

MEMORANDUM

Date: April 18, 2018
To: Chehalis Basin Board
From: Chrissy Bailey, Ecology
Re: Evaluation of future land use conditions and management for Chehalis Basin Strategy

Key Points

- During the programmatic build-out analysis conducted in 2015, county-wide population growth rates in Grays Harbor and Lewis counties combined were estimated at between .03% and 1% per year by extending the Office of Financial Management's (OFM) Growth Management Act (GMA) population projections through 2120.
 - OFM's 2017 GMA population projections (high, medium and low) through 2040 for Grays Harbor, Lewis and Thurston counties are illustrated in Figures 1-3 below.
- Most growth will occur in incorporated areas and Urban Growth Areas, which comprise a small percent (approx. 7%) of the 100-year floodplain on the mainstem Chehalis River.
- The rate of growth in the mainstem floodplain was estimated to have been about 40% of that countywide in Grays Harbor and Lewis counties; this translates to between 4 and 9 new structures per year, or between 92 and 207 structures in the mainstem over a 23 year forecast period (2017-2040). Outside of the floodplain (in the uplands) this would equate to between 230 and 516 structures over a 23 year forecast period.
- Growth/development in the floodplain is a concern, however this level of growth/development in the floodplain (distributed randomly) would not change the current projections from the EDT model for salmon under current conditions or the 2040 scenario in the Initial Aquatic Species Restoration Plan (ASRP) document.
- OFM GMA population projections are produced for GMA planning purposes and it is not advisable to extend them beyond a 20-year planning horizon for purposes of determining attributes of or inputs into a habitat model. For Chehalis ASRP purposes, the "high" projection scenario provides a reasonable "worst case" projection within the 2040 time horizon.
- Future development beyond the year 2040 OFM forecast is uncertain and could be affected by many factors. It will be important for the ASRP to recognize this and acknowledge the need to adapt or revisit model inputs/predictions based on future growth or development rates.
- Approximately 80% of the land within the Chehalis Basin is forestland (deciduous, coniferous, and mixed forest), with 54% classified as managed forests.
- A study is being initiated to model the effects of forest practices on hydrology. The results will not be known for several years.

- Studies related to the future of Washington's forests and forest industries (UW College of Forest Resources for example, which looks at risk of conversion of forest lands to non-forest uses) or the state Forest Action Plan (Department of Natural Resources/US Forest Service, which highlights major issues confronting forests, including conversion) could be useful in evaluating the extent of potential future forest land conversion to other uses.
- County Comprehensive Plans, particularly the Land Use and Economic Development elements, can be used to inform evaluation of potential future levels of and locations of development in the basin.
- Land use planning and regulation is a significant responsibility for local governments. Acquisition and voluntary stewardship (non-regulatory incentives) are essential complements to land use regulation.

Proposed Approach (ASRP)

1. No change this spring to the EDT model to address land use in preparation for the prioritization work by the Science Review Team (SRT) in each Ecological Diversity Area.
2. Over the spring/summer, Ecology will research forest land conversions (historic and potential future conversion pressure) and other potential significant changes in rural land use (e.g. Master Planned Resorts, Fully Contained Communities, etc.).
3. Ecology will develop an estimate for development in the basin outside of the floodplain (uplands).
4. By fall 2018, Ecology will examine land use designations, existing and potential lot patterns, and critical area protections in each of the priority areas identified by the Science Review Team (SRT) for protection and restoration in each Ecological Diversity Area.
5. Ecology will determine a 'full buildout' scenario in the priority areas and jointly with the SRT will assess the effect of full buildout on the priority protection/restoration areas. If a conflict exists, then an assessment will be developed of the potential to prevent the conflict through land use changes, incentives or compensation to landowners. If the conflict is unlikely to be prevented or addressed by one of these means, the EDT model would be changed to reduce the habitat potential of the priority area.
6. Ecology will work with the SRT to consider changes to the EDT model based on #'s 2-5 above.
7. This approach will inform the ASRP protection strategy by identifying areas where acquisition or easements will be critical to predicted outcomes.

