

**MINUTES OF THE  
SALT LAKE CITY MOSQUITO ABATEMENT DISTRICT  
22 April 2021  
BOARD MEETING**

Presiding: Neil Vickers, Ph.D., Board Chair 2021

Time: 12:37 p.m.

Place: 2215 North 2200 West, Salt Lake City, UT 84116

Trustees Present: Neil Vickers, Ph.D., Chair (Attended Remotely)  
Van Turner, Vice-Chair (Attended in Person)  
Carlton Christensen (Attended Remotely; Left at 2:51 p.m.)  
La Vone Liddle (Attended in Person)  
Dr. Dagmar Vitek (Attended in Person)

Others Present: Ary Faraji, Ph.D., Executive Director (Attended in Person)  
Aleta Fairbanks, CPA, CFO (Attended in Person)  
Andrew Dewsnup, IT/GIS Specialist (Attended in Person)  
Daniel Mendoza, Ph.D., University of Utah Professor (Attended Remotely)  
Susan Becker, Vice President, Zions Public Finance, Inc. (Attended Remotely)  
Rachel Anderson, Attorney, Fabian VanCott (Attended Remotely)  
Approximately 7 other members of the public (All Attended Remotely)  
The following persons provided comments:  
Lee Stanhope, Salt Lake City Resident  
Tena Rohr, Salt Lake City Private Citizen  
Dr. Brian Moench, M.D., Board President of Utah Physicians for a Healthy Environment  
Rebecca Burrage, Retired Nurse Practitioner, Great Salt Lake Audubon Member

**1. Roll Call:**

Trustee Vickers called the meeting to order at 12:37 p.m., and Executive Director Faraji confirmed that the meeting was being recorded. No conflicts of interest were declared by the Trustees.

**2. Discussion and Official Vote to NOT Pursue a Proposed Partnership with the US Air Force through the Innovative Readiness Training:**

Executive Director Faraji provided the attendees with a brief update. The District is extremely confident with the scientifically-based integrated mosquito management measures that we utilize to promote good public health and to enhance the quality of life. We routinely practice environmentally-friendly methods and strictly follow EPA and CDC guidelines. The potential partnership with the Air Force garnered a lot of attention from a variety of groups and members of the public, and we want to show that the Board and staff are listening. We are members of this community as well; and, for the time being, we believe it is in our best interest to not formally pursue this partnership.

Moving forward, we hope to make our operations even better through increased community involvement. We will be hiring a Public Information Officer to further engage the general public in our operations. We will also have an annual open house each spring once the COVID situation subsides so the public can actually visit with us, learn about the science that actually drives our operations, ask questions, and bring existing concerns to our attention. We are globally pursuing partnerships that will help provide answers to lingering questions, including working with Daniel Mendoza (who is an atmospheric scientist at the University of Utah), an environmental chemist at UC Riverside, and several others. We will develop hypothesis testing which will either provide empirical evidence that will reinforce current procedures or inspire essential revisions.

A motion to discontinue plans to pursue a partnership with the US Air Force through the Innovative Readiness Training was made by Trustee Liddle, seconded by Trustee Turner, and passed unanimously.

**3. Discussion and Approval of the Air Quality Solutions Proposal on Naled Dispersal Modeling, Sampling, and Health Impact Assessment:**

Dr. Daniel Mendoza, who is a faculty member of the University of Utah, spoke to the Board about his research proposal. His work is in City and Metropolitan Planning, and he has also joined Atmospheric Sciences and the Pulmonary Division at the University Hospital. His vocation centers around equity and air exposure, and his research takes an unbiased approach in order to see all sides of an issue and to address many concerns. He briefly recapped his proposal to provide naled dispersal modeling, sampling, and a health impact assessment. These studies have been accomplished in other areas, and established methodologies will be followed. His research is the depositional component: the actual analytical chemistry testing of the samples that will be collected is not part of this proposal and will be conducted by other researchers from UC Riverside.

Trustee Liddle made a motion to approve the Air Quality Solutions Proposal on Naled Dispersal Modeling, Sampling, and Health Impact Assessment. The motion was seconded by Trustee Christensen, and it carried with all in favor.

**4. Discussion and Approval for Biologist Christian Weinrich to Pursue a Professional Master of Science Degree through Montana State University:**

District Biologist, Christian Weinrich, is interested in pursuing a graduate degree in entomology. There is an opportunity for him to work with Dr. Robert Peterson, a renowned entomologist and expert in biological risk assessment, through Montana State University. The university offers an accredited professional master's program that will allow Christian to investigate some specific research questions that are of joint interest to us and some of the advocate groups. Specifically, he would be interested in investigating the biology, ecology, and impact of our operational mosquito management approaches on non-biting midges, the Chironomidae. Our Policies and Procedures does allow and encourages continuing education for staff. An overview and estimated cost (~\$14,000) for the program was included in the Board Packet for the Trustees.

