ERRATA TO THE 2013 FLOOD HAZARD MANAGEMENT PLAN

Volume II
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ERRATA TO THE 2013 FLOOD HAZARD MANAGEMENT PLAN

In addition to the Progress Update, the following sections of the 2013 Flood Plan have been updated to reflect current information and understanding, correct grammar or other factual errors.

Appendix A

Page A-6, Hydrology

Revised Text:

~~**Hydrology**~~	~~The science of the behavior of water in the atmosphere, on the surface of the Earth, and underground.~~
Hydrology and Hydraulics	The study of how much water will discharge from a watershed (hydrology) and the resulting flood or water inundation elevation (Hydraulics). This is commonly referred to as H & H.

Appendix D

Flood Plains Regulations, County, Cities, Towns, State and Local Agencies

Page D-5, second sentence.

Revised Text:

A 2010 analysis of flood hazard regulations for counties and cities within the Puyallup and Nisqually River watersheds indicates significant differences across the ~~eh~~ 16 categories evaluated.

Page D-5, paragraph one.

Additional Text:

The National Flood Insurance Program (NFIP) regulations identify requirements that communities must fulfill to join and stay in the program. The requirements that apply to a particular community depend on its flood hazard and the level of detail of the data FEMA provides to the community. The NFIP requirements are minimums. As noted in 44 CFR 60.1 (d),

"Any floodplain management regulations adopted by a State or community which are more restrictive than the criteria set forth in this part are encouraged and shall take precedence."

National Flood Insurance Program- Endangered Species Act Model Ordinance

Page D-21, Readers Digest Version of the Biological Opinion, Biological Opinion link.

Revised link: https://www.fema.gov/national-flood-insurance-program-endangered-species-act

Potential Funding Sources for Flood Damage Reduction and Mitigation Projects

Page D-22, paragraph one.

Revised Text:

The primary sources of funding to implement flood damage and mitigation projects are administered by the Federal Emergency Management Agency (FEMA) and State of Washington Department of Ecology (WDOE). Specific programs offered by FEMA include Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation (PDM), and Flood Mitigation Assistance (FMA)~~, Repetitive Flood Claims (RFC) and Severe Repetitive Loss (SRL)~~. Programs offered by WDOE include the Flood Control Assistance Account Program (FCAAP) and Floodplains by Design (FbD). Programs offered by the Salmon Recovery Fund Board are the Puget Sound Acquisition and Restoration Fund Board (PSAR) and the Puget Sound Acquisition and Restoration Fund Large Capital Projects (PSAR Large Cap). Community Development Block Grants are typically made available following a Presidential Declared Disaster and are administered by local jurisdictions.

Hazard Mitigation Grant Program

Page D-22, paragraph one.

Revised Text:

Cost share requirement for this grant is 75% federal, 25% ~~12.5% state and 12.5%~~ local. The local applicant and the State may split the cost share based on legislative approval.

Flood Mitigation Assistance

Page D-23, paragraph one.

Revised Text:

The FMA program was created as part of the National Flood Insurance Reform Act (NFIRA) of 1994 (42 U.S.C. 4101) with the goal of reducing or eliminating claims under the National Flood Insurance Program (NFIP). The FMA program is focused on mitigating Repetitive Loss (RL) properties and Severe Repetitive Loss (SRL) properties. A Repetitive Loss property is defined as a residential property that is covered under an NFIP flood insurance policy and: (a) has incurred flood-related damage on two occasions, in which the cost of the repair, on the average, equaled or exceeded 25 percent of the market value of the structures at the time of each such event; or (b) at the time of the second incidence of flood-related damage, the contract for flood insurance contains increased cost of compliance coverage. Repetitive Loss properties may receive up to 90 percent Federal funding. A Severe Repetitive Loss property is defined as a residential property that is covered under an NFIP flood insurance policy and: (a) has at least four separate NFIP claim payments (including building and contents) over $5,000 each, and the cumulative amount of such claims payments exceed $20,000; or (b) for which at least two separate claims payments (includes only building) have been made under such coverage, with the cumulative amount of such claims exceeding the market value of the insured building. Severe Repetitive Loss Properties may receive up to 100 percent Federal funding. ~~FEMA provides FMA funds to assist States and communities in implementing measures that reduce or eliminate the long-term risk of flood damage to buildings, manufactured homes, and other structures insurable under the National Flood Insurance Program.~~

Repetitive Flood Claim (RFC)

Page D-23, paragraph one.

