

Cathy Janasie:

Okay, so good afternoon everyone. Thanks for joining us on our webinar series today. I'm Cathy Janasie. If you don't know me, I'm a senior research attorney here with the National Sea Grant Law Center. In today's presentation, I'm going to cover some of our more recent mariculture work and in particular focus on a lot of our seaweed work. Just a few quick housekeeping notes before we begin. We do have everyone on mute right now to cut down on background noise, so feel free to use the chat box at any time if you have a question. We should have plenty of time for question and answer at the end of the webinar, but we can also try to answer questions as we go along if they come in.

If you have a technical issue, you can private chat with Lauren Fremin, who is the National Sea Grant Law Center's project coordinator and our webinar host. Then I also wanted to let you know that we are recording this webinar and we're going to post it to our website as soon as we can after the webinar. That usually takes a couple of days to get the transcripts and captions and everything finalized, but be on the lookout for an email about that for when it's up on our website.

For those of you who aren't as familiar with the National Sea Grant Law Center, we were founded in 2002. We are housed at the University of Mississippi School of Law and our mission is to conduct legal research, education, and outreach for the wider Sea Grant network of 34 Sea Grant programs and their stakeholders. If you are interested in our work and what else we do and have going on, I encourage you to visit our website and to also follow us on social media. But now I want to get to the topic of our webinar today. I wanted to cover today some of our recent mariculture projects as I discussed.

First, I'm going to talk about some of the state regulatory review that we've been doing this summer as well as looking at the federal nationwide mariculture permits. Then finally, I will give us an update on some of our seaweed food safety projects and some of our recent materials that can be of use. First, we've been working this summer with a law student on doing a review on state seaweed permitting. Our review covered Alaska, California, Connecticut Hawaii, Maine, Massachusetts, New Hampshire, New York, Oregon, Rhode Island and Washington. We have shared drafts of those reviews with Sea Grant agents in those states and they've been providing us feedback on them. We hope to have those finalized in the next month and post it on our website. In that review, we had a particular focus on the types of authorizations that were needed, the length of the authorization, so how long it will last, as well as the fees that were associated with it, as well as what state restrictions there are on sourcing stock.

I just wanted to note here in case I say any of these things in the webinar, lawyers are not scientists and usually legislatures are not scientists. Sometimes these laws and regulations are using the phrase marine plant or aquatic plant to refer to macroalgae. I know a lot of you are particular that it is not a plant. If I use that term, just know I'm using the term that the state is actually using in the law and regulation and noting that that is not necessarily the correct scientific term for what we're talking about.

I'm sure this is not a surprise to anyone who works in this area or in aquaculture in general, but this is a complicated process. As we were going through each state, we noted that every state is going to need multiple authorizations to be able to get a seaweed operation up and running. Part of that stems from the fact that we are in the water, which is often publicly owned lands, and so you're going to need the approval from the state to use that property. Some states also have tribal land that you'll need to get approval of, in particular Washington notes that they have a lot of tribal land where they might have to get that approval as well. Then, in addition to actually being able to use that land, they're going to have to get any number of operational approvals to be able to get up and running. This is going to be a combination of permits, licenses, leases, and et cetera.

Those terms change from state to state. I will note that licenses in particular is an interesting word because at least two states, Maine and Oregon actually use the term license in regards to being able to use publicly owned lands. Then a lot of states use that same term for the operational approvals. We really do have to be particular about what term is being used in each state and for what. As I alluded to already,

you're going to need approvals from federal, state, maybe tribal, county and or local governments in trying to get these operations up and running.

I'm sharing this map, not because I think you'll be able to read it, I recognize it's probably too small on your screen, but I do want you to note a couple different things that's going on here. One, this is obviously a very complicated chart showing all the different permitting steps that are needed in Alaska. On the left-hand side, I just want you to note all the different agencies or entities that need to be involved in this process. On the federal level, we're showing the Army Corps of Engineers, US Fish and Wildlife Service, National Marine Fisheries Service. On the state level, the Environmental Agency, Fish and Game Agency, the Natural Resources Agency, and then also highlighting the local government.

