



Draft Puget Sound Nutrient General Permit

- Background
- Initial analysis
- Comments and next steps

August 2, 2021



King County

Department of Natural Resources and Parks
Wastewater Treatment Division

Why Nitrogen?

- Ecology determined 'reasonable potential' that nitrogen from WWTPs is responsible for the decline in dissolved oxygen in Puget Sound
- Ecology is claiming that Puget Sound is experiencing "dead zones" and fish kills
- These claims have not been sufficiently substantiated
 - Based on a single model
 - No observational data to support

King County shares the goal to protect and restore Puget Sound, and supports solutions that are effective, timely and affordable

What we see

- Puget Sound has naturally occurring low oxygen zones
- 90% + of the nitrogen in Puget Sound comes from natural sources (ocean and land)
- Complex system of varying depths and mixing zones
- Wastewater contribution is small, and reducing may not be helpful or even detectable



The science does not support the requirements in this proposed Draft Permit



A complex system requires substantial data collection and multi-organization collaboration.

The science and model need more:

- Third-party review
- Address significant uncertainties
- There are trade-offs

Annual reporting that includes optimization analysis and process engineering

Influent nitrogen reduction measures/source control

Develop a Nutrient Reduction Plan and implement if thresholds are exceeded

Draft Permit Requirements

Applies to 58 wastewater treatment facilities in the Sound

What this means for King County and partners

- Projections show King County will exceed new lower Action Limits by 2022
- If we exceed, then must develop a plan to reduce Total Inorganic Nitrogen by 10%
 - Requires implementation of the plan if exceed Limit 2yrs in a row
- Significant Operating and Capital costs in first permit cycle



Economic impacts on residents and businesses

- Rates projected to double by 2030 to maintain system and protect public health
- Permit would require another significant increase on top of that
- Ecology should conduct its own Economic and Affordability Analysis



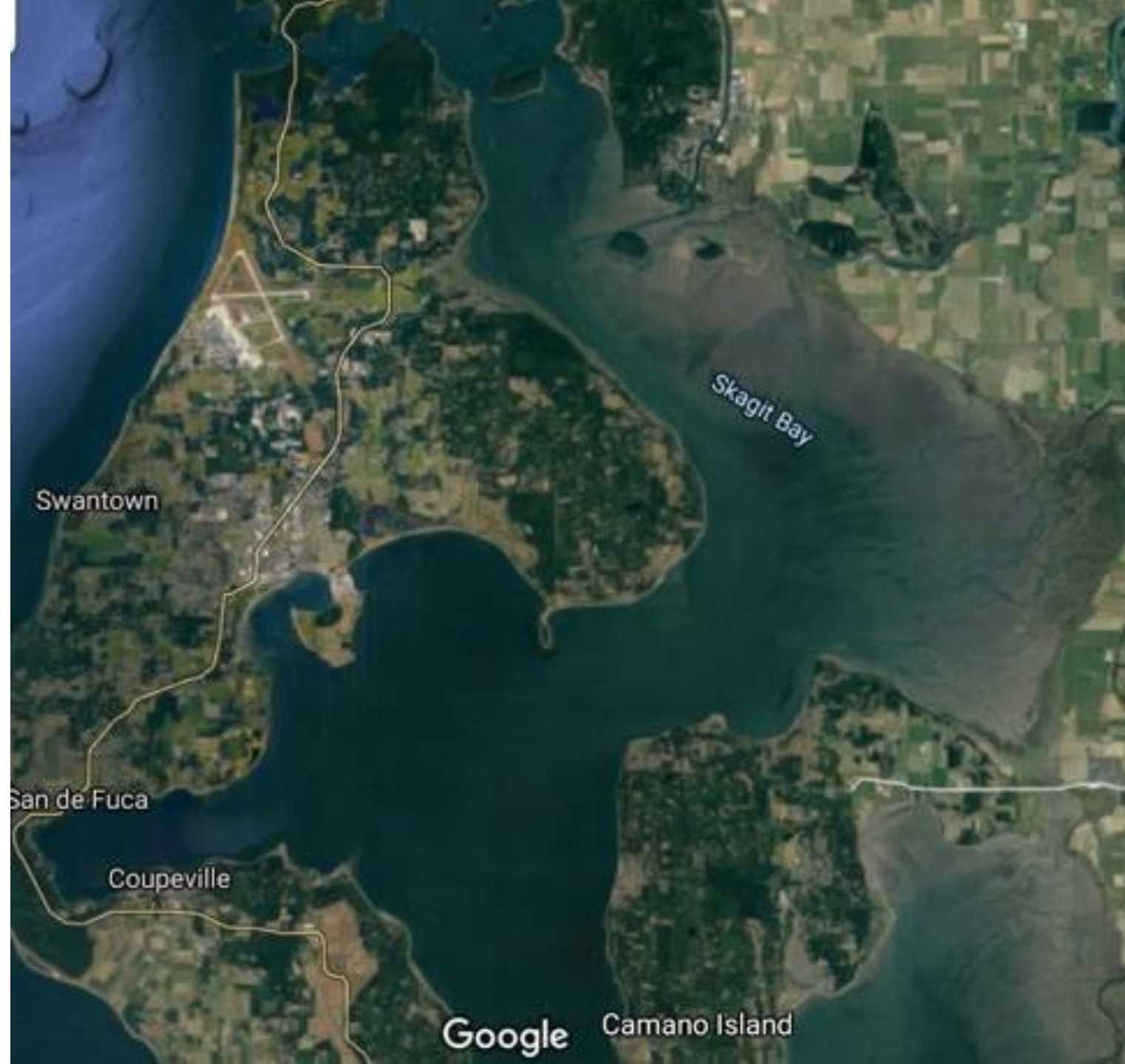
Affordability is already a big problem in King County

- Expanding or constructing new facilities for nutrient removal in a dense urban area will be very expensive
- Nutrient requirements come on top of cost for asset management, CSO control, and new capacity for growth
- Ratepayer dollars should go toward most cost-effective solutions



Let's get the science right and fully explore alternatives

- Complete Nutrient Management Plan
- Focusing on more expensive wastewater treatment infrastructure will not solve the problem
- Start where the problem exists:
 - Reducing runoff from farmland and urban landscapes
 - Restoring wetlands
 - Protecting natural lands
 - Promoting healthy forest soils
 - Fixing failing septic systems



What
happens after
comments are
submitted?

Ecology must prepare a response to
comments

(approx. mid-November completion)



Effective 30 days from final
publication

(tentatively January 1, 2022)

30-day appeal period

Questions?

Submitting comments:

August 16, 2021

[Submit online: Nutrient Permit - Washington State Department of Ecology](#)

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