

Climate Impact Advisory Committee



FINAL Meeting Minutes

Date: March 3rd, 2022

Location: Zoom

QUORUM	Y
Members Present	
William Bethel	x
Ginny Broadhurst	
-vacancy-	
Sue Gunn	x
Steve Harrell	x
David Kershner	x
Katherine Kissinger	x
Ellyn Murphy	x
Imran Sheikh	x
Phil Thompson	x
Eddy Ury	x
STAFF Chris Elder	x

1) Call to Order/Roll Call

-Meeting called to Order @ 5:31pm

2) Review and approve agenda

3) Review and approval of minutes from February Meeting

Dave Suggested Editing one of the names listed in the public. Smith Carol David seemed like more than one name. The suggestion was to split it up as Carol and David Smith. **Dave** Motioned to approve the minutes

Sue Seconded

4) Public Comment

Public in Attendance

Howard Sharfstein, Kulshan Carbon Trust

Atul Deshmane, PUD

Jessa Clark, Kulshan Carbon Trust

Adrienne Hegedus, POB

Betsy Gross

Ysabelle Kempe, Bellingham Herald

Charles Bailey

Jack Wellman, PSE

Von E. Ochoa

Eric Grossman, USGS

Howard introduced the Kulshan Carbon Trust, a nonprofit that was started a year ago with the goal of fostering natural climate solutions with farmers and landowners in Whatcom and Skagit county.

Chris Elder in zoom chat: Info from Howard and Jessa at KCT <https://www.kulshancarbontrust.org/info@kulshancarbontrust.org>

<https://www.bellinghamherald.com/news/local/article257511509.html>

Dave asked **Howard** who funded the pilot project for KCT

Howard said it was the Regen Network.

Jessa introduced herself as a board member of the KCT and voiced her support of the CIAC.

Howard described their pilot project. Jessa is leading a team to produce and distribute biochar. Howard is working on a way to offer access to carbon credits.

Steve asked about using soil carbon as an indicator of progress on climate work in the county and asked if we could potentially explore that in the future with KCT

Atul voiced support for the proposal of looking to soil as a measure of resilience

5) Puget Sound Coastal Storm Modeling System (PS-CoSMoS): A Tool for Sea Level Rise Planning – Eric Grossman

Eric is a former CIAC member and Adjunct prof at WWU. He works for the USGS.

Slide 1) coastal vulnerability and planning. This system has been in the works for 15 years and is fully functional in California and used for planning

This tech can be used to better predict sea level rise along marine shorelines at a very fine scale. Eric is also modeling how sea level rise, tides, and storm surge can intensify Nooksack River flooding, as occurred this past November

Slide 2) useful to help predict how our communities will respond to sea-level rise.

1ft by 2050

2ft by 2100

Slide3) model framework. Takes into account many factors, sea-level rise, ocean swell, interannual anomalies, fluvial discharge from 24 rivers

Slide 4) displays the predicted storm water levels vs the measured levels for a flood event in Tacoma in Jan, 2022.

Slide 5) hindcast from 1985 and formulates a forecast to 2100. 0.5m error

Slide 6) flood solving modeling throughout Puget sound for every 100m of shoreline at hourly intervals. this model gives the flood extent, depth, duration and flow velocities.

Slide 7) project has been completed for Whatcom County

Slide 8) cosmos outputs from shoreline master plan to show frequency of floods 50-year floods occurring closer to the rate of 5-year floods.

Slide 9) illustrates duration, velocity and water surface data for future flooding predictions at Sandy Point.

Slide 10) city of Bellingham has used cosmos outputs in their vulnerability assessment.

Slide 11) COB is renovating the water treatment facility to better handle storm surges and using cosmos data.

Slide 12) for rivers slightly different approach and work is being done to get this model to work for the Nooksack so we can better plan for river flooding events

Slide 13) integrating previous data from the flood management plan with cosmos, to address adaptive management for Whatcom County

Slide 14) a model that is built to simulate tidal influence from today to 2100 and can be reinforced by future measurements. It can also simulate the marine boundary to the floodplain. Bathymetry model was released in 2020.

Slide 15) the goal is to produce results that are reinforced by measurements. The mean error has been found to be about 1 ft.