Then I also want to highlight, while this is an overwhelming chart, to also note that it's Alaska, which is one of the states with the most robust seaweed industry right now. While this process can seem overwhelming, it's definitely one that people have gotten through and I think that should be encouraging. Part of the reason we're trying to put together these state-by-state reviews of what is needed to be able to help people know what agencies they're supposed to go to and what they're looking at when they're getting started in this process. Then also noting that this is from the state of Alaska's website. The state themselves may be trying to be helpful in helping potential growers get through this regulatory process.

I also wanted to highlight some trends we saw among the different states when it comes to sourcing seaweed stock. Some states are requiring that the seaweed come from in-state. Some are saying it just has to be a native of the species. For those states that are allowing stock to come in from out of state, they may be regulating that importation of the stock itself. I just wanted to share some examples of what we seen. Maine, for example, is one of the states that's saying we have to have the seaweed come from in-state. They say all seaweed shall be obtained or cultured from stock originating in Maine coastal to waters.

Connecticut says you cannot use kelp-sourced tissue from outside Long Island Sound except in waters to the southern land point of Rhode Island or Massachusetts. Then Alaska in particular, the regulators have termed this a genetic precautionary approach. They say that the parent stock has to come from within 50 kilometers of the farm site. Being very cautious about where it's coming from to protect both the genetic makeup of the native seaweed that's there, as well as trying to keep out different diseases that can be coming in if the stock came from further away.

Other states require native species. Rhode Island says you can't get an aquaculture license for species that are not endemic to the state without prior approval for the state. They do have a process maybe for authorizing that, but their base statement is you're going to have to use something that's native. New York's permits reference growing native algae to New York. As I said earlier, that provision usually comes with a follow-up that says if you're going to import the macroalgae into this state, you need a separate importation permit. In the states that are allowing the sourcing from out of state, that's very common to see.

Then finally, I just on this point wanted to highlight Washington, because they do have an importation provision in their laws and regulation, so they say you can import kelp or other seaweeds if you get import permit, but currently they're not approving any out of state seaweed or kelp hatcheries to import into the state. They're requiring all seed to come from an in-state facility. I just wanted to highlight this one because on the books and the laws and regulation, there is this provision that's saying they will allow importation, but in reality right now they haven't approved any place to get that from. In essence in Washington, if you wanted to start growing, you'd have to get it from somewhere inside the state of Washington.

Okay, so the second project we worked on this summer was to look at a review of the Federal Army Corps permits that we see in aquaculture activities. For those of you who don't know, the course authorized to issue permits under both section 10 of the Rivers and Harbors Act and section four for the Clean Water Act, section 10 was a requiring permits for what we call structure. In a mariculture operation you would think of that as the cage, the nets, the racks lines, et cetera. That would be in the now the cool

waters of the United States. While the Clean Water Act section 404 would be for any dredge and fill activities that were happening with the project. The Corps is taking the position that a lot of normal day to day aquaculture activities actually don't qualify dredge and fill, but they have given examples from when that section 404 could come into play.

I'm happy to follow up. That's a nitty-gritty rabbit hole to go down, but I'm happy to follow up with anyone who has specific questions about that. But generally they say it's not involved. The Corps authorizes those permits under both section 404 and Section 10. Those permits can be either individual or general permits. General permits are authorized at the state, regional or nationwide level for any category of activities which are similar in nature and will have only minimal adverse environmental effects, both individually and cumulatively. Individual permits on the other hand, may be issued for projects which do not meet their criteria of a general permit and are often those which they have more significant impact on the environment.

A nationwide permit is a type of a general permit that authorizes the activities across the country. It's important to note that despite its name, a nationwide permit may not apply everywhere in the country. The Corps of 38 districts implement the regulatory program for each nationwide permit. The use of the general permits is not uniform throughout the districts. That said, the vast majority of permitting is done through nationwide permits. Partly that's because the approval process for nationwide permits is very streamlined compared to other permit types. In exchange for that easier process, again, the nationwide permits are only supposed to be used for these projects that are having these minimal adverse impacts.

Nationwide permits can have any number of journal terms and conditions set by the Corps, and then certain regions can impose additional conditions which projects in that region must follow as well as continuing to abide by whatever national conditions are set. When examining a particular project, the district engineers or the Corps representatives who make the on-the-ground permit decisions have the authority to attach individual conditions, which the project must also meet to retain eligibility. I'm happy to say that we're soon going to be posting a memo that covers an overview of everything I just said to hopefully be able to provide an easy overview of what we're really looking at when we're talking about in particular Army Corps permits and how each one works.

