
**Governor's Council on Climate Change (GC3)
WORKING AND NATURAL LANDS WORKING GROUP
RIVERS SUB-WORKING GROUP
MEETING MINUTES**

Meeting Date: April 17, 2020
Meeting Time: 10:00 am – 12:00 pm
Meeting Location: via ZOOM

ATTENDANCE

Working Group Member	Title	Organization	Present
Alicea Charamut	Executive Director	Rivers Alliance of Connecticut	Y
Lynn Werner	Executive Director	Housatonic Valley Association	Y
Eileen Fielding	Director	Sharon Audubon (National Audubon Society)	Y
Kirt Mayland	Attorney/President	Reservoir Road Holdings & Mayland Energy	Y
Bill Dornbos	Executive Director	Farmington River Watershed Association	Y
Andy Fisk (alternate: Kelsey Wentling)	Executive Director	Connecticut River Conservancy	N
Jason Vokoun	Professor and Dept. Head	UConn Natural Resources and the Environment	N
Mike Dietz (primary)	Extension Educator	UConn/Institute of Water Resources	Y
Mike O'Neill (alternate)	Associate Dean	UConn College of Agriculture, Health and Natural Resources	Y
Laura Wildman	Director	Princeton Hydro - NE Office, Ecological Engineering	Y
Virginia de Lima	Retired	USGS (retired) & CT Water Planning Council	Y
Shelley Green	Director of Conservation	The Nature Conservancy	N
Erik Mas	Environmental Engineer	Fuss and O'Neill	Y

Associated Staff	Title	Organization	Present
Rick Jacobson	Bureau Chief	CT DEEP, Bureau of Natural Resources	Y
Peter Aarrestad	Director	CT DEEP, Bureau of Natural Resources - Fisheries Division	Y
Susan Peterson	Environmental Analyst 3	CT DEEP, Bureau of Water Planning and Land Reuse - Water Planning & Management Division	Y
Cary Lynch	Research Analyst	CT DEEP, Bureau of Energy and Technology Policy - Office of Climate Change Technology & Research	Y (ZOOM support)

AGENDA & NOTES

Welcome, Announcements and Roll Call *Alicea Charamut, Rivers Alliance*

Rivers Sub-working Group (SWG) members roll call.

Charamut said that she received an e-mail from Gwen MacDonald at Save the Sound who had requested to join the Rivers SWG. There was an original request made when the groups were being assembled and somehow her request fell through the cracks. MacDonald will probably be joining us, going forward.

Agenda Item(s)

Facilitated by Alicea Charamut, Rivers Alliance

- **Updates on Timeline and GC3 work going forward**

Charamut noted all Ecosystem Services teams have been busy and put a lot of amazing work into the spreadsheets. (More on this below.)

Charamut has not heard anything more about “pausing” efforts (due to Covid-19 situation). She assumes we will continue to move forward. Jacobson concurred that he has not heard anything definitive about “pausing”, either. He has heard that we will have to see how things play out in June/July with regard to taking draft documents out to public comment. Charamut feels it would be beneficial to push off releasing a draft for public comment because of Environmental Justice community concerns.

- **Identifying Objectives – Discussion and Team reports**

Each of the four Ecosystem Services teams (Cultural, Regulating, Provisional and Supporting) reported out on progress made with regard to filling out the spreadsheets that Charamut created to capture information. Focused on “objectives” but also discussed related items that some teams have also worked on regarding “outcomes and strategies” and “implementation actions”. Charamut recorded new objectives and other ideas identified on individual sub-group spreadsheets during the course of the discussion. (Spreadsheet can be viewed via this link: <https://drive.google.com/file/d/15Zgdzd81yezMUj9arZJYRB4Qhe87sRfN/view?usp=sharing>.) Charamut complimented all of the teams on their work and progress. She noted that this continues to be a work-in-progress.

