

**Post Flood Alternatives
for
Mosquito Flats
(an amateur perspective, continued)**

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On July 3, 2008, I presented a preliminary document on post-flood alternatives for Mosquito Flats to the Iowa City City Council. This document presents a refined version of the preferred alternative presented there. This presentation is based on the assumption that only limited money is available for a buyout of floodplain property in Mosquito Flats. Before presenting my recommendation, I will present a negative vision of the likely outcome for the neighborhood if the city does not take strong action.

A Negative Scenario

As things currently stand, a majority of the residents of Mosquito Flats have signed a petition asking for a buyout of the entire neighborhood, but the vast majority of the advice homeowners are receiving is based on the assumption that the majority of the property in the neighborhood will be rebuilt. Numerous property owners in the neighborhood have already found permanent lodging outside the neighborhood, and many more have indicated that they do not intend to return.

The result of this is an immediate threat of serious urban blight. Those who move out but opt to hang onto their property in the flats hoping for a federal buyout are likely to undertake no reconstruction after they stabilize the ruins of their former homes. Those who cannot afford to retain ownership of their ruined homes for extended periods but who do not wish to return face two options. First, they can invest whatever they can get from FEMA and the SBA into rebuilding and then convert their property to rental property, or they can sell. The most likely buyers for such property are property management firms intending to redevelop the property for rental purposes. After the recent flood, few people are likely to purchase houses as primary residences, but short-term renters face little risk.

We will end up with a neighborhood that is a mixture of unoccupied ruins and houses that have been minimally repaired to accommodate short term renters. Property values in such a neighborhood will never come close to what they were before the flood, and there is a real possibility that the result will endanger property values in adjacent areas where houses were not significantly damaged by flooding.

A Positive Alternative

If the city cannot raise sufficient funds for a buyout of the entire area, the city will need to take aggressive action to increase landowner confidence in the neighborhood and encourage owner-occupants to fully (and appropriately) rebuild. What is needed is a flood mitigation plan for the neighborhood. This need not offer full protection against a 500-year flood, those are rare, but it should offer protection against a 100-year flood such as we experienced in 1993.

Such a plan will have the following components: Buyouts, street realignment, street elevation, and storm drainage improvements. In addition, where streets are elevated, adjoining property owners

should be encouraged to partially elevate their yards and structures to conform to the new street elevation. This makes it critical that the city move quickly in deciding on a basic plan for the neighborhood's future, so that homeowners can plan their restoration efforts in terms of this plan.

Buyouts: The first priority in offering buyouts in Mosquito Flats should be to homeowners on the riverbank between 729 and 849 Normandy Drive. This is because the north bank of the river along this reach is defined by a bedrock cliff, and clearing the houses and fill from the south bank would allow creation of an enhanced floodway. There are two groups of houses that share a secondary priority for buyouts, the first being other homes between Normandy and the river, and the second being the triangle of low-elevation homes at the north-east end of the neighborhood. The size of the triangle bought out will depend on the amount of money available for buyouts.

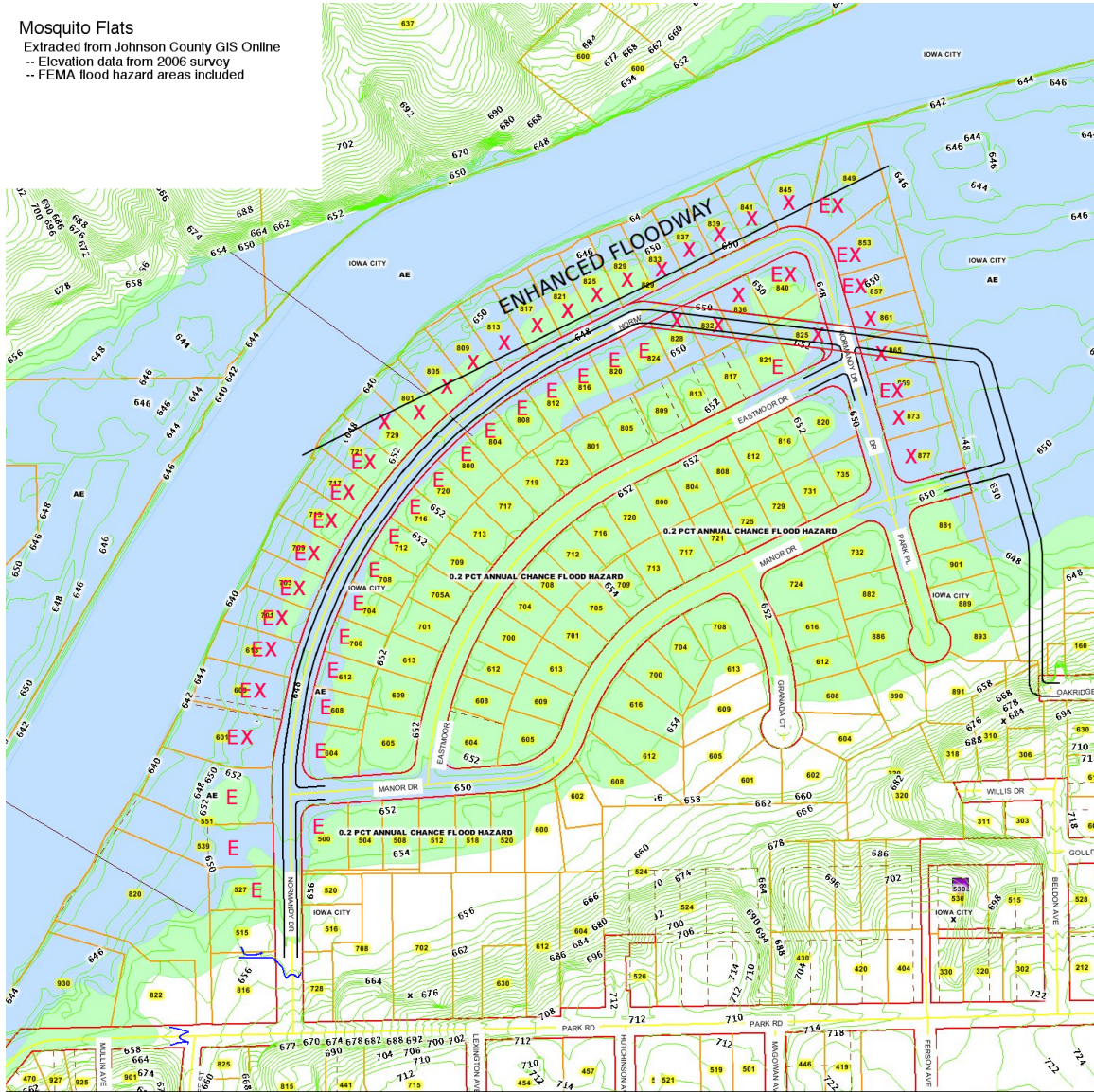
Street Realignment: To the extent that homeowners in the low-lying triangle at the north-east corner of the neighborhood opt to accept a buyout, the city should pull Normandy Drive back from the river, following whatever alignment becomes available as a result of willing sellers. Right-of-way acquisition for this realignment may involve land swaps, transferring left-over corners of lots that were bought out to property owners in exchange for corners of their lots taken for the new alignment. It may also involve re-orienting garages and driveways for property owners that opt not to accept a buyout where their property was formerly south of Normandy and ends up north of the street. Such reorientation will be relatively inexpensive only if the new street arrangement can be determined before reconstruction begins on these homes. The realigned Normandy should connect to a second exit from the neighborhood, for example, continuing up the hill to Oakridge, as I suggested in my July 3 discussion.