In particular, we wanted to talk about today about the three mariculture permits. Each of these were issued in 2021. For Nationwide Permit 48, that was a reassurance of the permit. But for the first time in 2021, we saw Nationwide Permit 55 and Nationwide Permit 56. Those were both the direct result and of an executive order, which told the Secretary of the Army to begin the development of permits for seaweed and finfish aquaculture, which eventually became 55 and 56. When I was originally working with my student, we were working on seaweed issues and we really wanted to see... I wanted to see what the status was with Nationwide Permit 55 in particular and where it had been adopted throughout the country. But as we were looking at the different permits, we decided to take a closer look just to see where we were with Nationwide Permit 48 as well as Permit 56.

In particular, we flagged Nationwide Permit 56 just because it is the subject of current litigation, which I'll talk about. We wanted to see how that might affect the renewal process for these three permits, in particular, Nationwide Permit 55. Some of you may remember that the previous version of Nationwide Permit 48 had quite a bit of litigation, which eventually resulted in it being suspended in Washington. I'll reference that litigation in a little bit when we talk about the current Permit 56 litigation because they're pretty similar. Our student prepared for us this map looking at the current status of the permits throughout the country. Green is showing that all three are approved, all three mariculture permits. The yellow is showing conditional approval, like I mentioned with some conditions on it. Then the red in particular is showing suspended.

In New England, there are no Nationwide Permits. That's why they are all showing up as red. The district doesn't use them, but each of them have a state level general permit that they're using in its place. I was surprised when I saw this just to see how wide the approval process was when the regions, because again,

I was just curious to see where we were with the different Nationwide Permits and how they've been implemented throughout the country at this time. Now, Nationwide 56 is the subject of current ongoing litigation. Our summer student, Colin Dawson, he actually did a blog post on this. I have the QR if you want more information about the litigation itself and some more background information. But this lawsuit was filed pretty soon after the nationwide permit was finalized. A group of environmental groups, including Don't Cage Our Oceans, filed suit, claiming that the Corps issuance of the permit and saying that the finfish nationwide permit would only have a minimal adverse environmental impact was arbitrary and capricious and that the permit should be set aside as unlawful.

Now, the plaintiff's arguments here really similarly track the same arguments that they made in that nationwide Permit 48 shellfish litigation from a few years ago. They're saying the inclusions that there was minimal impact was not supported by the record. In particular, they argue that the record itself wasn't robust enough. They then add that the potential impacts were not analyzed correctly. They were poorly analyzed, they didn't analyze enough impacts. Then they made this similar argument, which was successful with the nationwide Permit 48 litigation where they said that the nationwide permit punts too much discretion to the district engineers. These were all arguments that were successful in that nationwide 48 litigation.

What could make this case different than that nationwide 48 litigation, the Corps has brought up both of these points that first, that this is a new nationwide permit and not a new issuance. On the point of saying that the record is not robust enough, they say they have less information about potential impacts because it hasn't been done before. While with the shellfish nationwide permit, they could look at to see what has happened in the past, they don't have the benefit of that, the finfish permit. Then they say, even though they have less information, they actually did a more thorough analysis. They said they did a better job than they did with nationwide 48, and they say that the district engineers are merely there to submit decisions that they had already made at the national level.

The Corps is making a strong effort to try to distinguish the two lawsuits, especially because the legal arguments are so similar, brought by the plaintiffs. This is ongoing litigation. They just had oral arguments. In the beginning of July, I just checked the docket this morning, nothing new has come up. This is definitely a lawsuit that we're tracking and we will keep the network posted as we see how the litigation goes forward from here. But again, we were really interested to track this one just to see how it might impact the re issuance of all three permits in the future since they are coming up to be reissued in the future, including the nationwide permit for seaweed.

Then finally, I just wanted to touch on some of our recent seaweed food safety work and some of the products that we have put out. We've been working on this, it originated with our advisory service for Sea Grant programs. Through that service, Sea Grant programs are able to come ask the law center discrete legal questions that they have. I'll direct you to our website if you're not familiar with our advisory service just because this is a good example of how our advisory service transformed from a one discrete question into bigger projects that we've continued to work on for several years now. But the initial question we got asked from Connecticut Sea Grant was how raw seaweed would be regulated under the federal food safety regime.

