

**Annual Progress Report  
Implementing Flood Hazard Mitigation Initiatives  
In the Natural Hazards Mitigation Plan**

August 11, 2011

Thurston County participates in the National Flood Insurance Program's Community Rating System. This participation requires annual re-certification, one part of which involves making an annual progress report on implementation of the Thurston County Mitigation Initiatives contained in the **September 2009 Natural Hazards Mitigation Plan**.

In October 2009 the Thurston Board of County Commissioners approved by Resolution No. 14290 the "Natural Hazards Mitigation Plan for the Thurston Region". The Plan includes mitigation measures for flood hazards and replaces the 1999 "Flood Hazard Management Plan".

Property owners in communities participating in this community rating system program receive a discount on their annual premiums when they renew or purchase flood insurance. Thurston County is rated as a Class 5 community; therefore most property owners receive a 25% discount on their flood insurance premiums.

This progress report is being submitted to the Board of Thurston County Commissioners, released to the media and made available to the public.

**A. How the Reader May Obtain a Copy of the Plan:**

A reference copy of the Natural Hazards Mitigation Plan is available for reading at the Thurston County Courthouse, Building 1, Permit Assistance Center on the second floor. Parts or the entire plan may be reproduced for anyone wanting to purchase it. The Plan is also available on-line at the following link:

[http://www.co.thurston.wa.us/em/Plans\\_Reports/2009\\_Natural\\_Hazards\\_Mitigation\\_Plan\\_Thurston\\_Region\\_wThurstonAnnex.pdf](http://www.co.thurston.wa.us/em/Plans_Reports/2009_Natural_Hazards_Mitigation_Plan_Thurston_Region_wThurstonAnnex.pdf)

**B. Progress on Implementing the Mitigation Initiatives:**

The Natural Hazard Mitigation Plan, adopted by the Board of Thurston County Commissioners contains twenty-one flood hazard mitigation initiatives under four categories: Hazard Damage Reduction; Plan Coordination and Implementation; Data Collection and Mapping; and Development Regulations.

Each initiative is described below with its flood hazard priority and a description of the status toward implementation. A check ( ✓ ) indicates completion of the recommendation.

**Mitigation Initiatives:**

**1. TC-FH 25 – Priority 1 – Category: Hazard Damage Reduction**

**Action:** Develop evacuation plans for communities and residents situated downstream from the Nisqually and Skookumchuck River Dams.

**Status:** No current action on this initiative. We have been waiting to receive the revised DFIRM information from FEMA to

develop accurate evacuation plans. DFIRMS are expected in December 2011.

2. TC-FH 22 – Priority 2 – Category: Hazard Damage Reduction
  - Action:** Draft a prioritized list of road segments and bridges that should be elevated above the 100-year floodplain and culverts that will fail under flood flow. Upgrade these structures if state or federal monies become available.
  - Status:** Thurston County has been working with FEMA to revise and finalize DFIRM maps. Preliminary DFIRMS have been completed and are in the final adoption process, expected to be completed in the First Quarter of 2012. However, the DFIRM process confirmed that FEMA, under the RISK MAP program needs to remodel and remap the majority of Thurston County. The status of the RISK MAP projects is unknown at this time.
- ✓ 3. TC-FH 1 – Priority 3 – Category: Plan Coordination and Implementation
  - Action:** Continue Thurston County’s enrollment in the Community Rating System (CRS) program as a part of the National Flood Insurance Program.
  - Status:** Thurston County continues to participate in the CRS program
4. TC-FH 24 – Priority 4 – Category: Plan Coordination and Implementation
  - Action:** Develop a southeast flood detour plan for the Thurston County Comprehensive Emergency Management Plan.
  - Status:** Thurston County has met with the various jurisdictions and parties to develop an appropriate evacuation plan. The plan and memorandum of understanding (MOU) is currently under development. The plan and MOU should be finalized by December 2011.
5. TC-FH 7 – Priority 5 – Category: Data Collection and Mapping
  - Action:** Remap the floodplains for all rivers, streams, and high groundwater areas and update the Flood Insurance Rate Maps (FIRMs)
  - Status:** FEMA will be providing updated Digital Flood Insurance Rate Maps (DFIRMs) by December 2011.  
  
FEMA was working on a Flood Study of the Nisqually and Chehalis River Basins. The Flood Study may include remapping of the floodplain and may provide new base flood elevations. The most recent update to FEMA’s flood studies is they’ve been put on hold due to lack of funding.
6. TC-FH 23 – Priority 6 – Category: Data Collection and Mapping
  - Action:** Acquire MIKE 11, a three-dimensional hydrological modeling software package and AQUARIUS, a USGS standard stream flow modeling software package.

**Status:** No action has been taken on this initiative. Staff is looking for funding either from outside county resources or inside.

