



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
2900 NW Stewart Parkway  
ROSEBURG, OREGON 97471

September 8, 2014

Donna Colby-Hanks  
City of Brookings Planning Department  
898 Elk Drive  
Brookings, Oregon 97415

Re: Comment on the request from Maher/Tribble, LLC, Property Development to Annex Land into the City of Brookings, Curry County, Oregon (File No.: ANX-1-14)

Dear Mrs. Colby-Hanks:

The National Marine Fisheries Service (NMFS) reviewed the August 19, 2014 Public Notice for the proposed annexation in to the City of Brookings (City) of two parcels (13.33 acres) adjacent to the Chetco River in Curry County, Oregon. This letter is written because trust resources within our jurisdiction may be affected by the future development of this property. These trust resources include Southern Oregon/Northern California Coasts (SONCC) coho salmon (*Oncorhynchus kisutch*), southern distinct population segment Pacific eulachon (eulachon) (*Thaleichthys pacificus*), and southern distinct population segment North American green sturgeon (green sturgeon) (*Acipenser medirostris*), all listed as threatened under the Endangered Species Act (ESA). Furthermore, we have designated SONCC coho salmon critical habitat under the ESA, and essential fish habitat (EFH) for various life stages 20 species of groundfish, five species of coastal pelagics, and two species of Pacific salmon under the Magnuson-Stevens Fishery Conservation and Management Act (Table 1). We submitted a similar comment letter to Curry County on January 12, 2009, during their decision process for development of this property.

The NMFS is very sensitive to actions affecting the Chetco River because the population level of SONCC coho salmon in the Chetco River is currently very low and the lower portion of the watershed is already a highly modified environment, featuring degraded baseline conditions for water quality and physical habitat characteristics.

### **Proposed Plan**

The proposed annexation by the City will not authorize activities resulting in effects to our trust resources. However, the annexation is a required step for the future development of these parcels. Because future development cannot occur but for the annexation, the effects from future development need to be considered in this current decision. The development of lots on these parcels will adversely affect our trust resources.



We have little information describing the future development. This description is based on what information is available online and what was available to us for our 2009 letter to the County. The new sub-division would allow at least 38 lots to be built, many of which are adjacent to the Chetco River. A variance was requested to reduce the 75-foot riparian setback requirement to 50 feet with allowances for decks overhanging to within 40 feet of the Chetco River. Ferry Creek would be removed from its culvert and redirected towards Snug Harbor through a new channel. All stormwater would be collected and routed through a detention facility and bio-filtration swale.

## Comments

The NMFS appreciates several aspects of the sub-division design. Native vegetation planting and prohibiting the cutting of native trees in the riparian zone are particularly commendable. Unfortunately, NMFS has concerns with some aspects, as well that overshadow the proposed conservation measures.

The SONCC coho salmon recovery plan (in press) analyzed current and historic habitat and fish abundance trends. It found the key limiting stresses are 'lack of floodplain and channel structure' and 'degraded riparian forest conditions.' One of the key limiting threats was 'urban/residential/industrial development.' The development of this property needs to protect or improve floodplain and channel structure and riparian forest conditions to be consistent with the plan. Any further degradation of the limiting stresses will not be consistent with recovery and difficult to permit. The first three of the following comments directly relate to the limiting stresses and need special consideration.

**1. Channel migration.** Large rivers, such as the Chetco River, routinely move across their floodplains. Over time, these channels naturally migrate from one side of the valley to the other. While the north bank of Chetco River in the project area has been relatively stable the last decade or so, aerial photos from 1940 and 1955 show that the stream used to be further north, especially in the downstream portion of the project area. Natural migration of the channel will bring it back towards the north in the future. Nowhere in the provided information was a discussion of a channel migration study, or any other analysis, provided that might inform this and future decisions of the probability that structures would be at risk from future channel migration.

Understanding channel migration is critical in protecting NMFS' resources. Channel migrations form natural river features, such as alcoves and side-channels, and result in varying water depths, varying size in streambed substrate, and stream habitat features. Juvenile salmon and EFH species will use these habitats for feeding and resting because shallow-water areas and small structural elements create localized eddy currents and provide space to hide and avoid predation.

When channel migration occurs, landowners routinely apply for bank stabilization projects to protect structures that were built without consideration of channel migration. Bank stabilization reduces fish habitat quantity and quality because streambank hardening fixes the river in place and limits formation of natural river features. The method of stabilization almost always contains riprap. A large body of literature exists documenting the negative effects of riprap bank

protection on aquatic resources. Furthermore, bank stabilization usually just shifts erosional forces upstream or downstream, and results in the need for additional stabilization in a self-replicating cycle.