Deleted Text:

~~Repetitive Flood Claim (RFC)~~

~~The RFC grant program was authorized by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004 (P.L. 108–264), which amended the National Flood Insurance Act (NFIA) of 1968 (42 U.S.C. 4001, et al). Up to $10 million is available annually for FEMA to provide RFC funds to assist States and communities in reducing flood damages to insured properties that have had one or more claims to the National Flood Insurance Program (NFIP).~~

Cost share requirement for this grant is 100% federal and no local cost share is required. The State does not cost share in RFC grants.

Severe Repetitive Loss (SRL)

Page D-23-24, paragraph one.

Deleted Text:

~~The SRL grant program was authorized by the Bunning-Bereuter-Blumenauer Flood Insurance Reform Act of 2004, which amended the National Flood Insurance Act of 1968 to provide funding to reduce or eliminate the long-term risk of flood damage to severe repetitive loss (SRL) structures insured under the National Flood Insurance Program.~~

~~The definition of severe repetitive loss as applied to this program was established in section 1361A of the National Flood Insurance Act, as amended (NFIA), 42 U.S.C. 4102a. An SRL property is defined as a **residential property** that is covered under an NFIP flood insurance policy and: (a) that has at least four NFIP claim payments (including building and contents) over $5,000 each, and the cumulative amount of such claims payments exceeds $20,000; or (b) for which at least two separate claims payments (building payments only) have been made with the cumulative amount of the building portion of such claims exceeding the market value of the building. For both (a) and (b) above, at least two of the referenced claims must have occurred within any ten-year period, and must be greater than 10 days apart.~~

National Flood Insurance Program (NFIP) and Community Rating System (CRS)

Page D-25, paragraph six.

Deleted Text:

Flood hazard management regulations are codified in Title 18E~~.70~~ of the Pierce County Code. ~~and criteria, and procedures are laid out in Chapter Nine of the *Pierce County Stormwater Management and Site Development Manual*.~~

Page D-25, paragraph seven.

Deleted Text:

Basin and floodplain management plans serve as part of the flood hazard mitigation plan for Pierce County. Improvement projects associated with the basin plan should, if possible, reduce flood hazards and improve the County's rating. ~~Future flood hazard reductions could help to raise the County's rating from "Class 3" to a better class.~~

Community Rating System (CRS)-Section 510 (Floodplain Management Planning)

Page D-26, paragraph one.

Deleted Text:

The Pierce County Rivers Flood Hazard Management Plan will be used by Pierce County as the comprehensive floodplain management plan, specified in Section 510 of the CRS guidance, for credit points towards the community's National Flood Insurance Program (NFIP). The planning process will follow the guidance as much as is feasible in order to maximize the number of credit points available towards the County's CRS rating. ~~This will also help any other jurisdiction seeking CRS credit points through adoption of the Plan.~~ It is a CRS prerequisite to receive 50% of the points available in several 510 elements to be rated better than a Class 5 community.

Page D-26, Overview, paragraph one.

Revised Text:

Section 510 of the Community Rating System (CRS) program contains the guidance on planning for receiving credit points towards a community's ~~National Flood Insurance Program (NFIP) rating (e.g., Class 3)~~. Credit is provided for preparing, adopting, implementing, evaluating, and updating a comprehensive floodplain management plan or repetitive loss area analyses. The CRS does not specify what must be in a plan, but it only credits plans that have been prepared according to their ~~the standard~~ planning process ~~explained in Section 511~~. The planning process requires implementation of the following 10 planning steps: (1) organize to prepare the plan; (2) involve the public; (3) coordinate with other agencies; (4) assess the hazard; (5) assess the problem; (6) set goals; (7) review possible activities; (8) draft an action plan; (9) adopt the plan; and (10) implement, evaluate, and revise.