Proposed Approach (Broader Chehalis Basin Strategy)

1. Consider potential future land use patterns in the floodplain and uplands given steps outlined in ASRP approach above.

2. This spring and summer, Office of Chehalis Basin staff will meet and talk with local government staff regarding the modeled future floodplain corridor under climate change conditions, and whether this information might affect how their communities plan for the future.
3. In fall 2018/winter 2019, work with the Board and the ASRP Science Review Team and Steering Committee to:
 - Consider whether revisions to local regulations might minimize potential threats to floodplain function/habitat and the risk of future flood damage posed by development of existing lots in the floodplain.
 - Explore and evaluate the potential for land use or planning process incentives (e.g. transfer of development rights, density bonuses for setting aside critical areas, open space tax reductions, etc.) to avoid conflicts between floodplain development and habitat function, and to avoid future flood damage.
 - Consider whether and where acquisition and compensation are likely to be needed to ensure the objectives of the Chehalis Basin Strategy are achieved over time. Thurston County's purchase of development rights in the Nisqually Valley agricultural area is a local example.
4. Beyond winter 2019, Ecology will work with and support the Board and the ASRP Steering Committee in considering for inclusion in the long-term strategy, measures to protect investments made to restore habitat for aquatic species, measures to limit the risk of future flood damage, and to avoid additional harm to residents or structures already located in the floodplain.

