In previous issues of this newsletter, we described the controversy regarding Board of Game Proposition 90/64, and the concerns surrounding the presence of the bacterium *Mycoplasma ovipneumoniae* (*Movi*) in Alaska. Recently, our partners at the Alaska Department of Fish and Game (ADF&G) released the results of a study showing that a small number of Dall sheep and mountain goats tested positive for *Movi* ([http://www.adfg.alaska.gov/index.cfm?adfg=pressreleases.pr&release=2018_03_13](http://www.adfg.alaska.gov/index.cfm?adfg=pressreleases.pr&release=2018_03_13)). This has heightened concerns regarding the potential for transmission of pathogens between domestic livestock and their wild counterparts. It is important for the public to be aware that the detection of *Movi* in a given animal does not mean that the animal is, or will ever become sick. In this study all of the animals who tested positive appeared healthy, and none showed signs of respiratory illness. Although die-offs and pneumonia outbreaks among bighorn sheep in the Lower 48 have been observed, this is not the case in Alaska.

At this time, there is still very limited data available regarding the prevalence of *Movi* in domestic or wild sheep and goats in Alaska. The Office of the State Vet (OSV), as well as our partners at the ADF&G, the USDA Animal Disease Research Unit, and the Washington Animal Disease Diagnostics Laboratory, are working together to remedy this problem. ADF&G will continue to intensify their efforts to monitor the health of, and collect samples from, Dall sheep, mountain goats and other ungulate wildlife populations state-wide. Similarly, the OSV is continuing the study described in previous issues of this newsletter to determine the prevalence and distribution of *Movi* in domestic sheep and goats in Alaska. Our collective findings will allow us to better assess the risk of *Movi* to wild sheep and goats in Alaska, and make decisions based on scientific data and knowledge.

### Study of *Mycoplasma ovipneumoniae* in Alaska’s Domestic Sheep and Goats

This study has been in progress for over nine months now, and will continue this year. If you are interested in participating, or would like more information, please contact your private veterinarian or the OSV as soon as possible to make arrangements. Being part of this study will entail answering general questions about management practices on the farm, and then having a trained veterinarian or technician collect samples (blood, eye swab, nasal swab) from each member of the herd or flock. The samples will be identified by a code known only to the sample collector and the owner of the animal. The samples will be shipped free of charge to the USDA Agricultural Research Laboratory and the Washington Animal Disease Diagnostic Laboratory for analysis. Confidentiality will be maintained when the farm-code-protected results are sent to the OSV, distributed to the sheep and goat owners, and shared with the Sheep and Goat Working Group.

Continued on p.2
We appreciate all of the producers who have participated up to this point. The more data that is available, the better we will be able to work with our wildlife partners to analyze the risk of transmission between species, and make science-based decisions for wildlife and domestic herd management.

For more information about Movi, or the ongoing studies we have described, we encourage you to check out the previous issues of this newsletter (available under the “News and Advisories” heading on our website: http://dec.alaska.gov/eh/vet.aspx), the Anchorage Daily News opinion article written by myself and Sam Cotten, ADF&G Commissioner (http://www.adn.com/opinions/2018/04/17/fish-and-game-partners-tackle-threats-to-alaskas-wild-sheep-and-goats/), and the OSV and ADF&G Movi webpages (http://dec.alaska.gov/eh/vet/movi.aspx and http://www.adfg.alaska.gov/index.cfm?adfg=hottopics.movi, respectively).

Sincerely,

Dr. Robert Gerlach, VMD
State Veterinarian

Strangles (Streptococcus equi) is a highly contagious, infectious disease of horses, donkeys, and mules that is found worldwide. Recently, a case has been identified in a horse in Southcentral Alaska.

The first sign of a Strangles infection is a fever (103 – 106°F), followed 24–48 hours later by swollen lymph nodes, mucoid to mucopurulent nasal discharge, cough, depression, and loss of appetite. Swollen lymph nodes may cause difficulty swallowing and cause inspiratory respiratory noise. The horse may extend its head and neck to relieve the discomfort of the swelling and make breathing easier. In some cases Strangles can spread to other areas of the body (“Bastard Strangles”) causing additional symptoms including pneumonia, encephalitis, diarrhea, peritonitis, and bone infections. The incubation period for Strangles is about 3–6 days but can vary from 2–15 days. It is therefore possible for your horse to become infected with Strangles at an event and be back home for several days before it shows signs of illness.