Page D-26, Overview, number one.

Revised Text:

1. Organize to prepare the plan – the planning process must be conducted through a committee composed of staff from those community departments that will be implementing the majority of the plan's recommendations. ~~When a multi-jurisdictional plan is prepared, at least one representative from each community seeking CRS credit must be involved on the planning committee that is credited under this item.~~

Legal Agreements

Page D-28, Overview, number 1-3.

Revised Text:

1. T~~t~~he existing embankment (Auburn Wall) erected in King County ~~-~~by the ICRI crews for the purpose of preventing flow northward to Elliott Bay would be strengthened and maintained to ensure flow down the Stuck River channel into the Puyallup River;
2. A~~a~~ drift barrier may be erected near the present embankment to collect and hold drift coming down the river;
3. T~~t~~he channel below the embankment shall be straightened and deepened, and the banks strengthened to permanently confine the waters to the channel and prevent inundation of adjoining lands;

Page D-29, Overview, number 5.

Revised Text:

5. A~~a~~ fund shall be created in each County, to be known as the "Inter-County River Improvement Fund" to support construction work on the rivers. King County's share was 60 percent and Pierce County's share was 40 percent.

Tacoma Power Agreement on Alder and LaGrande Dams

Page D-37, Overview, paragraph two.

Revised Text:

The Nisqually Hydroelectric Project is operated under a license issued by the Federal Energy Regulatory Commission (FERC). The 40-year FERC license (No. 1862) was issued on March 7, 1997. The license contains articles pertaining to operational requirements, including minimum instream flow, lake levels for recreation and ramping rate requirements. There are no requirements for flood control or flood storage. According to Tacoma Power, operator of the dams, the dams provide some incidental attenuation of flood flows, however, there are no flood control requirements in the operating agreement (Nisqually Basin Plan, 2014~~2008~~). When possible and consistent with the federal mandate, Tacoma Power voluntarily uses the available storage to help reduce the downstream crest of the flood. However, Tacoma Power will do so only when these operations remain consistent with prudent operation of the project and the requirements of its federal license (personal communication with Todd Lloyd, Tacoma Power, October 2006).

Page D-37, Overview, paragraph three.

Revised Text:

Articles 402 and 403 of the operating agreement require minimum instream flows to be met downstream of the LaGrande powerhouse and LaGrande Canyon, respectively. The Nisqually River Coordinating Committee (NRCC) made up of the Nisqually Tribe, Washington Department of Fish and Wildlife, and Tacoma Public Utilities establish these instream flows to support fisheries. Article 404 addresses required reservoir water levels for Alder Lake and maximum conservation releases from LaGrande dam and powerhouse. Finally, Article 405 specifies allowable down ramping rates, or the rate at which discharges from the dam are reduced. There are no known operations at the dam to manage sediment transport through the reservoirs. Most of the sediment load (all except fine suspended sediment) originating from the upper reaches of the Nisqually River is trapped in Alder Lake (Nisqually Basin Plan 2014~~2008~~).

Page D-38, References.

Revised Text:

References

Pierce County Public Works and Utilities, Surface Water Management Division. 2014~~2008~~. Nisqually River Basin Plan, Volumes 1 and 2. Pierce County, Washington.

Lake Tapps Agreement

Page D-40, References.

Revised Text:

References:

November 24, 2009 conversation with Bob Barnes, PSE. (JMR)

TIM 7 White River Basin Plan (Draft), Dam Break Analysis

2009 Agreement Regarding Lake Tapps between Cascade Water Alliance and the Lake ~~—~~Tapps Community

Pierce County Comprehensive Plan (Title 19A)

Page D-53, paragraph one.

