



**Washington State Department of Ecology
Shorelands and Environmental Assistance Program**

Guidance to Local Governments on Frequently Flooded Area Updates in CAO's

Acronym Table:

| Word/Phrase | Acronym |
|-------------------------------------|----------------|
| Base Flood Elevation | BFE |
| Biological Opinion | BiOp |
| Channel Migration Zone | CMZ |
| Community Assistance Visit | CAV |
| Critical Areas Ordinance | CAO |
| Federal Emergency Management Agency | FEMA |
| Flood Insurance Rate Maps | FIRM or FIRMs |
| Frequently Flooded Area(s) | FFA(s) |
| Growth Management Act | GMA |
| National Flood Insurance Program | NFIP |
| National Marine Fisheries Service | NMFS |

The Growth Management Act (GMA) calls for periodic review and update of Critical Areas Ordinances (CAO). Due dates for review and necessary updates of CAO in the Puget Sound region and Clark County are:

- June 30, 2015 = Pierce, King, and Snohomish Counties and all cities within those counties
- June 30, 2016 = Whatcom, Skagit, San Juan, Island, Clallam, Jefferson, Mason, Thurston and Clark counties and all cities within those counties.

One of the Critical Areas specified in the GMA is “Frequently Flooded Areas (FFAs).” The following guidance is offered by the Department of Ecology regarding update of FFA provisions.

Each local government must consider the adequacy of the **designation** and the **protection** of FFAs within their CAO. In these reviews, new information such as maps or relevant science findings needs to be integrated. Local governments will consider whether there have been updates to state statutes, other local codes or best available science that should be incorporated into the CAO. An important facet of these periodic updates is maintaining consistency with other statutes and programs. CAO reviews are also an opportunity for local governments to make enhancements of policy and regulation, particularly policies related to [flood hazard management planning](#).¹

This guidance addresses the key elements of a CAO update for FFAs. We also address situations where a single local ordinance is used to meet both GMA and Federal Emergency Management Agency (FEMA) requirements for floodplain management. Links to additional information are provided at the bottom of this document.

Updating the designation and mapping of FFAs

- **Final updated Flood Insurance Rate Maps (FIRM) from FEMA:** The [Department of Commerce](#)² recommends that classifications of FFAs should include, at a minimum, the 100-year floodplain designations of the FEMA National Flood Insurance Program (NFIP). Many Washington communities have received updated [Flood Insurance Rate Maps](#)³ (often called “100 year floodplain maps.”) Final updated FEMA maps must be adopted into the local floodplain management ordinance in order for properties in a jurisdiction to retain flood insurance coverage. If your CAO references FEMA maps, you should update references to final updated maps.
- **Preliminary updated FIRM maps from FEMA:** In some jurisdictions, FEMA has issued preliminary updated FIRM maps, but the process to make these maps final has been delayed. Ecology and FEMA encourage use of these preliminary updated maps in regulating floodplains to reduce flood risk and protect floodplain resources (so long as the information is at least as restrictive as the current effective maps). Local governments can adopt the preliminary updated floodplain maps as the areas protected under their CAO. Ecology supports the use of the preliminary updated maps (until they are superseded by final maps) as best available science in meeting CAO update requirements. In no case may Preliminary FIRMs be used to reduce the area covered or applicable standards required by a currently effective FIRM. If utilizing Preliminary FIRMs, local governments should have an appeal or review process allowing for engineering review of preliminary FIRM information that is more restrictive than the current effective FIRM.
- **Identification of other flooding areas:** [Department of Commerce rules](#) recommend local governments consider designating flood areas outside the FEMA mapped 100-year floodplain, which may be threatened by flooding under future conditions. Other examples include the area identified as inundated during the “flood of record,” identification of areas subject to groundwater flooding, or stream systems where the path of flood waters can be unpredictable.
- **Mapping of Channel Migration Zones:** [Channel Migration Zones](#)⁴ (CMZs) are the areas where the river channel is likely to shift or “migrate” over time. Structures and other improvements in these areas are particularly vulnerable to long-term damage. Shifts in channel location are a vital natural process, creating “off-channel habitat” for salmon and other species. These quiet-water areas can be especially important during high river flows as refuge for juvenile salmon and other species. In many jurisdictions, maps identifying CMZs were produced as part of recent Shoreline Master Program updates. If Channel Migration Zone areas have been mapped or identified in policy statements, they should be considered for inclusion in the description of FFAs included in the CAO.

