

## U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT:

### 8-STEP PROCESS CASE STUDY EXAMPLE

#### Case Study Example - Anytown, USA

--Transitional Housing Program (Project No. WA90-T00-1287)

--Decision Process for E.O. 11988 as Provided by 24 CFR §55.20

#### **Step 1: *Determine whether the action is located in a 100-year floodplain (or a 500-year floodplain for critical actions).***

This action is located in a 100-year floodplain. One building on the proposed project site is located within AE Zone (area of special flood hazard with water surface elevations determined) and the other two buildings are partially located in an A Zone (area of special flood hazard without water surface elevations determined), as indicated on Flood Insurance Rate Map (FIRM) Panel 16 of 70 no. 5301260026R, revised September 27, 1998. This project is (a) new construction and (b) a multifamily housing project of greater than four units and, for both of these reasons, E.O. 19988 applies. An evaluation of direct and indirect impacts associated with construction, occupancy, and modification of the floodplain is required.

The proposed project, Transitional Housing Program, includes acquisition of two parcels and construction of three buildings. Each building would consist of five units located between 3201 and 3401 W Street. The Upper American River system has been a natural floodplain for many years. Therefore, this analysis will consider impacts to the floodway along with concerns for loss of life and property.

#### **Step 2: *Notify the public for early review of the proposal and involve the affected and interested public in the decision making process.***

A public notice describing the project was published in the Anytown Tribune, the local and regional paper, on September 22, 2008. The ad targeted local residents, including those in the floodplain. A copy of the published notification was kept in the project's environmental review records and attached to this document. The required 15 calendar days were allowed for public comment. As required by regulation, the notice also included the name, proposed location and description of the activity, total number of floodplain acres involved, and the HUD official or responsible entity contact for information as well as the location and hours of the office at which a full description of the proposed action can be viewed.

Comments from the public stated both support and opposition to the project. Supporters said the housing was necessary while opponents were concerned with property values and public services. A preliminary analysis performed by the city indicated that property values will not be affected and public services are adequate enough to handle 15 units of housing. One commenter also worried about debris coming from the buildings in the event of a flood. This concern will be addressed through engineering and site planning to minimize any such risk.

FEMA and city engineers were contacted concerning mitigation requirements of the National Flood Insurance Program (NFIP) as well as local ordinances that must be implemented as part of NFIP.

**Step 3: *Identify and evaluate practicable alternatives.***

The Anytown Housing and Redevelopment Agency (AHRA) project site selection criteria are:

- (a) The project can not cause current residents to become displaced;
- (b) The project must be within city limits in order for bond proceeds to be used by the AHRA;
- (c) The project must contain at least twelve units in order to meet community needs.

Anytown considered several alternative sites and actions:

A. Locate the Project Within the Floodplain

1. Locate the project between 3201 and 3401 W Street

This site meets the requirements of the city's bond and does not displace residents. The project also meets the community's needs of 12 units. However, the project as originally proposed would cause damage to the floodplain and its natural functions by paving areas and obstructing flood zones. Additionally, constructing in a AE Zone would present challenges in building at a foot above the base flood elevation (BFE) and would endanger human life as well as local and federal investment. The cost of elevation and maintaining flood insurance for the building in AE Zone are impracticable.

2. Modify the project between 3201 and 3401 W Street

The proposal can be modified to include two, seven-unit buildings with one building moved completely out of special flood hazard areas and a second building partially in the A Zone but elevated in order to minimize adverse impacts to the floodplain, public safety, and public investment. Any development in the unmarked A Zone requires that an expert, using FEMA approved standards, makes a determination and acquires an elevation certificate which states the necessary base flood elevation.

3. Locate the project at 3405 Dunder Road

The city proposed developing this site six years ago but met stiff resistance from the community. Another site was then chosen for development. Last year the site was again reviewed. Stiff opposition again resurfaced. The review also showed a storm-water runoff problem and a significant amount of special flood hazard areas. These factors made the site prohibitively expensive for development.

