

KUS KUS SUM

— Unpave Paradise —



Project Overview

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K'ómoks First Nation





Agenda

- Intro to Project Watershed
- Overview of the project:
 - Site History
 - Project History
 - Goals and Objectives
- Property Acquisition and Land Transfer
- Restoration
 - Design process
 - Phases
 - Permitting
- Goals/Monitoring
 - Detailed progress so far
 - Technical challenges and problem solving
- KKS Partner Group
- Funding
- Future of the Site



About us!

- Watershed stewardship group
- Registered charity since 1993
- Focused on the health of Comox Valley's Project Watersheds
- Current areas of focus/expertise include coastal, nearshore and estuarine restoration, forage fish research, freshwater restoration and collaborative, community-focused stewardship





Figure 1. Kus-Kus-Sum project location (photo source: Google Earth).

Site in 1946



**Tidally influenced
forested riparian
habitat**



Field's Sawmill 1950











Acquisition/Restoration Timeline

- 2016 – Partnership team formation
- 2017 - Launch fundraising & agreement w/ Interfor
- 2020/2021 - Purchase Site
- 2021/2022 - Initiate restoration; Hard surface removal
- 2022/2023 – Recontouring & revegetation
- 2023/2024 – Recontouring & revegetation
- 2024/2025 – Steel piling wall removal



Core Project Goals

- Restoration of ecological values
- Reconnection to the floodplain and Courtenay River, and adjacent conservation areas
- Reconciliation and the rematriation of landscapes
- Climate change adaptation and mitigation
- Community resilience



Land Acquisition

- Entered into an agreement with Interfor in 2017 with K'omoks First Nation and City of Courtenay
- Agreed to hold the land for purchase until we'd raised the required cost
- Finished fundraising late 2020 and completed the land transfer in 2021





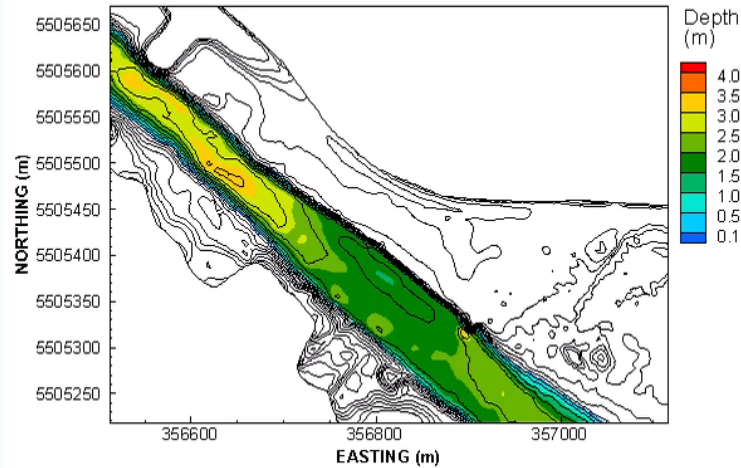
Land Transfer

- Reached the final fundraising goal at the end of 2020
- Land transfer was executed in February of 2021
- Project Watershed holds the land in trust for our two partners, KFN and CoC