[New guidance⁵ is available](#) from the Department of Ecology on using mapping tools to identify CMZs.

Update to Frequently Flooded Area standards

New information may warrant changes to CAO policy objectives that focus on protecting property and improving habitat in floodplains. In the Puget Sound region, local governments can take steps to change how they manage their floodplains to simplify permitting for floodplain development and other activities.

- **Habitat protection:** Increasingly, there is recognition of the importance of floodplains as [vital habitat to support salmon](#)⁶ and other species. Relevant information may be found in updates to salmon recovery plans, channel migration zone mapping or other sources. These sources should be considered in development of revised CAO provisions which better protect riparian habitat. These protections may be addressed under the FFA provisions or within the Fish and Wildlife Habitat Conservation Area provisions of a CAO.
- **Endangered Species protection:** Local governments have responsibility, under the Endangered Species Act, for preventing harm to listed fish and other species that commonly inhabit floodplains. No adverse effects to habitat function are allowed in specified areas that are vital to these species.
- **Address Unique Circumstances and Climate Change:** A jurisdiction may have unique risks due to the potential for [tsunamis](#)⁷, high tides with strong winds, [sea level rise](#)⁸ or extreme weather events that it may want to address in its FFA provisions.
- **Flood risk reduction beyond FEMA minimums:** Ecology and FEMA encourage local governments to go beyond the FEMA minimum requirements for floodplain management. Greater protection from floods may be a policy objective that should be incorporated into the CAO. For example, some jurisdictions use the “flood of record” elevations to regulate the minimum elevation of structures, where the record flood is higher than the 100-year flood elevation used by FEMA (called the Base Flood Elevation [BFE]).

Additionally, some jurisdictions require that structures be built two (or three) feet above the BFE, rather than the minimum FEMA standards. These higher standards may be incorporated into FFA provisions. A CAO update may be important to ensure internal consistency where a jurisdiction has a separate Floodplain Management Ordinance that incorporates these higher standards. A CAO update may also be used to establish these higher standards.

Update to Dual-Purpose Critical Area and Floodplain Management Ordinances

Local governments must address flood-prone areas under two separate statutes: The GMA ([RCW 36.70A](#))⁹ and the Floodplain Management statute ([RCW 86.16](#))¹⁰. A Floodplain Management ordinance under RCW 86.16 is necessary for a city or county to qualify for FEMA’s NFIP. Some local governments

adopt a single document to satisfy the floodplain management requirements of both the GMA and the NFIP. Such a dual-purpose ordinance needs to satisfy both the requirements of the GMA and the Floodplain Management statute and can be housed in the CAO. If all of a local government's floodplain management issues are adequately addressed in its Floodplain Management Regulations, then it may be possible for the FFA chapter to incorporate the Floodplain Management Regulations by reference.

- **Efficiency of concurrent flood ordinance and CAO update:** Where a local government has adopted a dual-purpose floodplain protection ordinance, **we encourage that you consider a concurrent update** that will satisfy the requirements of both RCW 36.70A and RCW 86.16.
- **Benefits of updating the local flood ordinance:** Local floodplain management ordinances are periodically reviewed by Ecology and/or FEMA to ensure that they meet Federal and State requirements through a review called a Community Assistance Visit (CAV). Concurrent floodplain management ordinance update during the CAO update will simplify the next required CAV review since Ecology will have already reviewed your local ordinance.
- **FEMA Puget Sound Biological Opinion response:** Jurisdictions in the Puget Sound basin must meet the procedural and substantive requirements of the National Marine Fisheries Service (NMFS) Biological Opinion on the NFIP. FEMA has the ultimate authority for determining the adequacy of BiOp compliance. In December 2014, FEMA provided new floodplain [ordinance guidance for Door 3 communities](#). Implementing the FEMA guidance will assist local governments in addressing compliance with the Endangered Species Act [Biological Opinion](#)¹¹ (BiOp). The CAO update provides an opportunity for local governments to include or reference procedures for BiOp implementation in their Floodplain Management Regulations or combined Floodplain Management Regulations/CAO. This will help ensure that all staff and other parties are aware of these procedures required to comply with the BiOp.
- **Programmatic Response to FEMA Puget Sound BiOp:** Within floodplains subject to the BiOp, some jurisdictions desire reducing review procedures that are often required for individual development proposals. An incentive for a reduced procedure approach is achieving programmatic compliance with the BiOp, known as “Door 2” communities. Updates to CAO provisions may be one tool to meet the requirements for this programmatic approval (Door 2 community) from FEMA. Additional guidance for preparing a Door 2 submittal to FEMA can be found at the [FEMA website](#).¹² As noted above, FEMA has authority for determining the adequacy of BiOp compliance.
- **Flood ordinance update requirements:** Please contact your [Ecology Floodplain Specialist](#)¹³ if your jurisdiction wants their CAO update to satisfy both GMA and NFIP requirements. Our staff will work with you to accomplish this dual update. RCW 86.16 includes specific requirements for these floodplain management ordinances. Floodplain management ordinances must be submitted to the Department of Ecology for review after local adoption.