4. Obtain a Letter of Map Amendment (LOMA) or Letter of Map Revision (LOMR)

The city also considered applying for a LOMA but the elevation information certified by a Licensed Land Surveyor/Registered Professional Engineer indicated that the

lowest adjacent grade (the lowest ground touching the structure) was not at or above the BFE.

A LOMR-F request was also considered but rejected due to a local policy forbidding fill in the floodplain due to the impact it may have on other property owners.

## B. Locate the Project Outside of the Floodplain

### 1. Locate the project at the Mount Vernon Avenue site

The city had considered an alternative site at 1500 North Mount Vernon Avenue. An engineering report concluded that the site had unstable soils and slopes as well as a significant amount of wetlands. The cost of the mitigating measures for these environmental impacts, as well as endangered species habitat, made the site prohibitively expensive to develop.

### 2. Other sites considered

Other sites were also considered within the city limits. All of the sites would have either displaced residents who were unwilling to sell or would have placed the project on sites encumbered by wetlands, steep slopes, soil contamination, or other more significant development constraints. A market analysis was performed and concluded no other sites were feasible for development.

## C. No Action or Alternative Actions that Serve the Same Purpose

A no action alternative was considered and rejected because of a recent city study that found the area in dire need of affordable housing. It showed an increase in homeless families of 35% over the past three years with a concurrent increase in the number of families using homeless shelters more than once a year. The current level of services and facilities in Anytown does not equip the city to help the homeless seeking assistance.

The emergency shelters currently housing families are for emergency use and not designed to meet the needs of homeless families with children. They are intended only for overnight use and do not provide the stability required for a family to function or the specialized services to help bring about independent family living.

The proposed project would provide the housing needed along with space for supportive services with the goal of enabling the families to become independent within a 24 month period.

#### **Step 4: *Identify Potential Direct and Indirect Impacts of Associated with Floodplain Development.***

Locating the project at W Street per the modified proposal will have minimum impacts to the floodplain because the structures will be elevated a minimum of three feet above the BFE and have a footprint designed to minimize these impacts. The design will also minimize potential damage to the property as a result of the flooding. The area has experienced some flooding in the past but never above the proposed elevation.

Loss of life as a result of flooding is the highest priority. FEMA estimates that it would take a warning time of between five and seven hours to safely evacuate people from the area. FEMA also estimates at a flood level of four feet carpeting, curtains, and furnishings would be damaged in the building partially in the floodplain. At five feet above the BFE, the structure will sustain 20-30% damage. At six feet above the BFE, the structure will sustain substantial damage at 50% or more.

The city of Anytown is a member of the National Flood Insurance Program and, therefore, any structure owned by the city that is located in the flood zone must be covered by flood insurance. Even though only one of the buildings is required to have flood insurance, the city will maintain flood insurance for both buildings in order to mitigate any effects of flooding.

In addition to concerns for life and property, the city considered the natural and values of the floodplain. The natural resources of the floodplain include water, biological, and societal resources.

By elevating the buildings and disallowing impervious surfaces in and around the floodplain, the construction will have minimal effects on water resources. Hydrologists and engineers were consulted in order to design the building and the site plan in such a way that natural flood and erosion control, water quality, and groundwater recharge are preserved. In addition to the prohibition on impervious surfaces in and directly around the floodplain, the floodplain was preserved through elevation and positioning of the building.

The Fish and Wildlife Service has determined that the construction of the buildings will have no quantifiable impact on plant and animal life. Only native plants are to be used in the floodplain and on the site.

Societal resources were also considered during the design process. The designs are meant to complement the natural features of the area and to offer an aesthetically pleasing structure. The site will not have an effect on agricultural lands and efforts have been made to preserve existing trees on the site. The site will also maintain an open space for recreational opportunities. An easement will be made to the city to allow for construction of a bike path that will serve transportation purposes. The city will also allow the site to be accessible for archaeological, historic, environmental, biological, and other scientific studies should an individual or an organization express interest.