Street Elevation: Iowa City's *Design Standards for Public Improvements* section on storm sewers has long required that storm drainage allow no more than 12 inches of water in the street during the 100-year storm. As I pointed out to the council in my memo of Apr. 18, 1988, these standards should be interpreted as requiring all roadways in the 100-year floodplain to be elevated to the level of the 100-year flood, since water levels in such a flood are permitted to rise one foot above that level after floodplain development is completed. Elevating Normandy to this level would create, in effect, a levee around the back part of the flats. Formal acknowledgment that this is a levee would require elevating the street an additional 3 feet to meet Corps of Engineers standards for levees.

Storm Drainage Improvements: Whether or not Normandy Drive is officially designated as a levee, it will serve as one, and the result will require a new drainage system for the area behind the elevated street. All storm drains will need backflow prevention valves, as outlined in my July 3 discussion. A new storm sewer will need to be run parallel to the inside edge of Normandy Drive to drain the low spots along that edge that currently drain into the depressed street.

Elevation of Homes: Homeowners who opt not to accept a buyout and whose homes are outside the line of the (official or de-facto) levee defined by an elevated Normandy Drive should be strongly encouraged to elevate their homes to the level of the street. While we should strongly discourage any homes in the enhanced floodway, those that remain there should be encouraged to elevate on piles, as 849 Normandy formerly was, prior to its relocation closer to the river. Homeowners fronting on the elevated road outside the enhanced floodway and on the interior may opt to elevate their homes and front yards to or above street level. This will reinforce the levee created by the road, and it should be encouraged, possibly with financial assistance. Again, such elevation is least expensive if it is planned before any substantial post-flood reconstruction begins.

Mosquito Flats
 Extraced from Johnson County GIS Online
 -- Elevation data from 2006 survey
 -- FEMA flood hazard areas included



Buyouts, potential street realignment, and streets to be elevated.

Legend:

- == – sections of road that should be elevated. Note that the realigned road across the northeast side of the neighborhood depends on precisely which property owners opt to accept a buyout. The alignment shown is merely one possible outcome.
- X – properties where buyouts might be offered, depending on funds available.
- E – properties where owners should be encouraged to elevate their houses if they do not opt for a buyout.

A Complicating Factor:

No levees or fill are permitted on property purchased with FEMA buyout money. As a result, this proposal would require a careful dance. The complexity of this dance depends, in part, on whether flood mitigation funds are made available as well as FEMA buyout funds. Proceeding as I have suggested would require that the buyout offers be extended to property owners before the source of funds is entirely identified, since property owners who opt to accept a buyout along the eventual route of the relocated Normandy Drive would not be bought with FEMA buyout funds, while those outside the re-aligned Normandy would be entirely eligible for FEMA buyout funds.

The question of how the local match is apportioned is also significant. If, in buying 20 properties, FEMA insists on the local match being pro-rated and applied to each property individually, then none of the FEMA buyout properties may be elevated or used to construct levees. If, on the other hand, in buying out 20 properties, the local match can be used to buy out 5 of them while FEMA buys out 15, then the use restrictions applying to land purchased with FEMA funds may only apply to the 15 properties and not to the other 5.