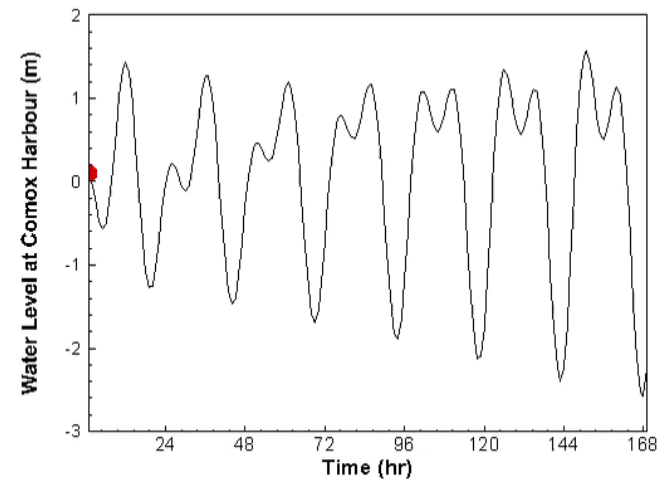
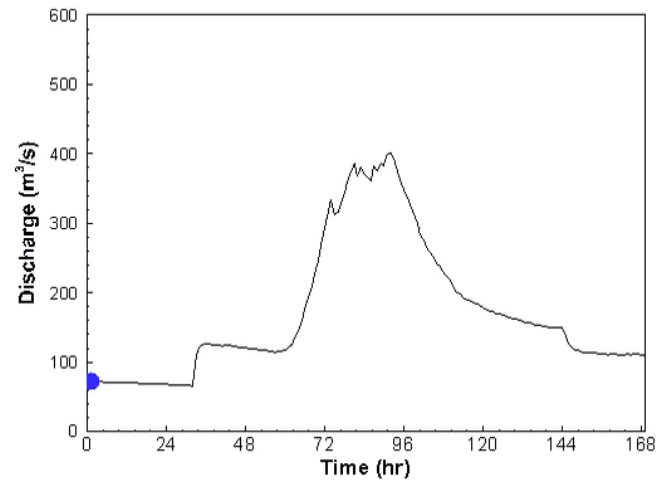
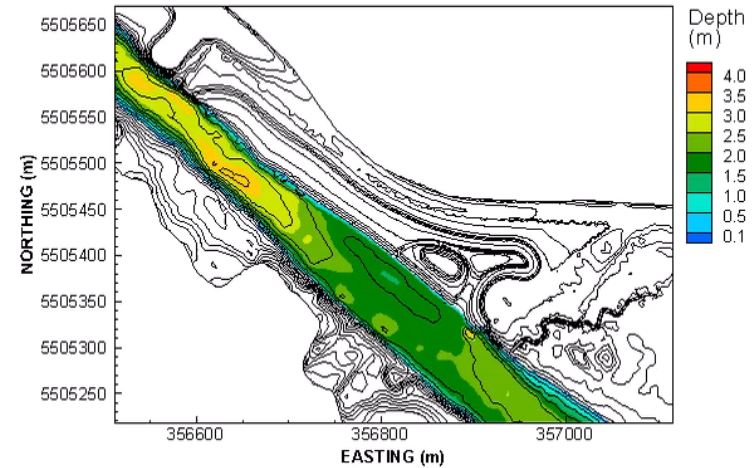