At this time, only one case of Strangles has been identified in Alaska, so it is unlikely that your horse is at risk of contracting the disease. Nonetheless, it is prudent to work with your private veterinarian to develop a biosecurity plan for your stable in order to minimize the risk of infection. In general, we recommend that all new additions be examined for evidence of disease prior to arrival, and meet the standards of your herd/farm health plan before interacting with your other animals. If possible your biosecurity plan should keep new arrivals and horses returning from public events isolated from other horses for at least a week or two. During this time, follow protocols to keep equipment and tack cleaned and disinfected. After caring for these horses you should practice good sanitation prior to interacting with the other animals at the facility (e.g. washing hands and boots).

If you observe symptoms of Strangles in your horse, it is important that it be physically separated and quarantined from other horses immediately. You should also contact your private veterinarian so your horse can be tested for Strangles, and treated with the appropriate medication, if necessary.
PARASITES IN ALASKA

According to the CDC, between 2004 and 2016 the number of parasite (mosquito, tick, and flea) bites on humans has more than tripled, and over 640,000 cases of disease linked to these insects have been reported (http://www.cdc.gov/vitalsigns/vector-borne/). It is now recommended that ticks removed from a human should be saved so if the person becomes ill the species of tick can be identified and it can be tested for diseases. In Alaska, as well as other areas, invasive species of parasites have been spotted in locations where they had not been previously identified. For example, the tick surveillance project run by the Alaska Department of Fish and Game (ADF&G) and the OSV found eight non-native species of ticks in Alaska. Other examples include the East Asian Longhorned tick recently found in New Jersey (http://www.today.com/health/how-protect-against-ticks-asian-tick-invades-new-jersey-t127911), and the recent finding of an African Louse in Alaska. The identification of the African Louse in Alaska is of interest to us because this invasive species has been identified in the southern U.S., and other warmer climates, but never this far north. It was found on a goat that was born and raised in Southcentral Alaska and which has never left the state.

The Role of the OSV

The OSV operates within the “One Health” model, which is a worldwide strategy recognizing that human, animal, and environmental health are intricately related, and issues that impact all of these areas require interdisciplinary collaboration and communication. Parasites such as ticks can have a devastating impact on the health of humans, as well as both domestic and wild animals. Surveillance and monitoring of their presence and health impacts is therefore a multi-agency initiative in Alaska. In collaboration with partner agencies such as the Alaska Department of Health and Social Services (DHSS), the ADF&G, and the University of Alaska, the OSV is doing its part to monitor the presence of parasites in Alaska, and collect data to assess the potential risk of tick-borne diseases in the state. In support of this initiative, this summer the OSV and ADF&G are continuing surveillance of the tick population in Alaska. This program will monitor for species not native to Alaska and screen for certain tick-borne diseases.

How You Can Help

It is important for all animal owners to consult with their veterinarian about the parasite prevention methods appropriate for their specific animals and situation. Livestock owners in particular should work with their vet to develop a herd health management plan that takes into consideration the control and prevention of both internal and external parasites. We also encourage anyone traveling or importing animals from outside the state to consider treating their animals for parasites prior to travel. This will help keep your animals safe, and will prevent the introduction of new parasite species to Alaska.

If you do find ticks, lice, or other external parasites on yourself or an animal, we ask that you either submit them directly to our office for species identification, or to your private veterinarian to ensure confidentiality of farm information. Please contact our office for sample submission protocols.

2019 NATIONAL ANIMAL HEALTH MONITORING SYSTEM GOAT STUDY

The National Animal Health Monitoring System (NAHMS), a part of USDA-APHIS, is tasked with collecting, analyzing, and disseminating data on animal health, management, and productivity across the United States. The NAHMS team conducts national studies on the health and health management of United States domestic livestock populations in order to meet the information needs of these industries.

We are very pleased to announce that Alaska has been selected to participate in the 2019 NAHMS Goat Study. This study will focus on health management issues facing the goat industry. This is a wonderful opportunity for Alaska goat producers to be a part of, and contribute to a study on a national level.

