Animal Agriculture and Water Quality (AAWQ) Subcommittee of the

Farm, Ranch, and Rural Communities Federal Advisory Committee (FRRCC)

Meeting Summary | May 30-31, 2024

This meeting summary is organized according to the agenda and as listed below.

I. Call to Order

The U.S. Environmental Protection Agency (EPA), with Venus Welch-White presiding as the Designated Federal Officer (DFO), convened the first meeting of the Farm, Ranch, and Rural Communities Federal Advisory Committee's (FRRCC) Animal Agriculture and Water Quality (AAWQ) Subcommittee on May 30th and 31st, 2024 in Washington D.C. at 9:20 AM EDT.

II. Meeting Opening and Welcoming Remarks

After the call to order, Venus Welch-White (DFO) thanked the subcommittee members for their time and willingness to serve on the committee. She thanked members of the public both online and in person for attending the meeting and acknowledged that there were members of the public that requested to provide public comments.

Mae Wu, Deputy Assistant Administrator of the Office of Water (OW) provided welcoming remarks. Ms. Wu welcomed the members to the EPA and thanked them for their time. Ms. Wu reviewed the National Pollutant Discharge Elimination System (NPDES) permit program and its purpose, emphasizing the goal of safeguarding our water. She concluded her remarks by posing two challenges to the subcommittee; first, she asked that members get to know one another and take advantage of being in person to make connections, and second, she suggested that members endeavor to find the common, core values that bring everyone together.

Rod Snyder, Senior Advisor for Agriculture for the Office of Agriculture and Rural Affairs provided additional welcoming remarks. He provided an introduction and noted that he is driven by building consensus across agriculture and the EPA. Mr. Snyder emphasized the importance of having the right people at the table for this conversation, including representing diverse perspectives. He briefly described the subcommittee make-up, noting that each member represents a key sector or geographic part of the country with all 10 EPA regions represented on the subcommittee. Mr. Snyder also recognized the importance of having the U.S. Department of Agriculture (USDA) at the table so that the subcommittee explores both regulatory and non-regulatory options to protect waterways. He closed by stating that the recommendations made by the subcommittee will be critical and thanked the members for their commitment.

III. Roll Call and Introductions

James Pritchett, Chair of the AAWQ Subcommittee, introduced himself to the members and took roll call, inviting members to introduce themselves briefly when called.

Roll Call:

Alexis Andiman (present) introduced herself as a representative from Earthjustice.

Mike Callicrate (present-virtual) introduced himself as a representative from Ranch Food Direct.

Laura DiPietro (present) introduced herself as a representative from the Vermont Agency of Agriculture, Food, and Markets.

Steve Goans (present) introduced himself as the Deputy Director of the Nebraska Department of Environment and Energy.

Teena Gunter (present) introduced herself as a representative from the Oklahoma Department of Agriculture, Food, and Forestry.

Devon Hall (present) introduced himself as a representative from Rural Empowerment Association for Community Help (REACH).

Tarrah Heinzen (present) introduced herself as the Legal Director of Food and Water Watch.

William Higgins (present) introduced himself as a representative from Roeslein Alternative Energy.

Chris Hoffman (present) introduced himself as the President of the Pennsylvania Farm Bureau.

Kelly Hunter Foster (present) introduced herself as a Senior Attorney at Waterkeeper Alliance.

Rebecca Joniskan (present) introduced herself as a representative of the Indiana State Poultry Association.

Keith Larick (present) introduced himself as a representative from the North Carolina Farm Bureau Federation.

*Tom McDonald (present) introduced himself as a representative from Five Rivers Cattle Feeding, LLC.

Rick Naerebout (present) introduced himself as a representative from the Idaho Dairymen's Association, Inc.

*James Pritchett (present) introduced himself as Chair of the AAWQ Subcommittee and a representative from Colorado State University where he is Dean of the College of Agricultural Sciences.

Kevin Shafer (not present).

Marguerite Tan (present) introduced herself as Director of Environmental Programs for the National Pork Board.

Alicia Vasto (present, arrived late at 10:10 AM EST) introduced herself as a representative from the Iowa Environmental Council.

Melissa Wilson (present) introduced herself as a representative from the University of Minnesota's College of Food, Agriculture, and Natural Resources.

Kent Woodmansey (not present).