Flood Control Districts operated by counties – Achieving internal consistency



An important consideration in CAO updates is maintaining *internal consistency* among various policies and programs of the local jurisdiction. Increasingly, counties are using specially designated districts such as [Flood Control Districts](#)¹⁴ to secure funding to address specific issues. If your county has created a Flood Control District to help define and fund floodplain improvements and other activities, you should consider whether the FFA provisions in your CAO should be updated to reflect the Flood Control District objectives. There may be other sections under the Comprehensive Plan (such as the capital facilities plan) that could benefit from an update to incorporate Flood Control District activities conducted by a county.

Ecology Floodplain Management staff contacts:

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Southwest Washington, [Jeff Stewart](#), (360) 407-6521
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For Statewide Policy Issues:

[Tom Clingman](#), Policy and Legislative Lead, (360) 407-7448

References:

¹ Municipal Research and Services Center (MRSC) information on flood hazard areas, including examples of local ordinances and links to other information:

<http://www.mrsc.org/subjects/pubsafe/emergency/ps-flood.aspx>

² WA Department of Commerce guidance on Frequently Flooded Areas:

<http://www.commerce.wa.gov/Services/localgovernment/GrowthManagement/Growth-Management-Planning-Topics/Critical-Areas-and-Best-Available-Science/Pages/Frequently-Flooded-Areas.aspx>

³ Final (effective) and many preliminary Flood Insurance Rate Maps can be found at the FEMA Map Service Center: <https://msc.fema.gov/portal>

⁴ Channel Migration Assessment web pages at Ecology:

<http://www.ecy.wa.gov/programs/sea/sma/cma/index.html>

⁵ Guidance on identifying channel migration zones -- Mapping tools technical guidance:

<https://fortress.wa.gov/ecy/publications/SummaryPages/1406032.html>

⁶ Land use planning for salmon, steelhead and trout (WA Department of Fish and Wildlife):

<http://wdfw.wa.gov/publications/00033/wdfw00033.pdf>

⁷ Tsunami hazard area and evacuation route mapping (select "*Tsunami Evacuation Map*" from Map Theme menu at top left): <https://fortress.wa.gov/dnr/geology/>

⁸ Sea level rise in Washington State: <http://www.ecy.wa.gov/climatechange/risingsealevel.htm>

⁹ Growth Management Act statute: <http://apps.leg.wa.gov/rcw/default.aspx?cite=36.70A>

¹⁰ Floodplain Management statute: <http://apps.leg.wa.gov/rcw/default.aspx?cite=86.16>

¹¹ National Marine Fisheries Service NFIP Biological Opinion: http://www.fema.gov/media-library-data/20130726-1900-25045-9907/nfip_biological_opinion_puget_sound.pdf

¹² NFIP ESA BiOp Biological Opinion Checklist: <http://www.fema.gov/media-library/assets/85336>

¹³ Department of Ecology information on technical assistance to local floodplain management programs:

http://www.ecy.wa.gov/programs/sea/floods/technical_assistance.html

¹⁴ Information on Flood Control Districts in Washington State:

<http://www.mrsc.org/subjects/governance/spd/spd-floodlist.aspx>