Beaches Conference 2017: Concurrent Session 2, Room 2
Swim, Surf, Steward: Engaging Beachgoers to Inform Ecosystem Management
Notes by Caitlin Peterson, NH Sea Grant/UNH Cooperative Extension

Pre-contact fish weirs in Cape Porpoise?
Tim Spahr, Cape Porpoise Archaeological Partnership

How are precontact artefacts studied?
- Artifacts are measured by depth – their exact location is called “provenance”
- Researchers have developed a timeline of various precontact periods that occurred in Maine
- Archaeological features (e.g., fish weirs) are defined as larger features that cannot be removed from the landscape, as opposed to artefacts that could be removed

Fish weir remains
- Google Earth image shows fish weir remains in Wells harbor
- The name “Stage Island” likely comes from cod fishing (it was used as a “staging area” for fish by Europeans in 1500s)
- Newly discovered potential remains of a fish weir in Cape Porpoise are almost identical in size to those in Wells Harbor
- Seaweed on rocks may be evidence that the rocks were placed there by humans (and therefore they lie a little higher off the ground and are not as scarified as natural rocks)
- Weirs can be different sizes/shapes to match their function
  - Salmon weirs could be very big, extending up to a mile out from shore
  - Sardine weirs were smaller and more corral-like

2016 archaeological survey to investigate Cape Porpoise weir
- There’s concern about archaeological evidence being washed away/eroded, so there is some urgency about this research

Questions and answers
- Question: Could European weirs indicate locations where there may be precontact weir remains?
  - Answer: Yes – weirs were typically built in areas where the fish tended to go, so it’s not unlikely that they’d be built in the same place over time
Beachgoers of Maine: Who are they and what do they think about water quality?
Charles Colgan, Center for the Blue Economy, Monterey Institute of International Studies and Professor Emeritus, Muskie School of Public Service, University of Southern Maine, and Ross Anthony, University of Maine

Results of a mail study sent to Maine beachgoers
- Patterns in beachgoers perceptions of water quality
  - NH residents inflate estimates of water quality in both ME/NH
  - Misperceptions about what causes changes in water quality
- Over 30% of individuals surveyed had a 50% risk perception of getting sick in water under advisory
- Gender and self-reported risk aversion were the only significant variables that appeared to influence individuals’ risk perception

Results of an in-person intercept survey on Portland and York Beaches
- Interviewers approached beachgoers with an IPad and requested participation; less than 2% refused
- Water quality information posted on the beach was slightly more likely to be checked at more urban beaches, though in total only about 25% check this info
- No real relationships found to predict who does or does not check the water quality levels
- Many people reported either leaving the beach or not going in the water during water quality advisories (90%), in spite of the fact that many people did not perceive water quality advisories to carry a risk; perhaps they were falsely reporting their response based upon the answer they thought interviewers wanted to hear.
- A high percentage of people reported interest in signing up for delivery of internet-based beach information (43% for residents, 30% for visitors) – may be an effective strategy
- Contact strategies should differ between beaches, as visitors stay in different types of locations

Questions and answers
- Question: What do water quality advisories say?
  - Example photos are on one of first slides – “not suitable for wading or swimming” is the main text, followed by additional in-depth information
**Surfing the wave of sustainability science**  
**Sophia Scott and Shannon Rogers, Plymouth State University**

**Results of surfer interview research**
- Surfers are more vulnerable to water pollution than average beachgoers, for a variety of reasons: they go to the beach more often; they are completely immersed in the water; they are more likely to ingest water or get cuts and scrapes; they tend to surf when water quality is the poorest (storms bring waves and also decrease water quality)
- 90.4% success rate with interviews. Focused on 12 beaches from Seabrook to Scarborough
- Surveys could only be conducted on those 18 or older, so age range is potentially skewed – researchers observed several kids surfing and also observed surf camps for kids
- 42% of surfers have noticed something in the water that affected their perception of its quality
- Only 2 of survey subjects mentioned water quality as a risk before being prompted with the question “do you consider water pollution to be a risk?”
- Surf forecasting websites were reported as most desirable source of water quality information
- The researchers published a one-page information sheet to distribute to stakeholders

**Questions and answers**
- Question: Is the low percentage of people who check for water quality advisories due to the fact that water quality is typically fairly good?
  - Answer: Maybe, but there are other reasons – for example, one prominent beach has many access points but information is only posted in one location. Many beaches do not have very obvious postings.
- Question: Did this research look into stand-up paddleboarders?
  - Yes, but they weren’t part of this survey – they don’t have as much water contact.
  - Less than 3% of respondents to surveys in the “Beachgoers of Maine” talk were paddleboarders (Ross from “Beachgoers of Maine” talk)
- Discussion: It would be good to be able to concretely tie sickness to water quality in users’ minds.
  - Surfers often say they know they will get sick, but it’s worth it (Sophia)
  - A study in CA did follow-up surveys after surfing to gather epidemiological data about response to exposure (Ross from “Beachgoers of Maine” talk)
- Question: How sick do users typically get? Do they have to see a doctor?
  - Most are just casually sick for a short amount of time; some do see a doctor.