Design Process & Modelling

Existing conditions

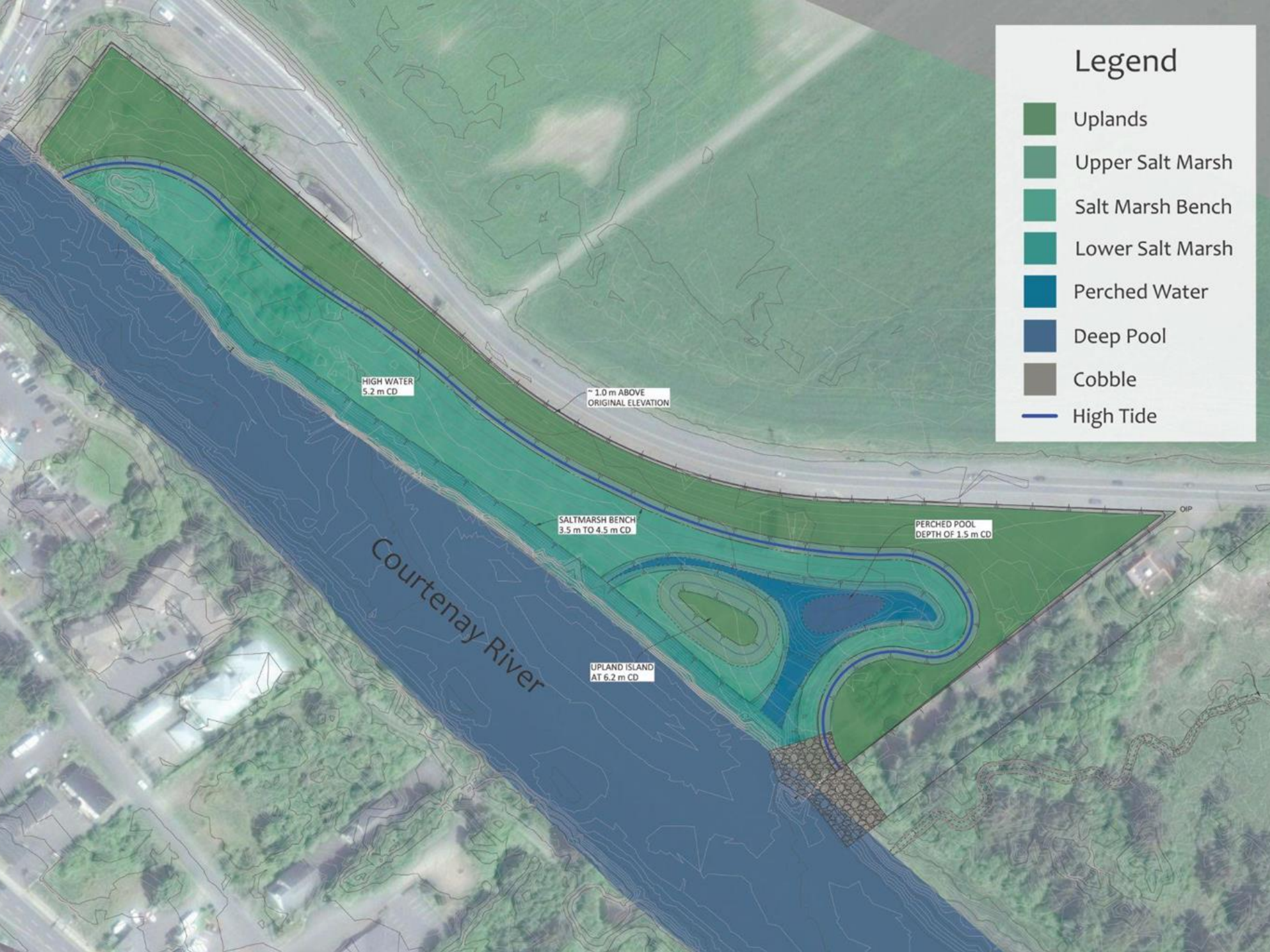


With proposed concept

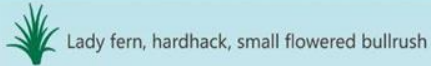


Legend

- Uplands
- Upper Salt Marsh
- Salt Marsh Bench
- Lower Salt Marsh
- Perched Water
- Deep Pool
- Cobble
- High Tide



KUS-KUS-SUM RESTORED



Lady fern, hardhack, small flowered bullrush



Sweet gale, hardhack



Tufted hair grass, Springbank clover, meadow barley, sweet scented bedstraw



Henderson's checked mallow, potentilla, aster



Lyngbyei sedge



Sea milkwort, arctic rush, Salicomia sp., Glaux sp., Triglochin sp.



