Garden City Idaho: From RISK Map to Risk Mitigation: Three Perspectives

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Northwest Regional Floodplain Management Association
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Dams

- **Lucky Peak dam (1954)**
  - 10 miles northeast of Boise
  - Used for flood control, irrigation, recreation, and power generation

- **Arrowrock Dam (1915)**
  - 20 miles northeast of Boise
  - Used for irrigation, flood control, power generation, and recreation

- **Anderson Ranch Dam (1950)**
  - 20 miles northeast of Mountain Home
  - Used for irrigation, flood control, power generation, recreation, and minimum stream flows
Gambling Prohibited 1953
Garden City Expands to the West and North of the River
2005 A Bottoms Up, Planning Approach
Garden City Today

- 4.04 land square miles
- 6 miles of River
- 12,000 population
- 2,000 businesses
- Average density 2,716 (Average density in Idaho 19.5)
- 3 State Highways-average of 160,000 cars/ day
- Built out
Vulnerable population
6.7 Miles of River
GC Flood Prone Areas: 6,500 CFS

- Under Veterans parkway Way bridge (south side of river)
- Between 44th St. and 45th St. downstream to Mystic cove Park at 48th St. (south side of river)
- Westmoreland Park (north side of river)
- Under Glenwood bridge (south side of river)
- At the bridge at Long Lake (behind Riverside Village) downstream to where the west bridge will be built (north side of river)
- On the green belt Behind 8870 River beach downstream to behind 9020 Duck Lake (south side of river)
1983 Eagle Island: 9,840 CFS at Glenwood Bridge
2012

8,300 cfs
2017 Flood

9,200 cfs
Artificial Flood Levels
NFIP

• Administration/ Staff:
  – Elevation certificates with new construction
  – CRS participation
  – Why would we regulate more than Federal minimums

• Public:
  – Do I have to have flood insurance?
  – When was the last time that the Boise River hit 16,600 cfs?
  – There is only a 1% chance of flooding at my house
  – The flood will only happen every 100 years
  – We have dams
Inconvenient Possibility
RISK Map- FEMA Flood Insurance Study (FIS)
Flood Hazard: Garden City anticipated 1% Flood Event
Economic Effects

Federally backed mortgages

Homes outside of AE during the 2003 floodplain were not required to build to floodplain standards. They may be below the Base Flood Elevation (BFE)

Homes built to 2003 standards also below BFEs

Loss of money from the community to insurance

Loss of property value

Under the Flood Insurance Reform Act of 2012, You Could Save More than $90,000 over 10 Years if You Build 3 Feet above Base Flood Elevation*

<table>
<thead>
<tr>
<th>Premium at 4 Feet Below Base Flood Elevation</th>
<th>Premium at Base Flood Elevation</th>
<th>Premium at 3 Feet Above Base Flood Elevation</th>
</tr>
</thead>
<tbody>
<tr>
<td>$9,500/year</td>
<td>$1,410/year</td>
<td>$427/year</td>
</tr>
<tr>
<td>$95,000/10 years</td>
<td>$14,100/10 years</td>
<td>$4,270/10 years</td>
</tr>
</tbody>
</table>

* $250,000 building coverage only (does not include contents), AE (high to moderate risk) zone, single-family, one-story structure without a basement at: 4 feet below Base Flood Elevation (BFE); at BFE; and at 3 feet above BFE. (Rating per FEMA flood insurance manual, October 1, 2012). The illustration above is based on a standard National Flood Insurance Program (NFIP) deductible.
Initial Response
Levee Seclusion Mapping

Information for Local Community Officials

In March 2011, FEMA made a commitment to update the way flood hazards for non-accredited levee systems were analyzed and mapped. As a result, some ongoing Flood Insurance Rate Map (FIRM) updates that included non-accredited levee systems were delayed or otherwise impacted while FEMA developed the updated levee analysis and mapping approach. Seclusion mapping was developed by FEMA as a process to allow the release of these impacted FIRM updates. Levee seclusion mapping will maintain the flood hazard information as depicted on the current effective FIRM (the FIRM in effect before the ongoing update) with map notes explaining that these flood hazards will be updated at a later time when the updated levee analysis and mapping approach is applied. Levee seclusion mapping will allow FEMA to provide community officials, residents, and business owners with updated information about their local flood hazards, while identifying those areas where the levee-related flood hazards were not updated.

Eligibility for levee seclusion mapping

Levee seclusion mapping is not appropriate for all FIRM updates. Levee seclusion is intended to allow updated flood hazard information not associated with levees to be released without delays associated with the application of the updated levee analysis and mapping approach to projects, which are already underway. To be eligible for levee seclusion, the ongoing FIRM update must meet the following criteria:

- The ongoing FIRM update was initiated before the July 2013 release of the document titled Analysis and Mapping Procedures.

Definitions

Levee: Per 44 CFR 59.1, a manmade structure, usually an earthen embankment, designed and constructed in accordance with sound engineering practices to contain, control, or to divert the flow of water so as to provide protection from temporary flooding.

Levee System: Per 44 CFR 59.1, a flood protection system that consists of a levee, or levees, and associated structures, such as closure and drainage devices, which are constructed and operated in accordance with sound engineering practices.

“Non-Accredited” Levee System: A levee system that has not been demonstrated to meet all requirements outlined in Section 65.10 of the NFIP regulations (44 CFR 65.10).

Resources & Related Links


Living with Levees: www.fema.gov/living-levees
United States Army Corps of Engineers has partnered with Garden City (205 program) to investigate flood damage reduction possibilities.

USACE has been working on a feasibility study since February of 2018.

Identify potential measures:
- Non Structural
- Structural

Exceeded Authority-$13. Mil
Challenges to Come
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