Charamut re-introduced the public comment provided at the 4-7-20 Rivers SWG meeting regarding the need to make sure urban rivers are included within the rivers/climate change discussion. Agreed that important to include and address. At the moment, much of the information within the spreadsheets applies generally to all watershed components and (river) environments. Next steps in the Ecosystem Services evaluation process should begin to reveal where specific solutions to various environments can be considered and applied. However, we recognize that many people “dismiss” urban rivers and it will be important to specifically call them out, as we need to have clean and healthy water everywhere.

Challenges/comments common to all four teams included:

- Need to better define terminology (eg. – outcomes vs. strategies vs. implementation actions), so that everyone is on the “same page”. Charamut noted these terms used in draft report Table of Contents. She will be putting together another guidance document to assist with filling out spreadsheet columns.
- Some feel there are too many categories/columns. Others noted that the spreadsheet is just a tool for us to organize our thoughts. It is not our final product.

In addition to reviewing/summarizing progress on objectives, etc., discussion around each of the Ecosystem Services included the following ideas, questions and concerns:

Cultural Services

Charamut reviewed work of team thus far. She noted that there are many overlaps between the different Cultural Services identified. Deciding where to put certain information has also been challenging. Trying to keep objectives broad.

Discussion included the following feedback:

- Need better public education around State Water Quality Standards, water quality assessments and impaired waters;
- Cold vs warm water fisheries, in face of changing climate; This also discussed under Provisioning Services;
- Opportunities to address urban river issues here;
- Important to recognize subsistence fishing here;
- In addition to watershed conferences, need more river celebrations and festivals;
- Culturally, we are connected to our climate and what “grows in it”; Shifting ranges of animals and plants will impact cultural viewpoints;
- Would our current practice of building along river banks and flood zones fit into Cultural Services piece?

Regulating Services

Mas reviewed the work of this team, to date. He said they followed the services listed pretty closely but then split them up a bit. Not sure if some items overlap with coastal issues (ie. - Wetlands SWG) but they wanted to make sure they captured certain issues. Mas also noted a fair amount of overlap between “objectives”, and perhaps with other teams. However, they were most concerned about being comprehensive.

Discussion included the following feedback:

- Should we be considering artificial ground water recharge (ie. – injection) as potential solution? Mas noted that hadn’t gone beyond Low Impact Development (LID) but could consider;
- With regard to climate carbon sequestration, would we be overlapping with what is being covered by the Forest SWG? Maybe, but should still consider it.

Provisioning Services

Dietz reviewed the team's work, noting that he was not able to attend the previous meeting. In his absence, de Lima had provided an overview on behalf of the team. Dietz identified some of the main topics his team discussed including: water conservation, over-salinization (of ground water) due to de-icing materials, use of gray water, hydropower and renewable energy, cooling waters, irrigation, navigation, harvestable animals and plants, and research organisms. More ideas captured but need to decide where to put them.

Discussion included the following feedback:

- The “right water quality for the right use” is an objective in State Water Plan;
- Brownfields question is interesting;
- Hydropower topic elicited much discussion, including:
 - With regard to renewable energy, there is a lack of financial incentives in CT with regard to existing hydroelectric projects (eg. – At Colebrook Dam (on West Branch Farmington River), there was no incentive for MDC to keep generating and hydropower component was removed); Would prefer to prioritize existing facilities over new hydropower facilities;
 - Dam removal may conflict with hydropower; Need to justify habitat restoration;
 - The Governor has an ambitious, 100% renewable energy goal by 2040; Need to identify “legacy” dams and objectives for how to make financially resilient; A lot of opportunity here for mitigation/adaptation;
 - What about other forms of renewable energy that might make more sense (eg. – photovoltaic asphalt?);
 - Why are we talking about maintaining existing dams, as opposed to assessing (environmental impacts) and removing them? Should only keep dams if providing valuable service. CT landscape has far more many dams than are useful ... Situation has never been truly assessed. Feel uncomfortable including hydropower unless qualifying it;
 - Hydroelectric is one of Provisioning Services, even if it is a competing interest ... Still need to consider as option and do “due diligence”;
 - There are hydroelectric production facilities that don't require a dam;
 - It's no surprise that provisioning competes with/opposes objectives of other ecosystem services; However, need to find a way to look at these things and move forward with recommendations to mitigate/adapt without one service out weighing the another;
 - Unlikely that there will be hydropower “at scale” that will matter in CT; Need to look at most cost effective alternatives such as solar, off shore wind, etc. This is an identified info gap re: State's renewable energy goals and whether current percentages makes sense;