Stay tuned to our website (http://dec.alaska.gov/eh/vet.aspx) and listserve (http://list.state.ak.us/mailman/listinfo/akstatevetnews) for more information about how you can get involved!
The U.S. Department of Agriculture’s (USDA) Animal and Plant Health Inspection Service (APHIS) is revising its Chronic Wasting Disease (CWD) Program Standards to better meet the needs of both animal health officials and the cervid industry. To ensure consistent terminology, APHIS is aligning the language in the program standards with the Code of Federal Regulations.

CWD is a transmissible spongiform encephalopathy (TSE), progressive and fatal brain disease that can affect cervids, including deer, elk and moose. The CWD Herd Certification Program (HCP) provides a national approach to control CWD in farmed cervids. The program is a cooperative effort between APHIS, State animal health and wildlife agencies, and farmed cervid owners. APHIS coordinates with State agencies to encourage cervid owners to certify their herds and comply with the CWD Herd Certification Program Standards to prevent the introduction and spread of CWD.

The revisions cover a variety of topics including: adding guidelines for live animal testing in specific situations, clarifying how disease investigations should be handled, aligning with the Code of Federal Regulations’ requirement for mortality testing, simplifying fencing requirements, adding biosecurity recommendations, and describing their intended approach to update the CWD-susceptible species list. APHIS also outlines factors for determining indemnity and includes a table that outlines possible reductions in herd certification status that States may consider for herd owners that do not submit required mortality surveillance samples or consistently submit unusable testing samples.

The revisions are based on input from internal and external stakeholders, including scientific experts on CWD and TSEs from the United States and Canada, a working group of State and Federal animal health and wildlife officials and representatives from the farmed cervid industry. These stakeholders reviewed the program standards, identified sections for revision, and provided options for those revisions.

APHIS issued a summary of the working group’s discussions and recommended changes to the CWD Program Standards at the 2016 United States Animal Health Association meeting. The summary was available for public comment and 35 written comments were received.


For more information about CWD and the HCP, visit the USDA-APHIS CWD website:
PRODUCE SAFETY PROGRAM UPDATE

The OSV Produce Safety Program staff wrapped up this season’s Produce Growers Food Safety Workshops with a trip to Juneau in March. Since last October, we have held nine workshops across the state, with a total of 135 growers participating! The OSV is very pleased with the wonderful response from a wide range of Alaskan growers. Workshop attendees have included everyone from large farms covered by the Food Safety Modernization Act (FSMA) Produce Safety Rule (PSR) to small farms and farmers’ market vendors, and other growers who would like to learn more about how to safely handle the produce they grow in their private gardens.

We will not be holding any public workshops this spring or summer, but once the growing season winds down we will once again schedule events for across the state. Thanks to a grant from the Food and Drug Administration (FDA), the OSV has been able to offer this course for free to any interested grower. We anticipate this funding will continue in the fall, so we strongly encourage everyone to take advantage of this opportunity, and to contact our office if you would like a training held in your community.

In conjunction with our workshops, we were pleased to host Cindy Lewis from the FDA Produce Safety Network twice this winter. Ms. Lewis’ visits included tours of both outdoor and indoor growing operations, and two meet-and-greet events where she met with growers and answered their questions about the FSMA PSR. While nothing is currently scheduled, we do anticipate that Ms. Lewis will be returning to Alaska in the near future, so please stay tuned to the website and listserv for announcements of future meet-and-greet events.

In addition to educational workshops and grower outreach activities, this spring the OSV staff attended the National Association for State Departments of Agriculture (NASDA) Produce Safety National Consortium meeting in Irvine, California. At this meeting our staff had the opportunity to network with those who operate produce safety programs in other states, get a sense for what is happening on the national scale, and showcase Alaska’s unique agricultural landscape to our counterparts nationwide. At this meeting our staff were also updated on the results of the Water Summit, which took place a few weeks earlier. Testing requirements for agricultural water, as defined in the PSR, are still under review by FDA. If you have comments or concerns regarding this topic, please let us know.

E. coli O157:H7 Outbreak Linked to Romaine Lettuce

Romaine lettuce harvested in Yuma, AZ has been linked to a multi-state outbreak of E. coli O157:H7, a pathogen that can cause severe food-borne illness.


At this point, the FDA feels it is unlikely that any impacted romaine lettuce is still available in stores or restaurants. However, this outbreak serves as a reminder to produce growers, harvesters, and packers about the importance of good food safety practices, and the severe consequences that can result if a contaminated product is released for public consumption.