***Recommendation***

To minimize the probability of needing bank stabilization measures in the future, the annexation approval should be conditioned to (1) require an appropriate environmental engineer to complete a channel migration analysis, and (2) restrict any structures from within the 100-year channel migration zone. This is not to be confused with the 100-year flood level.

**2. Floodplain fill.** The information discusses fill placed in portions of the property to raise them above the floodplain and a conditional letter of map revision (CLOMR) from the Federal Emergency Management Agency (FEMA). The fill would be placed as close as 25 feet from the top of bank. The NMFS assumes this area is on the downstream end of the property where the historical photos show an overflow channel from the main river into the top end of Snug Harbor.

Any encroachment on the floodplain causes negative impacts to the river system. Floodplain filling reduces the cross-sectional area of the stream. Reducing the cross-sectional area will result in two outcomes. At any given flood flow, the water elevation will be higher and the velocity of the water will be greater. A higher water elevation will impact more properties. Greater water velocities increase erosional power, results in bank failures and the need for bank stabilization measures. The same negative impacts from stabilization as outlined in #1 above will occur.

***Recommendation***

To minimize the impacts to flood flow conveyance, the annexation approval should be conditioned to prohibit fill within any areas below the 50-year flood elevation.

**3. Instream infrastructure.** Streamside housing developments increase the demand for instream infrastructure improvements, such as docks and boat ramps. The negative effects on our trust resources from these structures is well documented in the literature and many of our consultations with Federal agencies under the ESA. Docks increase predation on juvenile fish moving around the structure. Over-water structures create a light/dark interface that allow ambush predators to remain in a darkened area (barely visible to prey) and watch for prey to swim by against a bright background (high visibility). Boat ramps adversely affect the streambanks and riparian areas by eliminating riparian vegetation and replacing it with hard surfaces. Boat ramps also commonly require bank stabilization measures to keep them functional. Resulting in the adverse impacts outlined in #1 above.

***Recommendation***

To minimize the impacts to juvenile fish and the demand for development associated instream infrastructure, the annexation approval should be conditioned to prohibit any docks or boat ramps associated with the development now and into the future.

**4. Stormwater treatment.** Our understanding is that the applicant will route all drainage from impervious surfaces into a detention area and bio-filtration swale. However, the treatment capacities and efficiencies of the system are not available. The current standard for consultations between us and the U.S. Army Corps of Engineers (Corps) is “stormwater quality treatment practices and facilities will be designed to accept and fully treat the volume of water equal to 50% of the cumulative rainfall from the 2-year, 24-hour storm for that site.” For this site, the 2-year, 24-hour storm is 5 inches, meaning the stormwater facilities need to be sized to treat 2.5 inches of rain in a 24-hour period.

Stormwater runoff from impervious surfaces delivers a wide variety of pollutants to aquatic ecosystem. Of particular concern are metals (e.g. copper and zinc) and petroleum-related compounds (polynuclear aromatic hydrocarbons). These pollutants are a source of potent adverse effects to our trust resources, especially coho salmon. These pollutants also accumulate in the prey and tissues of juvenile salmon where, depending on the level of exposure, they cause a variety of lethal and sublethal effects.

***Recommendation***

To minimize the impacts to aquatic resources, the annexation approval should be conditioned to require an appropriate environmental engineer to design and build stormwater treatment facilities effective at treating 2.5 inches of rain in a 24-hour period.

**5. Ferry Creek channel.** The Corps permit (NWP2008-222) for re-establishing the Ferry Creek channel has expired as has the ESA biological opinion covering it. A new permit and ESA consultation will be required. Most restoration activities permitted by the Corps are designed to meet the proposed design criteria within the current Standard Local Operating Procedures for Endangered Species (SLOPES) restoration programmatic biological opinion (NMFS no.: NWR-2013-9717). Designed appropriately, the Ferry Creek channel reconstruction action could meet these criteria.

***Recommendation***

To ensure fish passage and maximize benefits from the channel restoration, the annexation approval should be conditioned to require an appropriate environmental engineer to design the Ferry Creek channel restoration to meet the SLOPES Restoration design criteria. To achieve a channel design consistent with SLOPES Restoration the design development will need close coordination with my office and ultimately require my approval for inclusion in SLOPES Restoration or result in a successful individual ESA consultation.

Thank you for the opportunity to comment on the proposed action. If you have any questions, please contact Chuck Wheeler, fishery biologist in the Oregon Coast Branch of the Oregon Washington Coastal Area Office, at 541.957.3379.

Sincerely,

A handwritten signature in black ink, appearing to read "Kenneth W. Phippen". The signature is fluid and cursive, with a large initial "K" and "P".

Kenneth W. Phippen  
Oregon Coast Branch Chief  
Oregon Washington Coastal Area Office

cc: Anita Andazola, Corps of Engineers