NFIP Impacts in Agriculture
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NATIONAL FLOOD INSURANCE PROGRAM

Additional Guidance on Building Requirements to Mitigate Agricultural Structures' Damage in High-Risk Areas Is Needed
WHY GAO CONDUCTED THE STUDY

- FEMA’s National Flood Insurance Program has been subject to many changes in an effort to improve its finances after sustaining heavy losses in recent years.

- Flood map updates (one of the changes) could place large portions of agricultural areas in high-risk flood zones, or Special Flood Hazard Areas (SFHAs) and subject agricultural structures to building requirements (e.g., elevation and floodproofing).

- GAO was asked by congressional requesters to evaluate the possible effects of such changes on farmers and rural residents.
**Methodology: Identifying Agricultural Floodplains**

- Because FEMA does not distinguish between urban or rural areas, we estimated the location of rural communities and agricultural areas in riverine SFHAs across the United States.

- Data used
  - Census Bureau
  - USDA Atlas of Rural and Small Town America
  - FEMA’s floodmap data, focusing on riverine floodplains
RURAL AND AGRICULTURAL RIVERINE SPECIAL FLOOD HAZARD AREAS

Source: FEMA flood map data and GAO analysis of Census and USDA data. | GAO-14-583
**METHODODOLOGY: SELECTED COMMUNITIES**

To more fully understand farmers’ experiences in dealing with building requirements, we selected 8 case study communities based on the following criteria:

- Communities that contain at least some agricultural land located SFHAs in riverine areas
- Communities with crop or livestock production requiring farm structures for nearby on-farm processing
- Geographic variations
## 8 Selected Communities

<table>
<thead>
<tr>
<th>Selected NFIP community</th>
<th>Number of farmers and production</th>
<th>Number of rural residents</th>
<th>Number of agricultural lenders/developers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sutter County, CA</td>
<td>8; Produced walnuts, rice, root stock, prunes, plumbs, crop protectant, and fertilizer</td>
<td>None</td>
<td>1 lender</td>
</tr>
<tr>
<td>Yolo County, CA</td>
<td>4; Produced wine, wine grapes, alfalfa, wheat, tomatoes, walnuts, corn, and seed crops</td>
<td>4</td>
<td>1 lender /1 developer</td>
</tr>
<tr>
<td>Rapides Parish, LA</td>
<td>3; Produced rice, crawfish, grain sorghum, wheat, corn, soybeans, and cotton</td>
<td>2</td>
<td>1 lender</td>
</tr>
<tr>
<td>St. Landry Parish, LA</td>
<td>2; Produced rice, crawfish, soybeans, and wheat</td>
<td>None</td>
<td>1 lender /1 developer</td>
</tr>
<tr>
<td>Duplin County, NC</td>
<td>4; Produced hogs, turkey, chicken, corn, soybean, cotton, and wheat</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Tyrrell County, NC</td>
<td>None</td>
<td>None</td>
<td>1 lender</td>
</tr>
<tr>
<td>Cass County, ND</td>
<td>2; Produced corn, soybeans, and wheat</td>
<td>None</td>
<td>1 lender</td>
</tr>
<tr>
<td>Walsh County, ND</td>
<td>1; Produced spring wheat, corn, pinto beans, soybeans, sugar and beets</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>24</td>
<td>10</td>
<td>6 lenders, 2 developers</td>
</tr>
</tbody>
</table>

Source: GAO. | GAO-14-583
What GAO Found

- Effects of NFIP’s building requirements for elevating and flood-proofing agricultural structures in SFHAs varied across our selected communities.

- Floodplain managers and farmers we spoke to in Louisiana, North Carolina and North Dakota were generally not concerned.

- However, farmers from California have been adversely affected by NFIP building requirements.
WHAT GAO FOUND

Two key factors may partly explain the differing views of farmers in California as compared to those from the other three states.

1. Vast floodplains: SFHA areas in the two California communities have greatly increased in size in recent years as a result of map updates and de-accredited levees.

2. Deep flood depths: Building requirements are difficult to meet in these communities because the flood depth is relatively higher than the other communities in our case studies.
Farmers in areas with vast floodplain and high flood depths have had to “workaround” FEMA’s building requirements as they try to expand their businesses. Examples of these workarounds:

- Quickly built facilities before flood map revisions placed their farms in SFHAs.
- Instead of building new structures, only make incremental additions or repairs that were below NFIP’s substantial improvement threshold for building requirements.

However, workarounds may not fully address the long-term expansion needs of these farmers.

The workarounds may ultimately defeat the purpose of the building requirements because they may increase the risks of flood damage to the structures.
FEMA acknowledged the need for additional guidance that covers all of the different types of agricultural structures and reflects recent developments in the size and scale of farm operations. The current guidance is more than 20 years old.

Other agricultural areas across the country also have vast floodplains and deep flood depths—some up to 37 feet—including Southwest Illinois, Northeast Arkansas, Southwest Mississippi, Southeast North Carolina, and Northwestern Missouri. Farmers in these areas may face similar challenges in complying with FEMA building requirements.

Additional and more comprehensive guidance would allow FEMA to better respond to recent developments and structural needs in vast and deep floodplains.
RECOMMENDATION

- GAO recommended that FEMA update existing guidance to include additional information on and options for mitigating the risk of flood damage to agricultural structures to reflect recent farming developments and structural needs in vast and deep floodplains.

- Updated guidance would help farmers in identifying feasible alternatives to complying with building requirements in expansive floodplains with deep flood depths.
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SEE LSU AGCENTER SLIDES FOR INFORMATION PRESENTED AFTER THE PRECEDING SLIDES.
**ADDITIONAL INFORMATION**

GAO Report (GAO-14-583)

- National Flood Insurance Program: Additional Guidance on Building Requirements to Mitigate Agricultural Structures’ Damage in High-Risk Areas is Needed