ON-FARM READINESS REVIEWS

Inspections of farms fully covered by the PSR are scheduled to begin in 2019. In order to help these farms prepare for compliance, states are beginning to offer On-Farm Readiness Reviews (OFRRs). The purpose of an OFRR is to help producers understand and implement the requirements of the PSR, assess the efficacy of their current on-farm food safety practices, and to further educate farm owners and their staff about how to grow, harvest, pack, and store produce in a safe manner. OFRRs are voluntary and are not regulatory. The findings will be reported only to the farmer, and will not be recorded or shared with any other agency.

Beginning this summer, we will be offering this service free of charge to any interested grower. First priority will be given to the few farms fully covered by the PSR, but we will visit smaller farms as well, as time allows. If you would like more information about the program, or are interested in scheduling an OFRR, please contact Barb Hanson at barbara.hanson@alaska.gov or 907-375-8278.
Fish and shellfish are important resources to the State of Alaska. Arguably, some fish are part of Alaska's identity; Copper River king salmon and Bristol Bay sockeye salmon are two examples among many. They serve as economic, cultural and nutritional staples for many Alaskans, providing nutritional benefits such as essential minerals, vitamins, and omega-3 fatty acids. Numerous rural communities depend on traditional fish resources as a reliable, nutritious, and accessible food source. Commercial fisheries provide income to people living in remote coastal communities that have limited opportunities for generating cash. On a larger scale, excluding oil, Alaska's largest export market is seafood.

In the interest of protecting these resources, the Alaska Department of Environmental Conservation (DEC) created the Fish Monitoring Program (FMP) in 2001. Environmental contaminants can pose a threat, both real and perceived, to fishery resources. Mention of mercury, polychlorinated biphenyls (PCBs), pesticides, perfluorinated compounds such as perfluorooctanoic acids (PFOAs), radiation, etc. in fish can cause concern to consumers, businesses reliant on fishery resources, and foreign buyers alike. For example, PFOAs have become of great concern to some parts of the state, and monitoring and assessment of these toxic compounds will be important going forward. Given the history of oil and gas development and military presence in Alaska, detection of PFOAs could increase, as has been the case next door in Canada.

The FMP's main goal is to ensure the State has sufficient information to inform the public and the Department of Health and Social Services (DHSS) to make public health recommendations for Alaskan seafood consumption. To that effect, the FMP analyzes fish tissue samples from around the state in an effort to establish baseline data and to identify potential threats and monitor changes in environmental contaminants present in seafood. This is a challenging task for such a large and diverse state that has substantial commercial, recreational, and subsistence fisheries.

Fish and shellfish are analyzed at the Alaska State Environmental Health Laboratory and contract laboratories for contaminants of concern that are identified by the FMP, EPA, and international groups such as the World Health Organization, European Food Safety Authority, and Canadian Food Inspection Agency. This is important because Alaska’s seafood is exported worldwide. Currently, the FMP analyzes fish and shellfish for: 1) select heavy metals (total mercury, total arsenic, cadmium, copper, lead, and selenium) and other metals, depending on need, 2) methylmercury (about 10% of samples annually), 3) organic contaminants including PCBs, polybrominated diphenyl ethers (PBDEs), organochlorine pesticides, pharmaceuticals and personal care products (PPCPs). When evaluating sites of concern, other contaminants may also be included depending on need. The Toxic Substance Portal (http://www.atsdr.cdc.gov/substances/index.asp) is a good source of information about contaminant exposure and effects.

The EPA has general nationwide fish consumption advisories, but specific waterbody advisories are determined by each State and the EPA provides standard practices and methods along with guidance. The EPA maintains a listing of advisories nationwide (http://www.epa.gov/choose-fish-and-shellfish-wisely/fish-and-shellfish-advisories-and-safe-eating-guidelines).

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MEET
CHRISTOFF FURIN,
PhD
Fish Program Manager

Christoff “Buck” Furin was raised in Kodiak, where he developed a love for marine biology. He attended college at Western Washington University, where he earned a B.Sc. in biology, with a specialization in marine biology. He then returned home to Alaska where he worked commercial fishing for salmon, halibut, and black cod, and as a fish tech for the Alaska Department of Fish and Game in Kodiak and along the Alaska Peninsula.