Terron Hillsman (present) introduced himself as a representative of the USDA Natural Resources Conservation Service (NRCS). Mr. Hillsman is an ex-officio member of the subcommittee and is non-voting.

**Member of the FRRCC.*

IV. Overview of AAWQ Subcommittee Charge

James Pritchett acknowledged that members bring varied perspectives as well as diverse practical knowledge to the subcommittee. Dr. Pritchett reviewed the AAWQ Subcommittee charge to recommend practicable and effective actions EPA can take to reduce pollutants from CAFOs/AFOs:

The AAWQ Subcommittee is charged with exploring actions EPA can take to facilitate effective pollutant reduction from CAFOs/AFOs, including by improving implementation of the Clean Water Act CAFO regulations, potentially revising those regulations, and/or facilitating non-regulatory measures to help CAFOs/AFOs protect water quality. This includes issues related to CAFO land application practices, production area practices, and limiting impacts on water quality from CAFOs/AFOs. With respect to land application practices, the subcommittee will consider implementable practices and technologies that are effective in minimizing the runoff of manure and other pollutants, ways of supporting their use, and how best to address challenges in implementing nutrient management plans (NMPs). As to production area

practices, the subcommittee will evaluate practices and technologies for manure storage, including treat and discharge systems, digesters, and nutrient treatment technologies. Finally, the subcommittee will consider certain over-arching issues, including the best means for assessing and eliminating water quality impacts from CAFOs/AFOs, including facilitating compliance and incentive-based approaches.

Dr. Pritchett summarized that the charge tasks the subcommittee with recommending practical steps to protect water quality by improving CWA implementation, potentially revising CWA CAFO regulations, and facilitating non-regulatory actions. These recommendations may fall into the categories of land application practices, production practices, and limiting CAFO impacts to communities and the environment.

V. Presentations

A. EPA Organization Structure and Background on FRRCC

Venus Welch-White, DFO of the subcommittee, introduced her presentation on EPA Organization Structure and Background on the FRRCC. Dr. Welch-White gave an overview of EPA's mission to protect human health and the environment and work to ensure that Americans have clean air, land, and water. This mission is accomplished by the development and enforcement of regulations.

Dr. Welch-White stated that science is the foundation for EPA's credible decision making to safeguard human health and ecosystems from pollutants. EPA conducts research at laboratories across the nation to solve environmental problems, shares information with other agencies, private sector organizations, academic institutions, and countries, and funds external research via grants.

Dr. Welch-White then highlighted the ten EPA Regions, identifying the Agriculture Advisors for each region. She also reviewed EPA offices, noting those that interface with the scope of the subcommittee and their regulatory jurisdiction, including:

- Office of the Administrator (AO)
- Office of Water (OW): Safe Drinking Water Act (SDWA), Clean Water Act (CWA), Waters of The United States (WOTUS)
- Office of Air and Radiation (OAR): Clean Air Act (CAA); National Air Emissions Monitoring Study (NAEMS)Office of Land and Emergency Management (OLEM): Resource Conservation and Recovery Act (RCRA), Emergency Planning and Community Right-to-Know Act (EPCRA)

Dr. Welch-White gave an overview of Federal Advisory Committees (FACs), noting that EPA has 23 FACs which are subject to the Federal Advisory Committee Act (FACA) and are created to obtain advice on a wide range of environmental issues. Every committee meeting, regardless of topic, is dedicated to open government and citizen participation. The FRRCC was established in 2007 to provide independent policy advice, information, and recommendations to the Administrator on a range of environmental issues and policies that are of importance to agriculture and rural communities. The FRRCC addresses specific topics and reports its policy advice and recommendations to the EPA Administrator through the Agriculture Advisor. FRRCC members represent academia, industry, non-governmental organizations, and state, local, and tribal governments. Dr. Welch-White noted that there are three FRRCC ad hoc work groups including Climate Adaption and Mitigation, Water, Energy and Climate, and Climate Finance,

Social Inclusion and Technical Assistance. Under the current charter, the FRRCC has held four public meetings working under the current charge of the nexus of climate and agriculture.

Dr. Welch-White noted that the FRRCC is a Tier 1 committee which provides its recommendations directly to the Administrator, while the AAWQ Subcommittee is a Tier 2 committee which will present its recommendations to the FRRCC. Lastly, Dr. Welch-White acknowledged James Pritchett and Tom McDonald for their longstanding support as members of the FRRCC.

