



FEMA

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FAQ: How does a community address Cumulative Effects when issuing a Floodplain Development Permit?

A project proponent or the community must assess and take into account the cumulative effects of the proposed permit action on threatened and endangered species (TES), as well the direct, indirect, interrelated, and interdependent effects. A permit action's cumulative effects may result in a finding of adverse effects. No short-term or long-term adverse effects are allowed within the Protected Area. Beyond (outside) the Protected Area the NFIP Biological Opinion states that there must be no net adverse effects to TES populations or their habitats, and that the overall result must be to maintain or improve current habitat conditions.¹ If a project proposed within the Protected Area would result in an adverse effect due to cumulative or other effects, it must either be redesigned to avoid the adverse effect, or consulted on under separate ESA consultation (section 7, 4(d), or 10); otherwise the project cannot occur.

The National Marine Fisheries Service (NMFS) and US Fish and Wildlife Service (FWS) have defined cumulative effects as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area" of the action under consideration. 50 C.F.R. 402.02. The Services have further elaborated on the term cumulative effects in the ESA Consultation Handbook by emphasizing that the term is meant to cover future non-Federal actions which must be reasonably certain to occur. "Indicators of actions 'reasonably certain to occur' may include, but are not limited to approval of the action by State, tribal or local agencies or governments (e.g. permits, grants); indications by State, tribal or local agencies or governments that granting authority for the action is imminent; project sponsors' assurance the action will proceed; obligation of venture capital; or initiation of contracts. The more State, Tribal, or local administrative discretion remaining to be exercised before a proposed non-Federal action can proceed, the less there is reasonable certainty that the project will be authorized. Speculative non-Federal actions that may never be implemented are not factored in the 'cumulative effects' analysis." (Endangered Species Consultation Handbook, page 4-32, USFWS and NMFS 1998). FEMA is adopting this Section 7 terminology for the implementation of the RPA in the NFIP Biological Opinion in the Puget Sound.

¹ The guidance provided in this document is intended for the administration and implementation of the National Flood Insurance Program. It has been developed by FEMA staff using guidance from numerous authoritative sources on the Endangered Species Act such as the Interagency Consultation regulations at 50 C.F.R. 402, the Endangered Species Handbook (USFWS/NMFS 1998) http://www.fws.gov/endangered/esa-library/pdf/esa_section7_handbook.pdf, The Habitat Approach - Implementation of Section 7 of the ESA for Actions Affecting the Habitat of Pacific Anadromous Salmonids (NMFS 1999), and Making ESA Determinations of Effects for Individual or Grouped Actions at the Watershed Scale (NMFS 1996). This document should not be used as an authoritative source on the subject for actions other than those being evaluated as required under the NFIP minimum criteria and the implementation of the RPA in the Puget Sound.



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No adverse effects to TES populations or their habitats can occur within the Protected Area. Beyond the Protected Area there can be no net adverse effects to “water quality, water quantity, flood volumes, flood velocities, spawning substrate, and/or floodplain refugia for listed salmon” (NFIP Biological Opinion Appendix 4, page 222). In addition, all indirect effects of actions outside of the Protected Area that impact stormwater, riparian vegetation, bank stability, channel migration, hyporheic zones, wetlands, or large woody debris (LWD)” must be mitigated (NFIP Biological Opinion Appendix 4, page 223).

One option for appropriately taking into account cumulative effects is through the development of a Habitat Conservation Plan. Others include a conservation plan under 4(d) limits (e.g. the Municipal Residential Commercial Industrial (MRCI) limit), a Candidate Conservation Agreement, or a Safe Harbor Agreement. These are eligible approaches under the Door 2 option. They are intended to be a programmatic approach where communities assess all current and likely future land management actions within the entire regulatory framework of their jurisdiction. One of the central objectives of the Door 2 approach is to assess cumulative effects by estimating the impacts of land-use regulations and land management actions upon current baseline habitat conditions, across each of a jurisdiction’s watersheds. Accurately assessing cumulative effects is one of the most difficult objectives for management of lands and threatened and endangered fish populations. Following a Door 2 approach greatly increases the potential for a useful and accurate assessment if jurisdictions are willing to devote the time and funds needed to gather data and conduct and document their analysis of cumulative effects.

Another approach is to ensure that permit-by-permit (Door 3) submittals assess and take into account cumulative effects. FEMA Region X assumes that the most viable and practicable way to ensure minimization of potential cumulative effects under a Door 3 scenario is to require strict adherence to the standards within the NFIP Biological Opinion at all locations (i.e. on every parcel). By doing so, there would be no adverse effects for actions within the Protected Area. If the effects of an action are not determined to discountable, insignificant, or beneficial, they are defined as adverse effects (Endangered Species Consultation Handbook, USFWS and NMFS 1998). Discountable effects are extremely unlikely to occur. Insignificant effects relate to the scope and size of the impacts, and never reach the scale where “take” occurs (Endangered Species Consultation Handbook, USFWS and NMFS 1998). A person would not be able to meaningfully measure, detect, or evaluate insignificant effects (Making ESA Determinations of Effects for Individual or Grouped Actions at the Watershed Scale, NMFS 1996).

Per the NFIP Biological Opinion and FEMA’s Habitat Assessment and Mitigation Regional Guidance (FEMA Region X 2011), Door 3 permit-by-permit project proposals located within the 100-year floodplain, but beyond the Protected Area could potentially have some short-term or localized adverse effects, but those effects would have to be avoided or mitigated. Off-site compensation is the least preferable mitigation option, and should be used only when it is demonstrated that other more direct forms of mitigation are not possible. As noted earlier in this memo, the NFIP Biological Opinion states that beyond the Protected Area there must



FEMA

be no net adverse effect to TES populations or their habitats, and that the overall result must be to maintain or improve current habitat conditions.

Jurisdictions will be required to initially judge what mitigation measures are required to adequately mitigate any adverse effects. Cumulative effects must be taken into account in the determination of the appropriate mitigation measures. FEMA Region X can provide technical assistance as requested to communities that need help making these calls. FEMA Region X retains the authority to review the habitat assessments that describe those environmental effects and associated mitigation measures, and to be able to require changes or additions to the mitigation measures, if necessary.