Christoff then went back to school at the University of Alaska, where he earned a M.Sc. in biology at UAA studying fish behavior, and later a Ph.D. at UAF where his dissertation project focused on understanding the effects of perchlorate (a component of solid rocket fuel) on threespine stickleback.

Christoff’s experience studying contaminants in fish made him a perfect fit for the OSV’s Fish Monitoring Program. He was hired as a Research Analyst III in 2014, and has been with the program ever since. His current duties involve managing all aspects of the program such as prepping and processing fish samples in the lab, coordinating the various projects, managing sampling programs, analyzing and reporting the data the program obtains, and keeping our database, GIS map, and webpage content current with these results.
For the most up-to-date information, a web search will yield many State consumption advisory webpages and even maps. The State of Alaska has fish mercury consumption advisories for the most susceptible demographic (pregnant women and children) for certain species of marine fish and for some specific freshwater waterbodies in Southwestern Alaska (http://dhss.alaska.gov/dph/Epi/ephpages/fish/default.aspx).

These advisories are for the protection of developing fetuses and children, who are the most vulnerable to the effects of mercury toxicity. In general, large, long-lived fish tend to accumulate some contaminants from their diet because they are not eliminated from the body, but are stored in tissues and accumulate over time. The amount of a contaminant found in fish is dependent on many different factors.

We collaborate with many partners who collect samples so that FMP resources can be devoted to chemical analysis, which is expensive. Some of our major collaborators include the International Pacific Halibut Commission, Alaska Department of Fish and Game (ADF&G), the U.S. Fish and Wildlife Service, the University of Alaska, the Alaska Monitoring and Assessment Program (AKMAP), and the Alaska Seafood Marketing Institute, as well as commercial, recreational and subsistence fisherman. As an example, in Southeast Alaska there is concern about mining activity in Canada impacting salmon populations in transboundary river systems such as the Taku, Stikine, Alsek and Unik rivers. The FMP is working with the DEC AKMAP and ADF&G to analyze fish samples from those systems.

While our primary objective is fish consumption, we try to take an ecosystem approach by evaluating fish as bioindicators of environmental contaminants. Whole-body samples of resident fish can provide good information about the contaminants in that location. This allows for evaluation of the aquatic environment in which the fish resides. Often, having more information about a system that has concerning contaminant levels leads to better decision making and policy, and more effective remediation.

We have an Interest in expanding our sample coverage to more areas of the state, including the Arctic and Western Alaska. The changing climate will present new challenges to communities and the environment in these regions, as is already evident. Examples are increased shipping traffic, melting permafrost, and increased storm erosion. Baseline data and monitoring will be essential in order to measure changes and inform local people of the state of their natural resources.

For more information about the OSV’s FMP, and to view the results of our studies, please visit our website: http://dec.alaska.gov/eh/vet/fish-monitoring-program.

**NEWCASTLE DISEASE DETECTED IN CALIFORNIA CHICKEN FLOCK**


Newcastle disease affects chickens and other poultry, causing respiratory (sneezing, gasping for air, nasal discharge, coughing), digestive (diarrhea), and neurological (tremors, drooping wings, twisting of head and neck, circling, stiffness, swelling of eyes and neck) symptoms, as well as sudden death. Newcastle disease kills nearly 100% of infected birds.

Virulent Newcastle disease has recently been confirmed in a backyard chicken flock in California. The USDA APHIS and state/local partners are working together to perform additional surveillance and testing in the area to ensure the disease has not spread to other flocks.

Newcastle disease is extremely hazardous to birds, but does not pose a food safety risk for humans. In rare instances humans can become infected, but the symptoms are mild—usually displaying as conjunctivitis or flu-like symptoms.

To prevent infection of your flock, it is important to engage in good biosecurity practices, including isolating birds returning from shows, as well as thoroughly washing hands, boots and equipment after contact with birds.

If you believe your flock may be infected with Newcastle disease, or observe any sudden or unexplained bird deaths, please contact our office immediately.
One of the most common types of inquiries the OSV receives is about transporting animals into or out of Alaska. Many times people are wondering how to travel with their household pets, especially when crossing the international border into Canada. Other times, people are transporting livestock, such as cattle, horses, poultry, sheep, goats, and pigs.