Revised Text:

The Pierce County Comprehensive Plan (Comprehensive Plan) is divided into thirteen~~en~~ elements: Land Use, ~~Rural, Economic Development, Environment and Critical Areas, Housing, Transportation, Utilities,~~] Capital Facilities, Cultural Resources, Design and Charter, Economic Development, Environment, Essential Public Facilities, Housing, Open Space Parks and Recreation, Transportation, Utilities, and Community Plans~~, and Essential Public Facilities~~. The Land Use Element, Environment and Critical Areas Element, Utilities Element and Capital Facilities Element include policies regarding flood control for major rivers in Pierce County. The Comprehensive Plan also divides the County into several subareas based upon geographic and community boundaries known as community plan areas. The Alderton-McMillin, Graham, Mid-County, and Upper Nisqually Community Plan areas lie within the Rivers Plan study area.

Page D-53, paragraph three.

Revised Text:

The Environment ~~and Critical Areas~~ Element builds further upon the themes of loss-prevention found in the Land Use Element. It encourages designations of flood-prone areas to rural to prevent high intensity uses generally associated with urban designations from locating in floodplains. Policies of the Environment and ~~Critical Areas~~ Element encourage the mitigation of potential impacts within flood hazard areas, especially to ensure no loss of floodwater storage. This Element calls for the continued maintenance of County flood-control facilities and acquisition and protection of floodplains to prevent future development within these areas.

Pierce County Community Plans (Title 19)

Page D-54, Pierce County Community Plans (Title 19B).

Revised Header:

Pierce County Community Plans (Title 19A, Chapter 14~~B~~)

Upper Nisqually Community Plan

Page D-54, Upper Nisqually Community Plan.

Revised Text:

The Upper Nisqually Community Plan area is also included within the Plan area; however this plan does not include specific policies regarding management of the Mashell or Nisqually Rivers, which fall within the subarea. The Upper Nisqually Community Plan adopted in 2000.

Pierce County Park, Recreation and Open Space Plan (2008)

Page D-55, Pierce County Park, Recreation and Open Space Plan (2008).

Revised Header:

Pierce County Park, Recreation and Open Space Plan (2014)

Page D-55, paragraph one

Revised Text:

The *Pierce County Parks and Recreation Open Space Plan, 2014* (PROS Plan) guides facility development by Pierce County Parks and Recreation Services. It addresses community priorities for county parks and recreation services. The plan provides regional elements serving a countywide audience, while balancing needs for local park service in urbanized residential unincorporated areas. Plan implementation will provide significant recreation opportunities for many underserved residents by providing parks in areas where they are needed most connected by a system of regional trails. A Regional Trail Plan is incorporated into the PROS Plan.

Pierce County Community Plans (Title 19)

Page D-56, Pierce County Community Plans (Title 19B).

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Pierce County Park, Recreation and Open Space Plan (2008)

Page D-57, Pierce County Park, Recreation and Open Space Plan (2008).

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Appendix F

Page F-2, Structural Approaches: Levee Reaches (Flood Risk Reduction), number one