For those of you who aren't as familiar with this topic, all food in the United States is regulated under the federal Food Drug and Cosmetic Act known as the FDCA. There's a general prohibition that any food can not move in interstate commerce if that food is adulterated or misbranded. That means it can't be prepared, packed, held under unsanitary conditions. In the United States and even abroad, we have these couple different ways where we try to keep food from becoming adulterated.

A lot of people on this call will probably be most familiar with the use of Seafood HACCP, but HACCP is also used for juice, dairy and meat and poultry. Then another alternative to use would be a food safety plan. That question we got from Connecticut Sea Grant was pointing out that the state had decided to use HACCP for the seaweed in the state, but they were curious about what the alternative would be under the

Food Safety Modernization Act, FSMA, as it's called, is a newer food safety law, but it only applies to food facilities. A food facility is anyone who's engaged in manufacturing processing, packing, or holding food for consumption.

Then I'm highlighting here just what it means to manufacture a process. That's making food from one or more ingredients or synthesizing, preparing, treating, modifying or manipulating food including food crops or ingredients. In particular, I've highlighted there that an example for that could be drying or dehydrating. We've gotten a lot of questions, one thinking just about raw seaweed, but then a lot of growers are also drying and dehydrating to try to extend either the shelf life or be able to ship it. The question we initially were tackling, and then as I'll talk about, we've evolved it with different products we've created is just this question of where does seaweed fit in this regulatory structure?

Seaweed, the FDA has made a statement that it's a raw agricultural commodity. That statement's probably a few years old at this point. When we started working on this, we didn't even have that from the FDA, but that means a couple of different things. First, it means that raw seaweed is exempt from the requirements of FSMA. It only has to comply with the general requirements of the Food Drug and Cosmetic Act. In particular, that adulteration provision. It means that processed seaweed is a facility and that those operations have to comply with FSMA and in particular the hazard analysis and preventative control rules.

Then what's been interesting, and we've been looking at even more closely recently is this drying dehydration piece because we continue to get questions about how that exemption works. The farm definition says that drying and dehydrating seaweed is exempt from FSMA if it happens on the farm. We followed up with FDA recently and I asked them a couple of very specific questions. I asked one, is there a time requirement for when that drying and dehydration has to happen? They said, "No, as long as it happens on the farm, it's covered." I asked if there was a difference between drying and dehydration because they're technically different processing. They said, "No, there is no distinction between the two." Then in particular, the farm definition also breaks out a farm to build this farm itself and then what they call a secondary purpose farm, which is if there's a facility that's also owned by the same entity that drying dehydration can potentially happen there and still be covered.

This drying dehydration piece is a piece we're working on. Again, we're going to be putting out a one pager, two pager going over everything I just said just because that's a piece that we continually to get questions about how that exemption works. The other exemption to point out is that under FSMA, there's an exemption for what's called a qualified facility. What that means is if a business is averaging less than a million dollars per year in sales, they're exempt from most requirements under FSMA. That is including a lot of facilities in the United States that are growing, I should say operations, not facilities that are growing seaweed. The first step that we've done to address a lot of these legal issues that we got is to create this series of infographics, which are available on our website that are breaking down all those legal issues I covered probably too quickly just then about how FSMA and the FDCA are working together.

We have an infographic that looks at how FDA is classifying seaweed and what it means to be a raw agricultural commodity. The other thing to note on that piece is we get a lot of questions about whether seaweed is actually covered by the produce safety rule, which is been issued under FSMA, and it's not. The actual comments to the produce safety rule specifically say that algae was considered and was not covered. We cover all of that in that first infographic. The second infographic looks more particular at that exemption for being a qualified facility that I just talked about. Then our third one, we got a lot of questions also what it means to just mean for food to be adulterated. We created an infographic that gives an overview of what it means to say what's being adulterated food, specifically because so many seaweed operations are just being covered by the FDCA adulteration provision.