### Animal Importation 101

Importation requirements vary by species, and in some cases by the age and sex of the animal. One thing that it is important to understand is that there may be more than one regulatory body that has jurisdiction over animal imports and exports. It is important to not only review the regulations for the State of Alaska, but also for any country or state that you are traveling in or plan to transport animals into or out of. In Alaska, that often means coordinating with the USDA and Canadian officials, if you are moving animals by land through Canada.

Importation requirements are in place to protect animal health, environmental health, and public health. Decisions of what diseases to test for and the requirements for animals coming into Alaska are based on scientific study and risk analysis.

Alaska’s animal health regulations were most recently updated in March 2017. Many of the updates included testing requirements to remain consistent with federal rules, which is required to continue to allow animals to be transported interstate. As always, staff at the OSV are happy to answer any questions you have about importing or exporting animals. Feel free to give our office a call or check out our animal import factsheets online at [http://dec.alaska.gov/eh/vet.aspx](http://dec.alaska.gov/eh/vet.aspx).

### Species Importation Requirements

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<tr>
<th>Species</th>
<th>Health Certificate/CVI</th>
<th>Importation Permit</th>
<th>Additional Testing or Certification Requirements</th>
<th>Intra-State Movement Permit</th>
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Continued on p. 9
Certificates of Veterinary Inspection (CVI)

Most animals being exported from Alaska need a health certificate, often called a Certificate of Veterinary Inspection (CVI), issued by an accredited veterinarian. It is important for accredited veterinarians to check the receiving state’s requirements prior to issuing a CVI, as each state has different import requirements for different species. It is the responsibility of the accredited veterinarian to ensure that vaccines are given within required time frames, the required statements and test results are included on the certificate, and that the CVI is submitted promptly.

Accredited vets are required to submit copies of health certificates they issue to the appropriate animal health officials in both the issuing state and the receiving state. This applies both when animals are transported domestically, and when an international health certificate has been issued for travel through Canada.

A list of the animal health officials for other US states can be found on the OSV website at: http://dec.alaska.gov/eh/pdf/vet/state-animal-health-officials-20170615.pdf

Accredited vets in Alaska can submit hard copies or email completed CVIs to the appropriate animal health officials, but it is also possible to create an electronic CVI (eCVI) online at http://dec.alaska.gov/Applications/EH/ATS/index.html.

The eCVI system is free of charge. Once the certificate is created, it can be printed, signed, and then scanned and e-mailed to the State Veterinarian. The eCVI and electronic import permit system is still relatively new. As you become familiar with these tools, we welcome your comments and suggestions to help make our system more user friendly.

Electronic APHIS Form 7001 No Longer Accepted

Many states, including Alaska, are no longer accepting the electronic Animal and Plant Health Inspection Service (APHIS) Form 7001, United States Interstate and International Certificate of Health Examination for Small Animals for small animal imports. At this time all states are still accepting the multi-page carbon copy APHIS Form 7001, as well as hard copies of comparable forms issued by the state of origin. Alternatively, there are several online platforms that can be used including GlobalVetLink (http://user.globalvetlink.com/gvl2/login/auth); Vet Sentry (http://www.vet-sentry.com); SmartICVI-New Planet Technologies (http://www.smarticvi.com/new-planet-technologies/); and AgConnect (http://iiad.tamu.edu/agconnect/mobile-application/agconnect-mcvii).

Travel Through Canada

Keep in mind that if animals will be transported through Canada, additional requirements may apply. For more information, please contact the Alaska USDA APHIS Veterinary Medical Officer, Dr. Mark Miller, at alaska.import.export@aphis.usda.gov or 907-229-7656.

Status of HB 315 and SB 164

The bill had support from the Alaska Farm Bureau, as well as many individual farmers and livestock owners. The House version, HB315, passed the House April 16, 38-1. However, the bill was conflated with the issue of Mycoplasma oviopneumoniae (Movi)-related pneumonia, and the recent discovery of the pathogen in both wild and domestic sheep and goat populations. Instead of forwarding the measure, the Senate Resources Committee asked that the department work together with stakeholders to come to broader consensus on the issue.
The OSV is housed in the Alaska State Environmental Health Laboratory (EHL), which is also part of the Department of Environmental Conservation (DEC) Division of Environmental Health. The EHL performs a wide range of microbiological and chemical testing services to protect Alaskans’ health. Food product testing in particular is a large part of the EHL’s mission. The EHL employs a team of skilled microbiologists, chemists, and technicians who must first undergo training, and pass regular proficiency tests in order to prove their competency to perform testing. To best utilize a relatively small staff, EHL analysts are cross-trained to perform a variety of the tests described below.