Trustee Christensen noted that the actual research is imperative information for the District, so this may actually be a special situation. Attorney Rachel Anderson will look into the situation to see if there are any labor laws which may need to be addressed. For example, is it appropriate to compensate Biologist Weinrich when class research must be conducted during regular working hours, but research conducted after regular working hours should not be compensated? Trustee Christensen made a motion to approve Biologist Weinrich's pursuit of a Master of Science Degree through Montana State University, contingent upon Attorney Anderson's clarification on what the specific circumstances would be. Trustee Vitek seconded the motion, and it passed unanimously.

**5. Presentation by Zions Public Finance and Discussion and Approval to Pursue a Tax Increase:**

As requested by the Board, Susan Becker was tasked with looking into the District's anticipated future growth, discerning the financial impact the Inland Port Authority will have on future revenues, and providing various financial scenarios that would assist the Board in defining an appropriate property tax increase. The first scenario readily portrayed how a tax increase is imperative because the approximate 1.5% annual increases could not possibly cover the historic 3% - 5% increases in costs due to inflation, even when no additional services or capital projects are pursued. Other scenarios depicting 30%, 50%, and 100% increases (with and without capital project improvements) were presented.

The Trustees engaged in a lengthy discussion analyzing different financial aspects, and they all agreed that future capital projects are essential. A motion to proceed with the notifications required for a 50% tax increase was made by Trustee Christensen and seconded by Trustee Turner. More discussion ensued because of inflation concerns; costs will invariably increase, making it necessary to prioritize and omit several desired capital projects. Executive Director Faraji mentioned that he is very uncomfortable with a tax increase in excess of 50%, but he serves at the discretion of the Board and will pursue whatever he is assigned to do. Susan Becker was asked to provide information on a 75% tax increase, which would raise property taxes on a \$400,000 home from \$26.84 a year to \$46.97. An easy way to calculate the increase would be adding approximately \$5.00 per every \$100,000 of market value. A \$20.00 annual increase on a \$400,000 home amounts to roughly \$1.67 more a month. Trustee Turner withdrew his second on the previous

motion. Trustee Liddle made a substitute motion to pursue a 75% tax increase, which Trustee Turner seconded. The motion carried, with Trustees Vitek and Christensen against the motion and Trustees Liddle, Turner, and Vickers in favor.

Lee Stanhope commented that he is generally against tax increases, but he is in favor of many of the projects that had been outlined, particularly the research projects. He wondered if there has been any outreach to the Inland Port to supply funds for mosquito abatement within the Port district. Executive Director Faraji responded that he and Trustee Christensen had met with Jack Hedge, the Utah Inland Port Authority Executive Director; Mr. Hedge had shown an interest in the research projects the District plans to conduct, and he appeared to be amenable to providing some additional funding to assist in mosquito control in the Inland Port area. Mr. Stanhope felt the amount of funding that the Inland Port would provide the District was quite miniscule when compared to the money the Port was receiving from the District's share of property taxes.

**6. Approval of the 18 March 2021 Minutes of the March Monthly Board Meeting:**

The minutes had been distributed to the Trustees for review prior to the meeting, and no modifications were necessary. Trustee Liddle moved approval of the 18 March 2021 minutes, and the motion passed unanimously after being seconded by Trustee Turner.

**7. Presentation of the March 2021 Financial Statements and Approval of Bills for Payment:**

The Board Members had also received the Financial Statements and record of bills for payment beforehand. CFO Fairbanks reviewed the Financial Statements with the Board; all expenditures were presented, with special attention being paid to items over \$1,000. Documentation for every payment accompanied the checks when they were signed. No unusual transactions had occurred; Trustee Liddle made a motion to approve the March 2021 Financial Statements as presented and March's bills for payment. The motion was seconded by Trustee Vitek and carried with all in favor.

**8. Discussion and Approval to Resume In-Person Board Meetings:**

Now that the COVID-19 restrictions have relaxed and most of the participants in the monthly meetings have been vaccinated, Executive Director Faraji wanted to know if the Board might want to return to in-person Board Meetings. Trustees Christensen and Vickers felt it was still too soon to conduct in-person meetings, and the issue was tabled.

**9. Report on Attended and Reminder/Approval of Upcoming Training/Meetings:**

- **Municipal Mosquito Control Program, 31 March 2021, Online**

Assistant Director White gave an online presentation to about 100 – 120 persons in the Texas, Louisiana, Alabama, and Tennessee areas. His presentation covered some of our innovative work with 3-D printers, drones, and our creative traps.