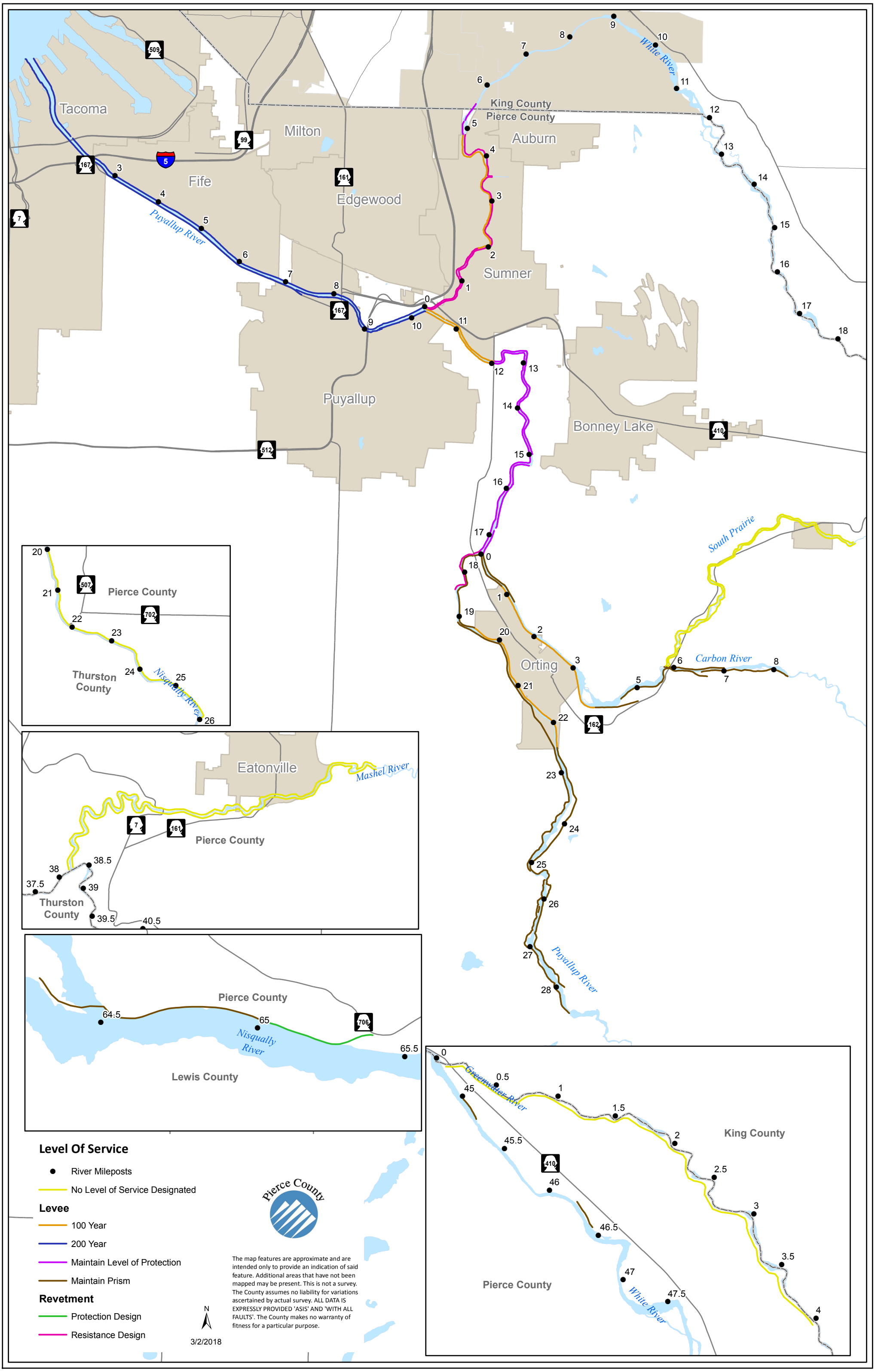
Revised Text:

~~1~~. 200-year Level of Protection – Levees are designed and maintained to safely convey a 200-year storm event. ~~the 200-year level of protection with three feet of freeboard.~~

Page F-2, Structural Approaches: Levee Reaches (Flood Risk Reduction), number two

Revised Text:

2. 100-year Level of Protection – Levees are designed and maintained to safely convey a 100-year storm event. ~~the 100-year level of protection with three feet of freeboard.~~


Tacoma
Fife
Milton
Edgewood
Auburn
King County
Pierce County
Sumner
Puyallup
Bonney Lake
Orting
Eatonville
Thurston County
Pierce County
Lewis County
King County
White River
Puyallup River
Nisqually River
Mashel River
South Prairie
Carbon River
Greenwater River
509
5
99
167
161
7
512
410
507
702
162
706
Level Of Service
River Mileposts
No Level of Service Designated
Levee
100 Year
200 Year
Maintain Level of Protection
Maintain Prism
Revetment
Protection Design
Resistance Design
N
3/2/2018
Pierce County
The map features are approximate and are intended only to provide an indication of said feature. Additional areas that have not been mapped may be present. This is not a survey. The County assumes no liability for variations ascertained by actual survey. ALL DATA IS EXPRESSLY PROVIDED 'ASIS' AND 'WITH ALL FAULTS'. The County makes no warranty of fitness for a particular purpose.

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