**Shellfish:** Alaska’s shellfish industry is dependent on the EHL’s testing services since it is the only lab in Alaska certified by the FDA National Shellfish Sanitation Program (NSSP) to analyze commercial shellfish for toxins such as Paralytic Shellfish Toxin and Amnesic Shellfish Toxin. Samples of shellfish are regularly sent in by shellfish farmers and harvesters from several coastal areas of Alaska. Commercial samples are analyzed using a Mouse Bioassay (MBA) to determine the total toxin content, and preliminary results are provided to growers and harvesters same-day. In addition to the MBA, the EHL also offers High Pressure Liquid Chromatography (HPLC) Post-Column Oxidation (PCOX) testing for non-regulatory purposes. This analytical chemistry method is advantageous to clients such as researchers and tribal groups as it allows for the quantification of 12 individual toxins without the influence of biological effects. Additionally, the EHL supports the Alaska Section of Epidemiology in conducting investigations into incidents of Paralytic Shellfish Poisoning.

**Manufactured Food:** Most ‘manufactured’ or ‘ready-to-eat’ foods produced in Alaska are seafood products, specifically smoked fish. The EHL tests these commercially-produced products for microorganisms that indicate the food has been contaminated with fecal matter (fecal coliforms), or pathogens that are commonly responsible for food-borne illness (*Listeria, Salmonella, Staphylococcus, E. coli* O157). In order to facilitate timely and cost-effective results, where possible the EHL uses rapid methods to quickly screen for target organisms. If a result is negative, no further action is needed. If a positive result is returned, more traditional, time-intensive cultural methods to confirm a positive sample are used to minimize the chance of false positives.

**Meat:** In order to ensure the safety of Alaskan consumers and allow Alaska’s slaughterhouses and processors to stay in compliance with USDA Food Safety and Inspection Service (FSIS) regulations, the EHL tests for microorganisms in raw meat (*E. coli* O157) and carcass swabs (fecal coliforms), as described above for manufactured foods.

**Dairy:** Several types of tests are conducted in support of Alaska’s dairy industry, which is overseen by the OSV. Both surveillance and compliance samples of dairy products are regularly analyzed. Samples are tested to ensure that they are free of bacterial contamination and antibiotic residues, the pasteurization process was completed, and to confirm the health of the cows that produced the milk product. Jugs and cartons for dairy products are also tested to ensure that they do not contaminate the products by introducing bacteria during the packaging process. *Continued on p. 11*
**FOOD TESTING AT THE ENVIRONMENTAL HEALTH LABORATORY**

**Fish:** In support of the OSV’s Fish Monitoring Program (FMP), the EHL processes and analyzes fish samples from the state’s various regions and water bodies. Important commercial, recreational, and subsistence fish and shellfish species are analyzed in-house for trace metals (methylmercury, total mercury, arsenic, cadmium, copper, lead, selenium, and others, if needed) and using a contract lab for persistent organic pollutants such as organochlorine pesticides, PCB congeners, brominated fire retardants, personal care products, and pharmaceuticals. This work provided essential data used in updating the State of Alaska Fish Consumption Guidelines in 2014. To view contaminant data, as well as a map showing the location of sample collection, please visit [http://dec.alaska.gov/eh/vet/fish-monitoring-program/fish-monitoring-map.aspx](http://dec.alaska.gov/eh/vet/fish-monitoring-program/fish-monitoring-map.aspx).

Due to concerns that radiation from the Fukushima disaster could reach Alaska, DEC, in collaboration with the Alaska Department of Health and Social Services (DHSS) and the FDA, started testing fish collected in Alaskan waters for cesium-134, cesium-137, and iodine-131 radioisotopes. Beginning in 2016, samples have been analyzed in-state at the EHL using a Portable Gamma Ray Analyzer developed by the FDA and Canberra. The Portable Gamma Ray Analyzer is currently the only instrument of its kind deployed to a state laboratory. The sample is analyzed at the EHL, and the results are sent to FDA scientists at the Winchester Engineering and Analytical Center for interpretation. Testing of these samples at the EHL rather than an outside lab allows for more timely results. Additionally, if another nuclear disaster should occur, this instrument would allow for effective, in-state assessment and monitoring of radioisotopes. For more details about Fukushima radiation see: [http://dec.alaska.gov/eh/radiation.aspx](http://dec.alaska.gov/eh/radiation.aspx).

