Bonus Session focused on education
How people are working with communities

First speakers
- Experience with informal and formal education with kids, adults, and volunteers
  - Sarah Sparks – U ME CE – STEM area specialization K-12 population
    - Hands on learned
    - Also adults and volunteers
  - Laurie Bragg – ME EPSCOR
    - SEANET
      - 4th year – 20 million dollar grant
    - Aquaculture to mitigate CC
    - Improve techniques to ensure sustainability
    - NSF requires us to make sure the work is accessible to general public and k-12 STEM pipeline
    - Collaborate with CoopExt to make toolkits

- Toolkits
  - Make science accessible for adults and kids
  - Intro to Ocean Sciences for K-2 – intro to aquaculture and marine science
    - Blocks with sea creatures
    - Sea animal yoga → move like a crab
    - Getting younger ages engaged
  - Sea Vegetables – Science of Seaweeds 3-5 grads
    - 10 activities designed around seaweed and food products
    - Why is kelp important to the coast
    - Curriculum and lesson plans in the toolkit
    - Check out our table
  - Want to make two more kits
    - Middle and high school
    - Still being designed and piloted to meet learning objectives
      - Middle school – innovation aquaculture engineering
      - High school – Diving into data – data literacy
        - Buoy and sensor data
        - NERACOOS
  - 4H + Cooperative Extension
    - Hosting focus groups to get the curriculum right and has been tested a lot
      - Sea Vegetables were tested by 11,000 students
      - Summer of Science – testing again this summer
        - 4H partners with YMCA etc. with young people to have college students deliver the lessons to see if they are able to explain the content in a way that makes sense and is correct science
Maine Discovery Museum with aquaculture exhibit to use these toolkits and concepts to make sure they do not just sit on a shelf
  - Activities are available to support the visits to the museum
  - Virtual reality to give aquaculture experience

We use students at the university for all aspects of this work – they are the biggest asset
  - STEM teaching

The toolkits are available for anyone to borrow – posted online for access – SEANET
  - If you wanted to borrow the kit, email us and we can send it to you.

Question – the sea vegetable on is downstairs?
Answer – No

Question – what is a good resource to find out all the edible vegetables?
Answer – ME Seaweed Council website or download our curriculum

Jen Kennedy – Blue Ocean Society

- Making Waves Across the Region – outreach and networking
  - Board member of gulf of Maine marine education association GOMMEA
  - Tell you about what we do
    - Have you heard of us? Yes
  - GOMMEA - Regional network of educators and scientists
    - Strategic planning process over the last few years – redid mission
    - Connect people of the gulf of Maine through education and experiences
    - Ocean literate citizenry who appreciates and cares for a healthy GOM
    - Wide geographic spread
    - Established 1979 – one of 17 chapters of National Marine Education Association

- Focus areas
  - Informal education audience
  - Regional reach to bring together educators/orgs to share ideas, learn, collaborate etc.
  - Hold events that are fun and interesting
    - Comedy
    - Movie nights

- Upcoming events
  - More than once a year
- Regional smaller events
  - More targeted
  - More networking
  - Website being developed
  - August tide-pooling
  - NH whale watch
  - Beach cleanups
- Why attend
  - Stay in the loop!
  - Friendship and social capital
  - Way to build momentum and make ideas grow
- Join us!! gommea.org
- Special sign up rate!
- NMEA 2019 we are hosting the event at UNH
  - We need folks to help plan
  - Turning the tide – learning from yesterday, adapting for tomorrow

Question: have you connected with the ME Environmental Association?
Answer: not sure, I will add that to our list

Ruth Indrick
- program that I created that manomet is leading
  - manomet worked with clam harvester in town of Georgetown
  - set up a clam farm
  - looking for way to support fisheries along the coast of maine
  - clam aquaculture seemed awesome
  - 75 nets
  - five other farms at sites across the states
  - wanted to connect with communities
  - asked if we could prepare education programs that connect people with clams that could be taught in schools
    - Georgetown school kids
    - Out on the clam flats
    - Doing experiments on the kids nets
    - Kids love it
  - Also had a chance to use clams as a tool for teaching about other things – other concepts
  - Curriculum will be shared
    - Five lessons that clams can help teach
      - Food Chains – plankton, predators and prey, life cycles
      - Water Quality – pollution, clam health, bioaccumulation
      - Invasive Species – Green Crabs – causing issues for clams and other species – how it is impacting communities
• Economics – state fisheries, local history, regulations, food systems
  o One of the first lessons is to do a dissection
  o Let’s do it!!