**Step 5: *Where practicable, design or modify the proposed action to minimize the potential adverse impacts to lives, property, and natural values within the floodplain and to restore, and preserve the values of the floodplain.***

- (a) Preserving Lives: In order to preserve lives, local law enforcement and the emergency broadcast system will implement an early warning system should flooding conditions arise. In addition to the warning system, law enforcement has an emergency evacuation and relocation plan. The new structures will also be marked with identification marks of past and estimated flooding and the interior common areas will display an evacuation plan. All residents will also be briefed on the location of the flood hazard area and evacuation plans upon placement.
- (b) Preserving Property: In order to preserve property, flood insurance will also be acquired and maintained in order to mitigate possible flood damage. The building will be floodproofed in compliance with FEMA Coastal Standards and the International Residential Code. This includes the use of breakaway walls on the first floor.
- (c) Preserving Natural Values and Minimizing Impacts: By elevating the buildings and disallowing impervious surfaces in and around the floodplain, the construction will have minimal effects on water resources. In addition to the prohibition on impervious surfaces in and directly around the floodplain, the floodplain was preserved through elevation and positioning of the building. Swales will be introduced using native vegetation to address drainage impacts and will be placed by biologists and hydrologists with consultation with the U.S. Fish and Wildlife Service. Conservation easement agreements through the United States Department of Agriculture's Natural Resource Conservation Service will also be entered for nearby wetlands owned by the city. These actions will serve to both restore habitat off and on site while also preserving non-impacted areas to minimize effects. Additionally, the city has implemented a policy of "no net loss" for all wetlands impacts through a restoration and compensatory mitigation program.

**Step 6: *Reevaluate the Alternatives.***

Although the W Street site is in a floodplain, the project has been adapted in order to minimize effects on floodplain values. Additionally, steps were taken in order to minimize risks to human life and property via evacuation plans, construction methods, flood insurance, etc. The estimated annual cost of flood insurance is \$XXXXXX and the costs of flood-proofing is \$XXXXXX. The city will help the developer with flood-proofing costs, while the developer alone will bear the costs of maintaining the statutorily required flood insurance premiums for the life of the structure in accordance with the Flood Disaster Protection Act of 1973.

The Dunder Road site is even more problematic due to storm-water runoff and floodplain concerns. The floodplain concerns here are worse than those of W Street. Additionally, there is a complete lack of public support to make this a feasible site for the project.

Construction outside of the floodplain at the Mount Vernon site or others is not viable as well. Due to contamination, slope, and other concerns, as well as the requirement that the project be constructed

within city limits due to bond issues, the W Street site is the only location that satisfies these needs and concerns without displacing residents.

The no action alternative is also impracticable because it will not satisfy the need to provide assistance to local homeless families and provide them with opportunities for independent living.

### **Step 7: *Determination of No Practicable Alternative***

It is our determination that there is no practicable alternative for partially locating the project in the flood zone. This is due to: 1) the need to provide housing and services to homeless families; 2) the bond requirements to construct within city limits; 3) the desire to not displace residents; 4) the need to construct an economically feasible project; and 5) the ability to mitigate and minimize impacts on human health, public property, and floodplain values.

A final notice was published detailing the reasons why the modified project must be located in the floodplain, a list of alternatives considered, and all mitigation measures taken to minimize adverse impacts and preserve natural and beneficial floodplain values. No concerns were expressed by the public concerning this notice.

### **Step 8: *Implement the Proposed Action***

The city will assure that this plan, as modified and described above, is executed and necessary language will be included in all agreements with participating parties. The city will also take an active role in monitoring the construction process to ensure no unnecessary impacts occur nor unnecessary risks are taken. The flood insurance requirement for the life of the property will be realized through the use of a covenant on the property title.