**Cottage Foods:** Cottage foods are foods that are exempt from most regulatory oversight because they are sold in small quantities and are not considered potentially hazardous. Common cottage foods include products such as baked goods, salsa, sauces, and jams/jellies, as well as pickled and fermented products. In order to ensure that a food meets the criteria for the cottage food exemption, the producers must demonstrate that the pH and water activity levels of the food meet the criteria set out in the exemption. The EHL provides these testing services for cottage food producers throughout the state.

In January 2017, the EHL received their ISO 17025 accreditation. By achieving this international accreditation, the EHL has demonstrated a rigorous quality assurance system on par with national FDA laboratories, as well as their ability to produce high-quality, legally defensible scientific test results. This achievement expands the ability of the State of Alaska to provide regulatory food testing in compliance with FDA requirements, quickly respond to food-borne illness outbreaks, and allows closer collaboration with other accredited public health partners nationwide. This is essential as EHL supports DEC’s Food Safety and Sanitation Program, the OSV, the DHSS’s Epidemiology Section, and the Municipality of Anchorage in all types of foodborne illness investigations.

**References and additional information:**

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**MULTISTATE OUTBREAK OF SALMONELLA LINKED TO EGGS**

The Food and Drug Administration (FDA) has recalled eggs produced by Rose Acre Farms following a multi-state outbreak of *Salmonella* Braenderup. At this time, the Centers for Disease Control (CDC) is reporting 35 cases in 9 states with 11 hospitalizations. Fortunately, no cases have been identified in Alaska.

To prevent illness, the CDC and FDA are advising consumers to check egg cartons for the following numbers: P-1065 (the plant number) and another set of numbers between 011 and 102 (the Julian date), or, for Publix and Sunups egg cartons, plant number P-1359D and Julian date 048A or 049A with Best By dates of APR 02 and APR 03. If you find eggs with any of these numbers on the carton, return them to the store or throw them away, and sanitize the surfaces in the refrigerator where they were stored.

*Salmonella* infection can also be prevented by following good food safety practices. This means thoroughly washing your hands and any surfaces that come into contact with raw egg, ensuring your eggs are kept refrigerated, and cooking eggs to at least 160°F.

WE’VE GONE GREEN!

In an effort to conserve our natural resources and reduce waste, printed hard copies of our newsletter will be provided by request only. If you would like a printed copy for your office or organization, please let us know and we will be happy to mail one to you! Otherwise, please enjoy (and share!) our newsletter electronically by subscribing to our listserv, or visiting our website.

**UPCOMING EVENTS**

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<tr>
<td>National Cheese Day</td>
<td>N/A</td>
<td>June 4, 2018</td>
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<tr>
<td>Independence Day, OSV Closed</td>
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<td>Southeast Alaska State Fair <a href="#">www.seakfair.org/</a></td>
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<td>Deltana Fair and Music Festival <a href="#">www.deltanafair.com/</a></td>
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<td>Tanana Valley State Fair <a href="#">www.tananavalleyfair.org/</a></td>
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<td>Kenai Peninsula State Fair <a href="#">www.kenaipeninsulafair.com/</a></td>
<td>Ninilchik</td>
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<td>Alaska State Fair <a href="#">www.alaskastatefair.org/</a></td>
<td>Palmer</td>
<td>Aug 23 — Sept 3, 2018</td>
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<td>Kodiak Rodeo and State Fair <a href="#">www.kodiakrodeoostatefair.org/</a></td>
<td>Kodiak</td>
<td>Sept 1 — Sept 2, 2018</td>
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<tr>
<td>Sustainable Agricultural Research and Education (SARE) Supporting Sustainable Agriculture Conference <a href="#">http://uaf.edu/ces/ah/sare/conference/</a></td>
<td>BP Energy Center, Anchorage</td>
<td>November 5—7, 2018</td>
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<tr>
<td>Produce Growers Food Safety Workshop (in conjunction with SARE Conference)</td>
<td>Anchorage</td>
<td>November 8, 2018 (timing TBD)</td>
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