Red elderberry, red flowering current, ocean spray



Black hawthorn, black twinberry, red osier dogwood, nootka rose, salmonberry



Red alder



Crabapple



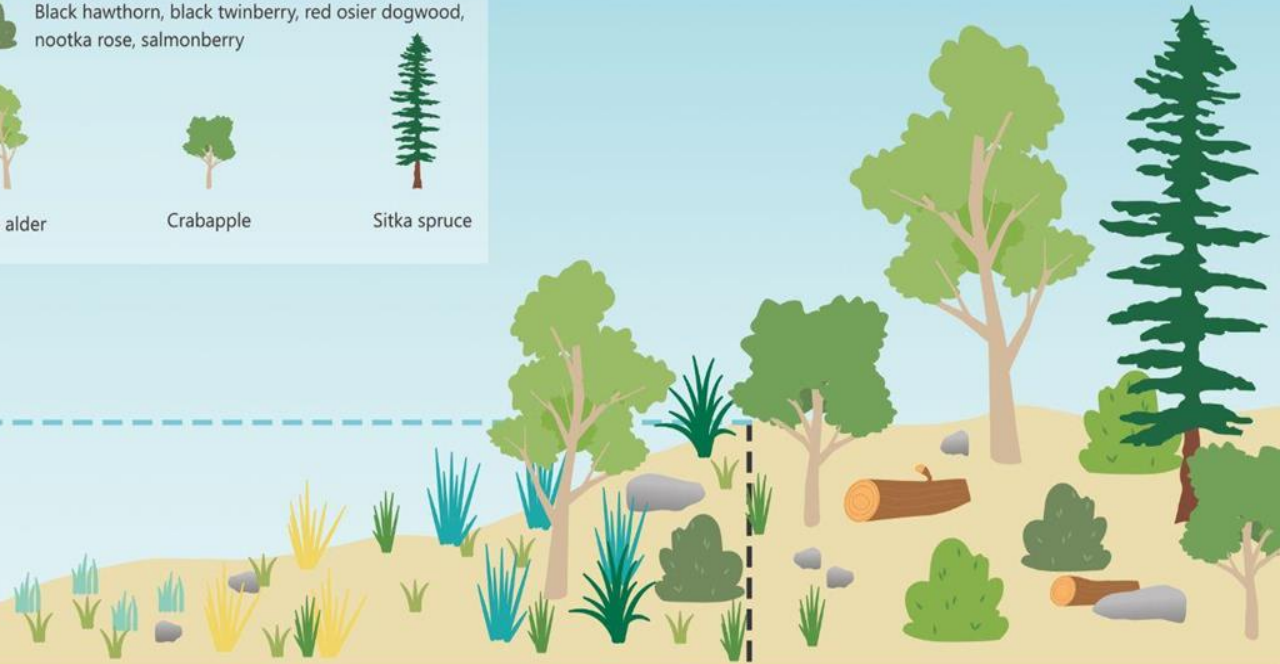
Sitka spruce

HIGH TIDE

**COURTENAY
RIVER**

SALTMARSH

UPLAND





Restoration Phasing

- 3 Key Phases
 - Hard Surface Removal
 - Concrete and asphalt removal, crushing and repurposing
 - Recontouring/earthworks & Revegetation
 - Excavation
 - Soils removal
 - Topsoils/compost amendment
 - Native species planting
 - Steelpiling Wall Removal
 - Next step – removal via barge
 - Recycling of sheet piles





Phase I: Unpaving





Metal Recycling





Concrete Recycling





Concrete Wall





Phase II: Recontouring







King Tides & Flooding





King Tides & Flooding



Phase III: Removing the Wall



- Working with DFO, Current Environmental, NHC, and qualified contractors on best removal methods
- Winter removal via barge with vibrating arm
- Requisite permits (in process)
- CEMP measures: sound habituation and reduction, turbidity and erosion control measures



Key Works in 2023/2024

- Maintenance of turbidity and erosion control structures
- Continued regrading of site
- Soils testing, sorting, and off-site removal
- Ecological and environmental monitoring along with archeological monitoring
- Re-vegetation with native species (tidal marsh and upland riparian)
- Installation of armouring and riprap (at south and north ends)
- Initial investigation and planning of steel-piling wall removal
- Continued collaboration on final site planning for access, and rematriation to KFN



Construction & Environmental Management Plan

- Machine maintenance and monitoring
- Spill management
- Turbidity and erosion control
- Water quality monitoring
- Soils testing
- Work timing
- Dust suppression





Ecological/Restoration Monitoring

- Using Hollyhock Flats Conservation Areas as reference site
- Comparing a variety of parameters: vegetation establishment/communities/diversity, water quality, fish use, bird use, soil quality, blue carbon
- Baseline monitoring last year and this year at Hollyhock
- Monitoring at KKS for at least five years for many parameters, more if possible