- ✓ 7. TC-FH 15 – Priority 7 – Category: Hazard Damage Reduction  
**Action:** Draft a prioritized list of which floodplain residences the county would acquire (buyout) if state and federal monies are available *if the property owners are willing to sell.*  
**Status:** A list of floodplain residences in the county would approach to acquire if monies were available has been developed.
- ✓ 8. TC-FH 4 – Priority 8 – Category: Plan Coordination and Implementation  
**Action:** Continue to be actively involved in the multiple jurisdiction flood hazard reduction efforts within the Chehalis River basin.  
**Status:** Thurston County continues to actively participate as a member of the Chehalis River Basin Flood Authority.
- 9. TC- FH 9 – Priority 9 – Category: Data Collection and Mapping  
**Action:** Develop mapping products to achieve all flood maps and data sets so they can be reused at a later date.  
**Status:** Due to loss of staff and changes in workloads this has not been completed. Estimated completion is 2Q 2012.
- 10. TC-FH 8 – Priority 10 – Category: Data Collection and Mapping  
**Action:** Map the channel migration zones for all rivers in the region and the extent of high quality riparian habitat.  
**Status:** Mapping of riparian habitat - All Puget Sound drainages in Thurston County except the Nisqually watershed will have riparian habitat mapping completed in 2011.  
Mapping channel migration zones (CMZ) - Work on CMZ mapping is occurring as resources are made available. The CMZ mapping methodology will be included in the revised Critical Areas Ordinance.
- ✓ 11. TC-FH 16 – Priority 11 – Category: Hazard Damage Reduction  
**Action:** Draft a prioritized list of which residences the county would help elevate above the 100-year floodplain, if state and federal monies are available.  
**Status:** A list of residents in the county that would be contacted to elevate above the base flood elevation if monies were available has been developed.
- ✓ 12. TC-FH 2 – Priority 12 – Category: Plan Coordination and Implementation  
**Action:** Secure funding for flood related projects within the 20-year Stormwater Capital Facilities Plan.

- Status:** The updated 2011-2016 Stormwater Capital Facilities Plan contains projects prioritized to minimize or eliminate localized flooding problems.
13. TC-FH 21 – Priority 13 – Category: Hazard Damage Reduction
- Action:** Undertake a study of repetitive public cost losses, this would include residential structures, but also include properties such as livestock, out-buildings and rescue costs not already identified by FEMA.
- Status:** An inventory of all structures within the current floodplain has been completed. Presently, we are to receive the revised DFIRM information from FEMA to finalize the structure inventory. DFIRMS are expected in December 2011.
14. TC-FH 11 – Priority 14 – Category: Development Regulations
- Action:** Revise shoreline regulations to encourage ‘shoreline protective structures’ to be “bioengineered”.
- Status:** Thurston County continues to work at updating the Shoreline Management Program and anticipates completion in 2013.
- ✓ 15. TC-FH 20 – Priority 15 – Category: Plan Coordination and Implementation.
- Action:** Implement the recommendations of the adopted stormwater drainage basin plans.
- Status:** Recommendations from adopted stormwater drainage basin plans have been referenced or incorporated into the Drainage Design and Erosion Control Manual and implemented during development plan reviews.
16. TC-FH 10 – Priority 16 – Category: Development Regulations
- Action:** Reevaluate land uses and zoning based upon new floodplain maps.
- Status:** This action is dependent upon FEMA completing their DFIRM and Flood Study projects, which has not occurred at this time.
17. TC-FH 12 – Priority 17 – Category: Development Regulations
- Action:** Work with others to determine the width and conditions of buffers along river and stream shorelines.
- Status:** This is included in the work at revising the Critical Areas Ordinance and the Shoreline Management Program.
18. TC-FH 13 – Priority 18 – Category: Development Regulations
- Action:** Draft a Comprehensive Plan policy which encourages the creation and use of wetland mitigation bank.

- Status:** The Critical Areas Ordinance update will include the ability to use approved wetland mitigation banking. The overall comprehensive plan updates will add supporting language.
- 19.** TC-FH 14 – Priority 19 – Category: Data Collection and Mapping
- Action:** Prepare new drainage basin in priority areas such as Salmon and Yelm Creeks.
- Status:** All the remaining sub-basins including Yelm and Salmon Creeks in the Nisqually Watershed will be included in the Nisqually Watershed Characterization study by the end 2011.
- ✓ **20.** TC-FH 17 – Priority 20 – Category: Hazard Damage Reduction
- Action:** Work with landowners and others to establish reforested corridors along river and stream shorelines
- Status:** This work is being done through several projects including the update of the Critical Areas Ordinance, Shoreline Management Program, and Salmon recovery efforts to the four lead entities.
- ✓ **21.** TC-FH 18 – Priority 21 – Category: Hazard Damage Reduction
- Action:** Encourage research into bioengineering and other techniques which provide stream bank protection and improve fisheries through the use of large woody debris. Support local demonstration projects which could provide such research.
- Status:** The Shoreline Master Program and Critical Areas Ordinance will include preferences to use bioengineering and other more natural protection measures when activities are approved. Development of examples and guidelines will eventually be included with the updates. Letters of support have been sent to the local lead entities for salmon recovery and other organizations for such work as well as staff support when available.