Eagles Flock Flood Warning Infrastructure Concept

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Notes on Flood Warning Infrastructure — Eagles Flock and Leaf River Corridor

From: Michael Hoffman, North Star Group, Inc. **To:** Nathan Satcher, AICP, CFM — Senior Planner & Floodplain Administrator, City of Hattiesburg **Date:** April 18, 2026 **Re:** Eagles Flock / Leaf River — PPIN 26786 and PPIN 26700

A working concept that came up while scoping the horizontal engineering on Eagles Flock. Offered as a working idea. I am not a Certified Floodplain Manager; any correction welcome.

The concept sits at the intersection of floodplain administration, warning practice, and Community Rating System positioning, which is why it is directed first to the City's floodplain program.

The elevated-roadway requirement

The floodway subdivision standards call for roadways elevated above flood elevation. The concern behind the requirement is a real one — maintaining access during flooding so residents aren't trapped. The elevated-roadway design reflects the life-safety approach available when those standards were drafted.

Several CRS communities have since worked that same life-safety concern from the other side: investing in flood warning infrastructure that delivers lead time for evacuation before inundation reaches access routes.

A scope note on what's being borrowed

The element referenced from Roseville's program is the warning infrastructure itself — real-time detection and evacuation lead time. Not their broader land-use approach, which centers on removing development from the floodplain. That strategy is specific to their geography and political history. Warning infrastructure is separable: its value is in the lead time it delivers, and lead time is useful whether a floodplain is developed, partially developed, or preserved.

The premise at Eagles Flock is compatible occupation — development designed to maintain floodplain function while serving humans and land together. The No Adverse Impact framework that ASFPM has promoted since 2006, and the Netherlands Room for the River program, both support that model. A companion memo in the reference library collects the precedents.

What those communities saw

Roseville, California — first Class 1 CRS community in the United States. FEMA's case study captures the before-and-after tied to their flood early warning system: during a 100-year event in 1995, over 300 water rescues. During another 100-year event in 1997, after installation, zero water rescues.[1]

Miami-Dade County — Class 5. Approximately $1 million annually into the program; approximately $15 million in resident NFIP premium savings over ten years.[2]

Galveston — Class 7, same class as Hattiesburg. Approximately $3.5 million annually in resident NFIP savings at that class.[3]

North Miami — Class 5 since 2001. Over $770,000 in citizen savings per their CRS Coordinator.[4]

Norfolk, Virginia — real-time flood intelligence integrated with navigation apps to reroute drivers, with CRS Program for Public Information credit.[5]

Where Eagles Flock fits

Leaf River rise times at the site are measured in hours, which gives the warning approach meaningful lead time. As the horizontal engineering has been getting scoped, it raised the question whether some of the same capital logic could potentially support warning infrastructure instead, or alongside it, in a way that might have broader corridor value. Once the backbone is engineered, additional corridor points carry a marginal cost small relative to the backbone itself.

Candidate Leaf River points

A rough starting set, subject of course to whatever locations make more sense from the City's experience:

- East Hardy Street at Leaf River — downtown corridor bridge crossing[6]
- Chain Park at Highway 42 — public-use riverfront park[7]
- Highway 11 boat ramp and Leaf River access point — Pinebelt Blueways[8]
- Lagoon Road approach to the project site

Closing

Sharing as a working thought. If any part of it seems worth keeping in mind, glad to develop it further on my side in whatever form is most useful.

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Footnotes

[1] FEMA case study, *Community Rating System Saves Dollars, Property and Lives, City of Roseville, California*. https://www.fema.gov/case-study/community-rating-system-saves-dollars-property-and-lives

[2] FEMA case study, *Following the Leaders with the Community Rating System*, reporting Miami-Dade County CRS Coordinator Michael Gambino: approximately $1 million annual mitigation commitment; approximately $15 million in resident flood insurance premium savings over the preceding ten years. https://www.fema.gov/case-study/following-leaders-community-rating-system

[3] Same FEMA source as footnote 2; Galveston Class 7 annual savings (~$3.5 million, as of June 2014). Also referenced in FEMA, *Community Rating System Users Group — FAST*, https://www.fema.gov/case-study/community-rating-system-users-group-fast

[4] FEMA case study *Following the Leaders*, North Miami CRS Coordinator Jeff Geimer. Same URL as footnote 2.

[5] City of Norfolk, Virginia — FloodMapp NowCast integration and Waze partnership for CRS Program for Public Information credit. https://www.floodmapp.com/post/understanding-the-community-rating-system-crs-how-floodmapp-helps-communities-earn-points

[6] East Hardy Street at Leaf River, Hattiesburg (approx. 31.3251, -89.2757).

[7] Chain Park, 5619 Highway 42, Hattiesburg, MS 39401 (31.3386, -89.2806).

[8] Pinebelt Blueways — Leaf River, Highway 11 Boat Ramp, Hattiesburg, MS 39401 (31.3425, -89.2808).