Slide 16) One of the first models to include tidal inundation at the mouth of the river.

Slide 17) demonstration of the model running the 2020 Superbowl flood, a 10-year event to illustrate tidal influence on river flooding. Knowing this means we can plan ahead to preserve agriculture and wildlife habitats.

Slide 18) the model showcased the rising peak and the fall of the flood but doesn't yet factor in rainfall.

Slide 19) how will these kinds of floods change in the future as a result of storm surge and sea level rise. By 2040, 52% increase in runoff from 10-year flood events

Slide 20) habitat restoration can create new channels for the flood plain and increase salmon habitat. This would also lessen the extent that the western floodplain will experience flooding. 2ft drop in flood exposure in key agricultural areas. This could provide some lasting resilience for the next 20-60 years. This could allow decades of planning time for us.

Slide 21) sediment, Nooksack has the highest sediment load of Puget sound rivers. USGS is working on accounting for that in their new models. Sediment buildup can cause increased flood exposure in Whatcom County.

Slide 22) summary:

1. New Coastal storm Modeling system (cosmos) projections of the combined influence of sea level rise, storms, waves, and stream flooding help inform exposure to flooding.
2. Many areas along Whatcom County vulnerable to flooding and wave impacts today and with sea level rise.
3. Compound flood model in river delta settings shows rapid increase in flood exposure to higher sea level + stream flooding, and opportunities for habitat restoration to mitigate effects.

Ellyn asked if the new channels south of Ferndale referenced for flood management would be engineered and who owns that land

Eric mentioned that the channels are old buried stream beds that would be reconnected to the river system. The WDFW owns the land for salmon habitat restoration.

Ellyn asked how many river miles are included in the tidal influence that reaches to Ferndale.

Eric said he would send that information later

Ellyn asked if the tidal influence will extend with sea level rise.

Eric said that is consistent with what the predictions say

Atul asked about the ratio of sea level rise to feet of river.

Eric said that number hasn't been generated yet. The plan is for a range in river discharge and tidal influence to describe how far up the river flooding effects will happen.

Atul mentioned Eric's presentation from the nearshore summit and the effects of sediment flow on marine environments and the large negative impact it has

Eric said that they are working on some blue carbon solutions. Many of these sediment effects are exacerbated by land use.

Dave asked if the model predicts the frequency of which the levee in Ferndale would be breached if no action is taken by 2040

Eric said that the model is scenario based, and he ran previous recorded flooding events to see how much worse they would be, given exacerbated conditions from climate change. The next phase of work on the model would be able to accurately predict when the levee would be overtopped

Chris mentioned that we received a grant from the Dept. of Ecology to help incorporate sea level rise into our shoreline management programs. The first step of the plan is to survey the infrastructure that is vulnerable.

William Bethel in zoom chat: Writing this question so I don't forget at the end, what factors cause the .5m error margin?

Eric Grossman, he/him, USGS, Bellingham (Lummi/Nooksack Lands) in zoom chat: William, are you referring to the error in the modeled water levels or wave heights? Both are affected by error on our land surface elevations, then there are various uncertainties in environmental forcings esp. winds. Winds are almost always biased low over water.

Chris Elder, Whatcom County in zoom chat: From **Steve - @Eric**, that was great. Is the presentation available, or can you send a copy to the committee?

Eric Grossman, he/him, USGS, Bellingham (Lummi/Nooksack Lands) in zoom chat: I have to go - please let **Chris** know if you have any additional questions and I will get a PDF of the presentation to him for distribution. stay well.

David Kershner in zoom chat: Thanks, **Eric**. Great presentation.

6) Update on Climate-Related Issues Before the Council – **Kaylee Galloway**

Kaylee said that one of her top priorities is to find ways to build internal systems to help implement the CAP.

The first agenda item is renaming the natural resources subcommittee to include climate action

Next would be updating the code that governs the role of the CIAC

For policy efforts **Kaylee** is looking at things to put into the comprehensive plan update which will be starting its process soon. Co-sponsored by Council member **Carol Frazey**

Kaylee said that the council has sent a letter to the commissioner and the board of WA Dept of Natural Resources in regards to the Bessie timber sale encouraging all parties involved to ensure drinking water is protected for our community.