- **Texas Mosquito Control Association, 7 April 2021, Online**

Assistant Director White also provided another presentation on non-target effects and the novel work that our District has been doing to about 100 – 150 persons at the Texas Mosquito Control Association meeting.

- **Earth Day Events, 24 April 2021**

Operations Supervisor Hardman, Rural Field Supervisor Salt, and Biologist Weinrich will be displaying mosquito abatement activities at the Earth Day festivities this coming Saturday. They will exhibit live mosquitoes and mosquito larvae. Also, they will allow participants to feed mosquito larvae to our mosquito fish.

- **Utah Ordinance Compliance Association, 4 May 2021**

The Utah Ordinance Compliance Association reached out and asked Executive Director Faraji to speak at their monthly meeting this year.

- **AMCA Washington Days, 10-12 May 2021, Online**

The AMCA Washington Days will take place this year, but the scheduled meetings with the legislators will be held virtually. Executive Director Faraji is scheduled to meet with Senator Romney's staff on 12 May 2021, and he may sit in on Senator Lee's and Representative Curtis's meetings as well. He asked the Trustees to let him know if they'd like to participate virtually in the meetings. Some specific "asks" will be made during the visits, and Executive Director Faraji will distribute this literature to the Board once everything has been finalized.

- **UMAA Annual Meeting, 24-26 October, Park City, UT**

Plans are being made to hold the UMAA Annual Meeting in Park City this year. The meeting will be a hybrid format, including in-person and virtual opportunities.

## 10. **Executive Director's Report:**

The Board Members were given a few updates, which included the following: 1) This year's warm spell pushed *Anopheles* mosquitoes out of hibernation, and they began host seeking for blood meals. We've already had four service requests in relation to adult mosquitoes. 2) Our field crews are now conducting larval control measures. 3) Executive Director Faraji and Assistant Director White have begun interviewing prospective employees for the 2021 seasonal positions, and two seasonals have already been brought onboard. 4) We normally hire two interns each summer, but we have decided to hire three

interns this year in order to help us with our research. 5) The Ouelessebouyou Alliance has an interest in funding a western-approach mosquito program in Mali to provide malaria control. The District has been able to put the Alliance in contact with several distributors, and these suppliers are donating over \$20,000 in free equipment and product to the Alliance. The Alliance has purchased two vehicles, and the District will assist in calibrating and mounting ultra-low volume (ULV) aerosol sprayers on the back of these units. They are also purchasing a 40-foot container to facilitate shipping these products to Mali. 6) The District will be hosting a UMAA workshop that will be a state-wide Insecticide Resistance Workshop and Training to teach the other districts how they can go about conducting insecticide resistance testing at their own facilities with their local species of mosquitoes. The desire is to help Utah's mosquito abatement districts increase their accountability and involvement in monitoring insecticide resistance issues; monitoring resistance should be a routine component of every district to scientifically influence product rotation and continuing efficacy. 7) The insectary renovation is nearly completed; unfortunately, the insectary is still experiencing ongoing condensation and humidity issues. We have decided to place a dehumidifier unit inside the insectary to see if that will help ameliorate the condensation problem. 8) We had two additional glycol leaks, which necessitated hiring another subcontractor to fix the leaks. 9) We had a loss of power on Saturday, and another glycol leak was discovered when the power came back on. We have a call in to Koch Mechanical to see what caused this leak. 10) Executive Director Faraji and Assistant Director White just got three research publications accepted for publication. The first publication is in regards to the concept of heterodissemination and using frogs as carriers of a mosquito larvicide. This paper will be published in **Scientific Reports** from the publishers of **Nature**, which is a highly-respected journal having a high-impact factor. The second paper will be on infrared light sensors and using bioacoustics to remotely identify mosquito species based on their wing beat frequencies in surveillance traps. This manuscript will also be published in **Scientific Reports**. The third paper is an invited review manuscript on the use of unmanned aerial systems for surveillance and control in integrated mosquito management operations. This manuscript will be published in the *Journal of Economic Entomology*. 11) Assistant Director White is still in the process of attaining an adjunct professor position at Utah State University. He will set up and conduct a seminar for the Biology Department in the fall.