- Probably not enough off shore wind and solar to power CT sufficiently; Other states looking at issue more aggressively and considering alternatives such as Hydro Quebec; May not affect CT rivers but will affect other rivers; Don't know answer ... May become unfortunate part of mix – lesser of two evils?
- Mayland offered to provide presentation on renewable energy at some point, if Rivers SWG interested.
- Charamut commended the Provisioning Services team for doing a great job, despite the controversy surrounding some of the provisioning services identified.

5 MINUTE BREAK

- **Identifying Objectives – Discussion and Team reports** *(continued)*

Supporting Services

Since Wildman had reviewed the team's work at the previous meeting, she invited one of the other members of her team to provide an overview. Fielding noted that Wildman had provided a thorough overview last time but offered to provide summary. Topics identified by the team include: need for better stormwater management; improvement of agricultural lands management (especially since exempt from inland wetland regulations); protection of core forests and riparian areas; definition of wastewater and improving wastewater prior to release; water regulation and flood control; competing demands for groundwater; instream vs. out-of-stream water uses; changes in land use patterns; fluvial processes and connectivity; protecting riparian corridors; cold water streams, etc. Still have more work to do ...

Discussion included the following feedback:

- May want to add something about migration and overtopping of marsh grass/ estuary islands.
- What about the role of rivers with regard to “extreme events”? Not sure how fits in ... However, rivers play a “supporting role” in terms of serving as point of “disturbance”. Maybe climate change is “helping” rivers in this regard?
- Rivers play critical role with regard to (landscape) shaping processes and movement of sediment and debris – including woody debris, floodplain fertility, etc.

- **Outcomes and Strategies – Definitions and Next Phase of Teamwork**

Charamut led a discussion about how to move forward with completing next sections in Ecosystem Services analysis (ie. – outcomes and strategies, implementation actions, etc.). Some teams have already started working on these pieces. Charamut noted that “outcomes and strategies” don't necessarily “marry” well with the Ecosystem Services process we are pursuing. However, they are included in the draft report Table of Contents, so she included them. She asked for thoughts on how to move forward. Feedback included:

- Reorganizing and/or simplifying categories (aka columns) and including more descriptors (to clarify terminology);
- Clarifying terminology to eliminate confusion about terms that sound similar;
- After identifying implementation actions, apply SMART goals;
- Recognizing that not every action will have a broader strategy ... and some actions are already defined in 2011 plan; Some items will include more detail than others;
- Clarifying implementation actions vs (measurable) outcomes;
- Need to have conversation with other WNLWGs to make sure using same terminology; May need to adjust once compare notes;
- Broader category column headings are good for capturing other ideas, especially where we might be able to collaborate with others.

Based on this conversation, Charamut said she will write up another guidance sheet for Ecosystem Services teams to use as they continue to work on spreadsheets.

Public comments

Jennifer Duff (Princeton Hydro) – No comment

Next Steps and Adjourn

Ecosystem Services teams will to meet again and continue to fill out spreadsheets.

Charamut will reach out to UMass for presentation (on modeling), per discussion at April 7 Rivers SWG meeting (see previous meeting minutes).

If anyone has ideas for a speaker/presentation on groundwater, snowpack and recharge, please let Charamut know.

Charamut will also consider renewable energy presentation

The next Rivers SWG meeting will be: May 5, 2020; 10:00 a.m. – 12:00 noon, via ZOOM

Adjourn ~ 12:10 p.m.