A conversation has been started in regards to climate management in disaster planning.

Gulf Rd. Closure. This closes off access to the Cherry point aquatic reserve and limits tribal access. And the Council is reconsidering the closure.

Ellyn asked if in the legislature the 1099 bill doesn't pass then is the intention to include those components into our comprehensive plans

Kaylee said yes, having the state pass the requirement would be helpful because it would open up state resources to help us, but if not, we would still like to implement the strategies. Kaylee said that we could potentially ask for funding for this in the state budget to help us be ahead of the curve in regards to climate management.

7) CIAC Advisory Role to Executive and Council

a) Whatcom County's Comments to WUTC on PSE CEIP – **Ellyn**

Ellyn met last week with exec. Sidhu and the letter discussed in our previous meeting was submitted. The exec supports development of clean energy in the county

Phil said he has looked into the Climate Commitment Act and potential ways we could participate. Ecology is conducting a large rulemaking session this year. Final rules to be adopted in the fall.

Jack Wellman thanked our committee for the thoughtful response in our letter commenting on the PSE CEIP. He also offered to present on their clean energy efforts if we are interested in the future.

b) CNG Franchise Review – **All**

Chris gave an update from some of the individuals working on the CNG Franchise renewal

It looks like the recommendations we have submitted are going to be included in the updated version.

Eddy said that he reached out to the county individuals assigned to this, progress seems to be slow going and, in the meantime, the old agreement will continue to be in effect until a new one is agreed upon. Eddy said that he has been working on some direct edits and is willing to share them in a google doc to the committee. Eddy asked Chris if it would be worthwhile to add specific language to our recommendations to Council

Chris said that it isn't something that is necessary to get input from the whole committee, but that council would likely be receptive to the help

Eddy invited anyone interested in collaborating with him to reach out and offered to review it at the next committee meeting

Chris said he could send the letter straight to staff.

Atul asked in regards to the CNG franchise if a requirement could be added for the company to disclose the lifecycle carbon footprint of the gas used in the county and if that's a reasonable expectation.

Eddy said that anything they are able to get information on they should be willing to report that.

Atul said that lifecycle emissions isn't currently something that is being asked of the natural gas industry. He also offered to team up with Eddy in regards to this

Phil asked what would happen with this information

Atul said that it serves to expose the issue of upstream carbon emissions for natural gas.

Eddy said that he thought that information could potentially be obtained through the SEPA process

c) Wind Energy Code Subcommittee – Eddy/Chris

Eddy said there is an upcoming wind energy subcommittee this month. And that by next meeting there will be more to review.

8) Communication and Social Media Campaign Update - Katie and Steve

Steve said that twitter following is going kind of slow. He's been tweeting and retweeting things regularly. He is also working on Op-eds.

Katie said that the Instagram has also been slow to start and she has a plan to be able to generate more content for the Instagram page.

9) Old/New Business

Ellyn will be giving a presentation this month to the Ferndale city council about our CAP.

Ellyn said that she and Steve have been talking about putting a dashboard on the website and she asked the chapter owners to think of ways that we can show progress relevant to our chapters. Chapter leads are encouraged to research dashboards in place from other places around the world.

Eddy said that the City of Bellingham is thinking about proposing a climate fund for the city and it would be a ballot measure that the city votes on. Eddy thinks that it might be impactful for us to review and comment to COB on.

Ellyn said that she will put that on the agenda for next meeting

Sue asked if the committee is responsible for writing the job description for the Climate Manager

Chris said that the Execs. Office is working on it, but progress is slow

Ellyn said that a draft would be good to add to the agenda for the next meeting.

Kaylee said that there was a concern in updating the code for CIAC referencing an office that doesn't currently exist and that it would be helpful for us to provide comment to council in support for the wording

Steve said that he is willing to write an op-ed on this subject to help.

Dave asked if it would still be helpful to write to council in addition to attending council meetings

Chris said yes because council meetings don't always have public comment so writing is still a good idea.

10) Adjourn

Adjourned at 7:20pm

Next meeting scheduled for **April 14, 2022**

Recorded by **Katherine Kissinger**

Staff contact, **Chris Elder**