**11. Probable Agenda Items for 20 May 2021 Board Meeting:**

- Executive Director's Report
- Insectary / Facility Updates
- Research Projects Update
- Tax Increase Update

**12. Public Comment:**

The following individuals made comments to the Board, and a few of their remarks are included below:

Tena Rohr: She is a retired special education teacher who has dealt with autism for many years. She is concerned that the pesticides being used will cause damage to children's health and fetuses. She fears that pesticides are contributing to behavioral problems, loss of intellect, attention deficit disorder, motor development delays, autism, etc. She would like the District to stop pesticide spraying. She asked if the District acknowledges "No Spray Requests". She was informed that adulticides are never sprayed unless there is an absolute need based on our surveillance measures: trapping, mosquito abundance, mosquito species, and viral testing/infection rates. The aerial applications are only conducted out in the farther western areas of our District where the vast majority of larval mosquito habitats exist and also when there is an overabundance of *Culex tarsalis* and *Aedes dorsalis* mosquitoes. There are virtually no adulticide applications conducted in our residential areas. We do observe residential "No Spray Requests" in the City, and the form is available on our website.

Dr. Brian Moench: The Utah Physicians for a Healthy Environment (UPHE) sent a 63-page report, signed by 13 physicians, to the District citing multiple references claiming that pesticide usage is a serious health issue and harmful to the environment. It contributes to local air pollution and poses a threat to fetuses and neurological development in children. It is ineffective, and possibly counterproductive, in controlling mosquito populations and also ineffective in controlling West Nile virus. He was irritated that the District had not taken the time to respond to each of the claims UPHE made in its 63-page report, and the District was accused of not caring. He even asserted his doubt that the District had bothered to respond to concerns set forth by other members of the public. Channel 4 News was supplied with a multi-page response to UPHE's recent press release, and he felt the science behind that response was extremely thin. He claimed that most of it wasn't science at all. It is not science to say that EPA approval through its research and testing actually exonerates these pesticides. It is not science to say that the doses are extremely small and therefore will not cause harm. It is not science to say that "nuisance mosquitoes, those that do not transmit disease, justify aerial spraying miles away from population centers." That is a value judgement that the majority of people served by the District would disagree with. He was affronted that the District had given little indication that it actually considered what UPHE submitted. Dr. Moench requested that the District reanalyze its operations. He agreed that the systematic research performed by Dr. Mendoza will be worth doing. However, it will not invalidate UPHE's report; and, dispersion modelling is likely to have less value because it seems steered towards a hoped-for result that will once again show only small doses of exposure. He was displeased that the District did not solicit input from UPHE when designing Dr. Mendoza's study. Whatever the results of Dr. Mendoza's study, they should not supplant the studies UPHE selected for its report. UPHE requested that the District adopt a two-year moratorium on adulticide spraying and spend money learning about non-pesticide methods, such as those used in cities like Boulder, Colorado.

Rebecca Burrage: She was a follow-up to Dr. Moench's comments. She recently heard about the progressive mosquito control being conducted in Boulder, Colorado. She read an email by Dr. Abernathy, who manages that mosquito program and is also responsible for the Biodiversity Conservation and Applied Ecological Programs. Boulder thinks about land management differently. They have a lot of scientists and ecologists on staff to manage all of their land and they look at land management as ecosystems management. They are also trying to reduce larvicide treatments. Dr. Abernathy believes

that the more you disrupt wetland ecosystems, the higher the risk of infectious disease. Overall, biodiversity is protected, and it's also important in wetland ecosystems to mitigate climate change and stem biodiversity loss. She commented that the monarch butterfly population has drastically decreased since the 1980s, and she was concerned that pesticide spraying could result in them becoming an endangered species. She also wondered about the effect of pesticides on natural mosquito predators like lady bugs and dragonflies.

Lee Stanhope: He is a resident of Salt Lake City. He and his two daughters are on the autism spectrum, and he is concerned that pesticides may be a factor. Where spraying chemicals cannot be perceived as being a major cause of autism, it also cannot be demonstrated to be a non-factor. Perhaps spraying pesticides in the northwest quadrant for several years has caused seepage onto other areas, and pesticides sprayed over wetlands are ending up in the Great Salt Lake. The EPA includes warnings that the chemicals that are being used are hazardous to fish, invertebrates, and aquatic plants. He recognizes that there is a concern of spreading mosquito-borne diseases, but the numbers of those infected are small. And, the percentage of autistic persons in Utah are quite high. He urged the District to research other methods of mosquito abatement that are being utilized in other areas.

**13. Adjournment:**

Trustees Liddle and Turner made and seconded a motion to adjourn the meeting at 3:03 p.m. The 20 May 2021 Regular Monthly Board Meeting will be held at 12:30 p.m., and this meeting will be held in person and electronically.

  
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Ary Faraji, Executive Director

20 MAY 2021  
Date

  
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Neil Vickers, Chair

05/20/2021.  
Date