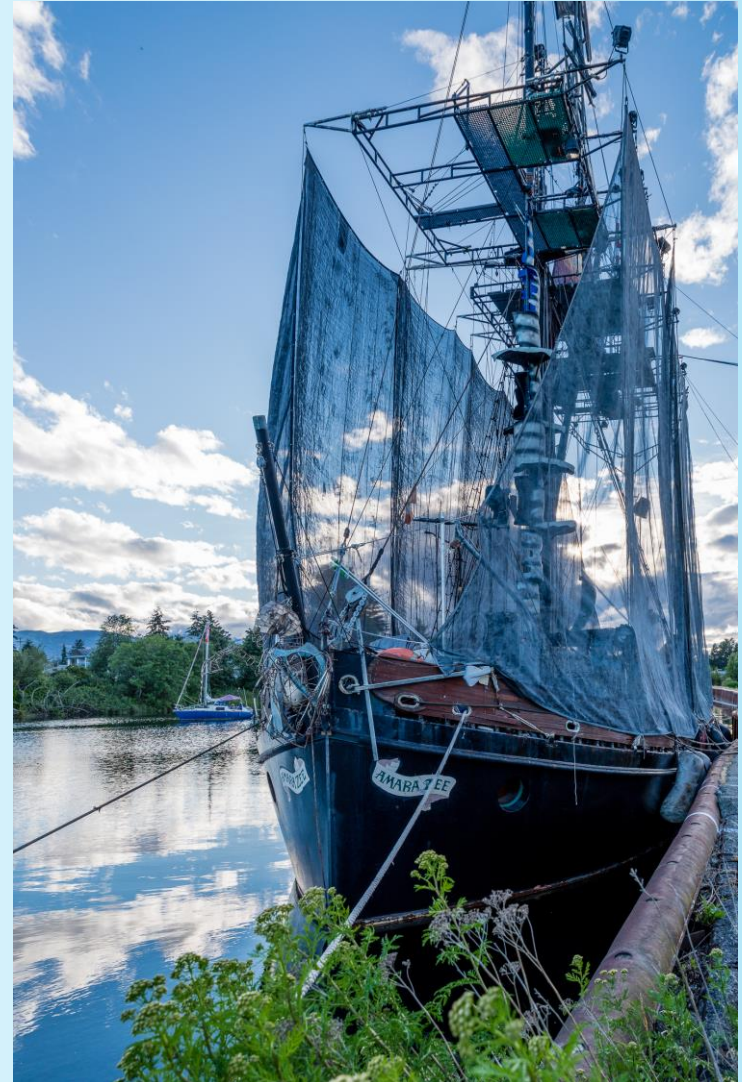
Kus-kus-sum Partner Group

- Meets once a month
- Appointed staff and elected officials from both partner groups
- Provide project updates, discuss relevant topics and future planning
- Great platform for solutions-based thinking and collaboration



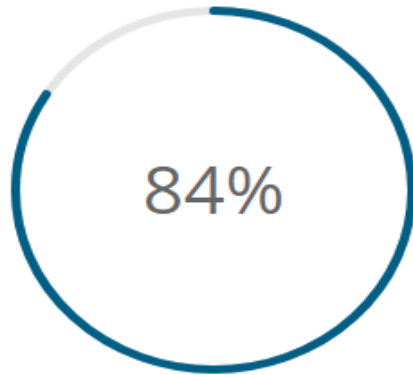
Funding Strategy

- Multi-tiered
- Community fundraising, business donors, grants, and direct gives (from Province), unique events – land acquisition
- Grants, community fundraising, business donors, event fundraising – restoration
- Leveraged partnership with KFN to acquire initial funds without match, leveraged acquired funds to obtain substantial grants requiring match
- Very diverse granting and reporting

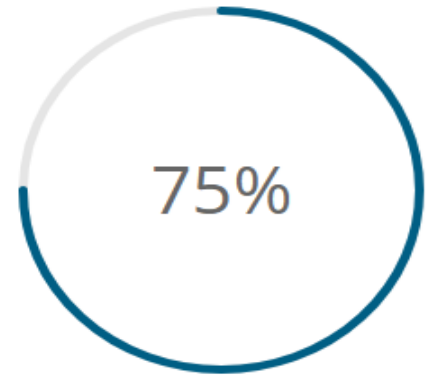




Funds Raised to Date



RAISED OF THE TOTAL
COST OF THE PROJECT



RAISED FOR RESTORATION



Future of the Site

- Rematriation of land to KFN
- Conservation covenant
- Monitoring, management and traditional harvest



Thank you! Questions?