Figure 1: Grays Harbor County GMA Projections 2017-2040

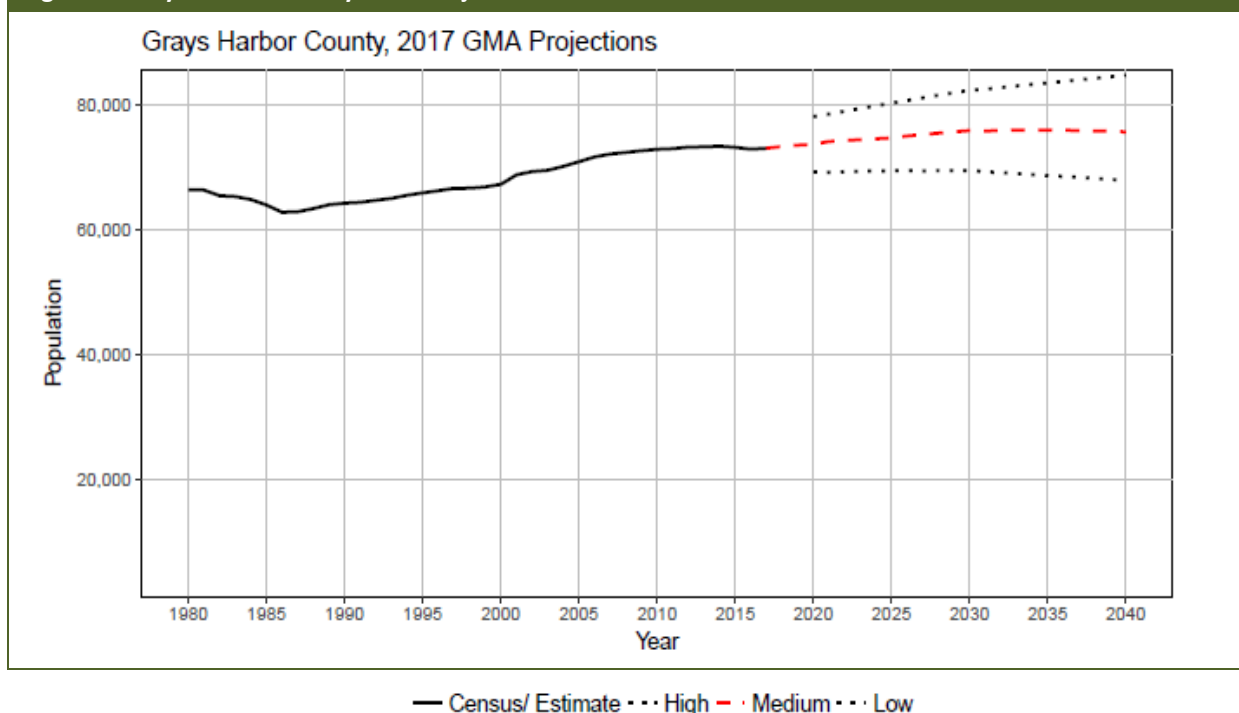


Figure 2: Lewis County GMA Projections 2017-2040

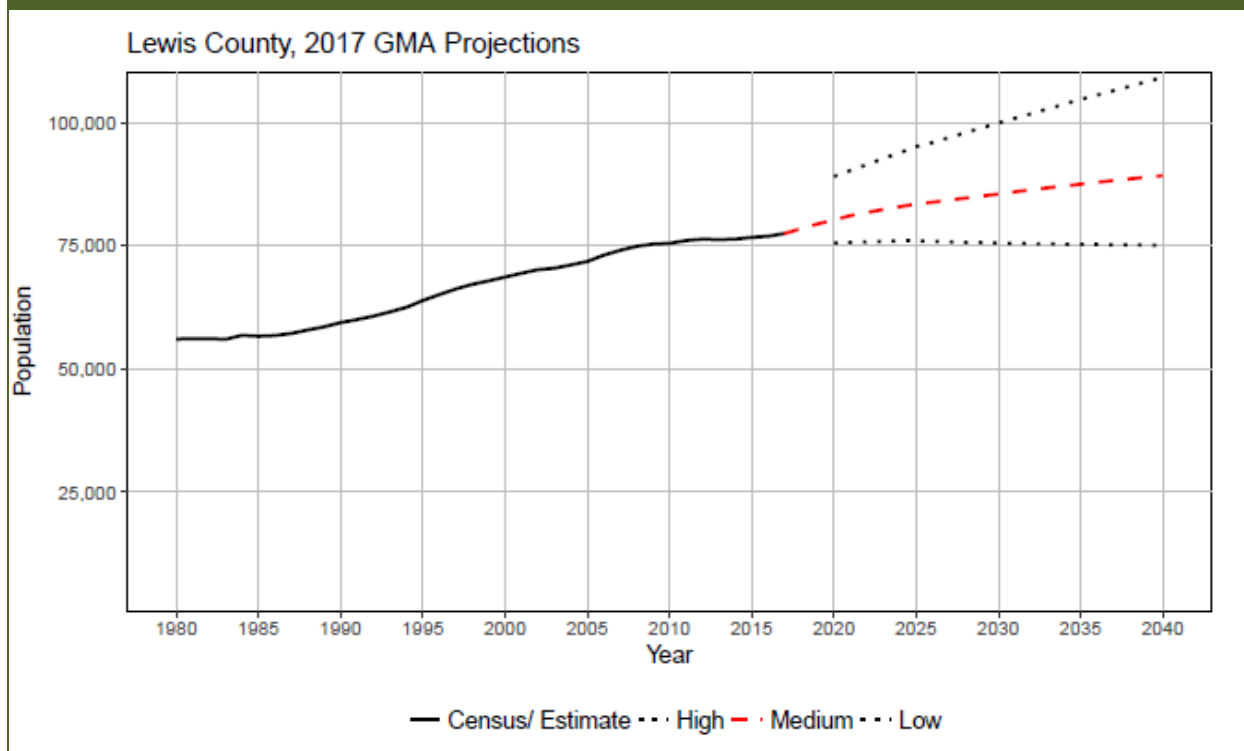


Figure 3: Thurston County GMA Projections 2017-2040

