u>**

- **<u>Pre-project screening</u>** provides a method for planners to evaluate hazards, resources, and site-specific issues in alluvial fan areas that are proposed for development

- **<u>Pre-project screening</u>** helps local governments determine whether new development can be designed to promote flood management sustainability, by avoiding the most hazardous areas and conserving the most valuable resources.

- **<u>Flood management tools</u>** are also included in *The Integrated Approach* consistent with FEMA guidelines to analyze alluvial fan flood hazards and to formulate flood hazard protection

The Task Force was also charged with developing a voluntary model ordinance for local adoption that would assist city and county governments in alluvial fan areas with planning and development activities.

The **Model Ordinance Governing Planning and Development on Alluvial Fans** provides a process to implement the local planning tools presented in ***The Integrated Approach*** to provide better informed land use decisions for development proposals on alluvial fans areas. The **Model Ordinance** was designed to ensure that land use decisions achieve objectives:

1. Minimize flooding and other hazards that may result by locating development on alluvial fans;
2. Minimize the costs and damages that may result from these hazards; and
3. Preserve and maximize the flood protection, environmental and other beneficial values that alluvial fans provide.

LOCAL PLANNING TOOLS FOR ALLUVIAL FAN PRE-PROJECT SCREENING

STEP 1	STEP 2	STEP 3	STEP 4	STEP 5	STEP 6
Identify whether proposed site is on regulated floodplain with adequate hazard protection	Consider relative flood hazard potential	Consider other hazards present on proposed site	Consider beneficial resources on proposed site	Consider capacity to address multiple objectives consistent with FloodSAFE	Consider problem-solving economic strategies
Flood-Zone (FZ) Tools **FZ1** - FEMA Special Flood Hazard Area (SFHA) **FZ2** - Existing flood control structure certified to provide adequate protection from hazards	**Alluvial Fan (AF) Tools** **AF1**- Is the proposed site underlain by Quaternary Sediments that include Alluvial fans? AF2- Map the relative potential for alluvial fan flooding	**Multiple Hazard (MH) Tools** **MH1** - Active faults **MH2**- Seismic shaking **MH3**- **Rockfall** and landslides **MH4** – Minerals and unstable geological units **MH5**- Wildfire hazards **MH6**- Other local hazards	**Multiple Benefit (MB) Tools** **MB1**– Capacity for recharge **MB2** - Ecological value **MB3** - Mineral resources **MB4** - Cultural resources **MB5** - Current and future land uses	**Sustainability Analysis (SA) Tools** **SA1** – Examine capability of site for proposed use **SA2** – Examine suitability of site for proposed use	**Economic (ECON) Tools** **ECON1**- Multiple benefit IRWM project **ECON2**- Cost & benefit analysis **ECON3**- Resources for operation and management **ECON4**- Transfers and purchases of development rights **ECON5** – Other funds **ECON6**- Disaster clean-up **ECON7**- Asset management

FEMA Guidelines for Determining Flood Hazards on Alluvial Fans
FEMA Appendix G: Guidance for Alluvial Fan Flooding Analyses and Mapping

Flood Management (FM) Tools
FM1- Identify the presence of an alluvial fan
FM2- Identify existing hazards on alluvial fan area
FM3- Define active and inactive fan areas
FM4- Establish the appropriate level of hazard protection
FM5- Identify studies necessary to demonstrate development is protected from design flood
FM6- Incorporate multiple objectives in the mitigation measures

(Other pertinent local, state and federal regulations may also apply)

Go to Boykin’s AFTF Portal slides

CONCLUDING REMARKS ABOUT FUTURE AFTF ACTIVITIES

When the AFTF web-based interactive Portal is operational and ready for use, DWR will continue its partnership with the university that will provide a a series of training workshops in alluvial fan areas throughout Southern California for local governments, development interests, environmental groups and interested members of the public offered.

Watch for updates on the AFTF website at

http://aftf.csusb.edu/

Questions and Comments

DOWNLOAD AFTF Deliverables

The Integrated Approach for Sustainable Development on Alluvial Fans (includes Model Ordinance Governing Planning and Development on Alluvial Fans)

http://aftf.csusb.edu/documents/IA_Final_Oct2010_web.pdf

AFTF Study Area Flood History

http://aftf.csusb.edu/documents/AFTF%20Study%20Area%20Flood%20History_ALL.pdf

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