Then we were left with this lingering question because one, we're looking at most seaweed operations being exempt either through that farm definition or the million dollar cap. Then as I mentioned, alluded to

earlier, so many seaweed operations are actually that are exempt are being required to use HACCP on the state level. It left us with this question of, okay, what happens if an exempt seaweed operation that's currently regulated under HACCP loses that exemption for a number of reasons and they're going to have to transition to FSMA? This was a question that bubbled up through the Seaweed Hub Regulations Workgroup with which the law center where the facilitators from. We worked through the Seaweed Hub with New York and Connecticut Sea Grant, in particular Mike Ciaramella and Anoushka Concepcion, the seaweed food safety document that is comparing that preventive controls for human food rules with seafood HACCP.

The document itself is a very good background document and was one of the reasons I wanted to highlight it because it features an overview of FSMA and what's required under the law and gives a good background of that qualified facility exemption as well as the farm definition, so more background on what is covered and what is not covered for seaweed operation. It compares the HACCP program with the preventive control for human foods piece. At the end, Mike put together a very good checklist for operations to go through if they're transitioning from HACCP to the preventive control rule. It's one, a really good document for people who are doing that transition. But again, it also has a lot of very good background information, if you want more background on those issues I talked about just briefly here today in our webinar.

The document also has some interactive features. One of the things we recognized was that there's a lot of technical and legal terms used here. Every time one of those terms that is used in the regulations and that has a regulatory definition, we made pop-ups for those definitions. If you couldn't quite remember what it means to be a very small business or to be a qualified facility, you could just hover over the word and the definition would pop up. You don't have to go back to the definition section to see what that term means. Then likewise, we have links within the document for additional sources. This example I'm showing here is actually there's a link for adulterated food to that infographic I highlighted as well as there's links to the regulations themselves and some other background documents that either the team or other states have made. There's a lot of good resources in the document itself to actually point you to other places to get more information on this topic.

Then just another piece of what we've worked on with the seaweed food safety piece in particular was we've continually really gotten questions and concerns about being able to write state level seaweed food regulations because the science and the understanding of food safety hazards with seaweed is still developing. We worked with UMass Boston to create this peer review journal article database. Some of you might have heard us talk about it before, but I just wanted to remind people that we have it. The way the platform works is you are able to narrow down the articles that are in the database. You can search by species of seaweed the year of the article, specific keywords, and in particular, if there's a particular contaminant or issue that you're concerned with, you can search by whether or not the paper thinks it's a low hazard, moderate hazard, major hazard.

Then that list of papers below will populate with the ones specifically related to whatever search topic you had, as well as that map over there will populate showing you where in the world that article is coming from. Because a lot of the other comments we've gotten is that the industry is so much further along in other places and what's happening there. The other thing I'll note is that there is a Google Form on the page to submit articles that aren't in there. Definitely reach out to us too, if you think there's something missing from there because we want this to be a helpful website for people working on this topic. Then finally, I just wanted to highlight some next steps that we're working on. We're in a project led by New York Sea Grant with USDA funding, and the goal of that project is to develop a seaweed hazards and control guide for going for the seaweed industry on potential food safety hazards.

We thought that that was a crucial next step to develop a guide so that we could eventually lead to a seaweed-specific food safety training program for the food safety industry. That project's ongoing. We will definitely keep you posted when we finally get that guide published, but again, we're just in the middle of the drafting process, and so we won't have that for another year or so. With that, I will wrap up

and we can move to the question and answer portion. But before we do that, I just wanted to say again, but this webinar is going to be recorded, and so we will be emailing you as soon as it is up. I will stop sharing my screen. Quickly, that's my contact information if you want to reach out to me in particular on any of these questions. I'm always happy to talk about, in particular, seaweed and aquaculture in general. It's one of my favorite things to work on. I will stop my share and we can see if there's any questions.

Stephanie Otts:

Cathy, it looks like there's one question in the chat. Is there any form of regulation or guidance for macroalgae extracts made in the United States?

Cathy Janasie:

There's regulations for it being used as an additive for certain seaweeds. I'd have to double check before I say anything definitive on that extract piece. But the additive ones are the only ones that are coming to mind. Amalia, I see your comment that the geographic restrictions on sourcing are not necessarily based on understanding population genetic. I know you guys have been working out lot on that topic. Yeah, valid point.

Okay, I see no other questions. Thank you again for tuning in. Our next webinar, it's going to be on September 17th at the same time, on the US Supreme Court term and the cases that are relevant to the Sea Grant Network. But again, thanks to everyone from joining and we'll let you know when the recording's ready to be posted.