B. AAWQ Subcommittee Operating Guidelines and Ground Rules

Rob Willis of Ross Strategic introduced himself and outlined his role in facilitating the subcommittee's discussions and helping to move the subcommittee toward its goals. Mr. Willis outlined the meeting goal to get to know one another and identify needs in preparation for forming ad hoc work groups. He also gave an overview of the overall trajectory of the subcommittee stating the process will be 12 to 18 months with full subcommittee meetings and ad hoc work group meetings as needed. He outlined the meeting agenda and gave an overview of group discussions for both days of the meeting with introductory discussions on the first day and exploration of the three areas outlined in the subcommittee charge, land application area, production area, and effective management strategies, as well as best management practices going forward on the second day.

Mr. Willis then introduced the Proposed Operating Guidelines as deliberative products and gave an overview of the document.

There was discussion regarding scheduling of future meetings, information sharing, consensus, and conveying information to the FRRCC.

C. Overview of CWA Authorities and Animal Agriculture

Chris Kloss, Director of the Water Permits Division, OW, introduced himself and his presentation on the Overview of CWA Authorities and Animal Agriculture. Mr. Kloss noted that his presentation does not impose any binding requirements, determine the obligations of the regulated community, change or substitute for any statutory provision or regulatory requirement, change or substitute for any Agency policy or guidance, or control in any case of conflict between this discussion and statute, regulation, policy, or guidance. Lastly, he noted that the views expressed in the presentation are those of the author and do not necessarily represent the views or policies of the EPA.

Mr. Kloss began by giving an overview of the challenge of nutrient pollution. Nutrient pollution can have harmful negative impacts like dead zones and algal blooms. He cited the dead zone in the Gulf of Mexico caused by nutrient pollutants from the Midwest as an example of these impacts. These impacts harm aquatic life and can shut down water systems. He noted that sources of nutrient pollution are very diverse.

The CWA created the NPDES permit program in 1972 to help address pollution by regulating point sources that discharge pollutants to Waters of the United States (WOTUS). Permits must be obtained from EPA or an authorized state, territory, or Tribe. Mr. Kloss gave an overview of the states and territories currently authorized noting that EPA remains the permitting authority on tribal lands.

Mr. Kloss discussed the definition of "point source," noting that CAFOs are included in the definition but that agricultural stormwater discharges are exempt. He also provided the regulatory definition of an

AFO; a lot or facility where animals have been, are, or will be stabled or confined and fed or maintained for a total of 45 days or more in any 12-month period, and crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility. He noted that CAFOs are categorized as Large and Medium CAFOs. Large CAFOs are categorized as CAFOs if the operation confines equal to or more than the specified animal numbers found in 40 CFR 122.23(b)(4), regardless of discharge status. Medium CAFOs are categorized as CAFOs if the operation confines animals within the specified range of animals identified in 40 CFR 122.23(b)(6) and discharge through a man-made conveyance into WOTUS. Mr. Kloss noted that small CAFOs must be designated as such to be in the NPDES program.

Mr. Kloss gave an overview of CAFO concentration and type across the country noting that some areas, such as the Midwest, California, and the South, have more animal agriculture than others. He noted that CAFOs make up 2 percent of U.S. livestock farms and that only 30 percent of CAFOs are permitted. Effluent Limitation Guidelines (ELGs) are developed by EPA on an industry-by-industry basis and incorporated into the NPDES permits. Technology-Based Effluent Limitation (TBEL) refers to the consistent nationwide standards for minimum level of treatment that anyone with the permit must achieve.

Mr. Kloss continued by providing an overview of CAFO regulatory requirements. NPDES permits cover the production area (where animals reside) as well as the land application area (where manure is applied). Under the permits, the production area is subject to "zero discharge" except when all controls are designed to contain a 24-hour, 25-year storm. The land application area component requires land application in accordance with an NMP. Even unpermitted Large CAFOs must land apply consistent with nutrient management requirements to qualify for the agriculture stormwater exemption. NMPs identify conservation and management practices that ensure the CAFO operator achieves production goals as well as natural resource protection goals.

Mr. Kloss concluded his presentation by giving the legal context for the CAFO regulatory program. After the initial EPA regulations in 1974 and 1976, the 2003 CAFO Rule Revision expanded the extent of the CAFO program. The 2003 Rule required all CAFOs to apply for an NPDES permit, unless they demonstrate that they have no potential to discharge. Additionally, the 2003 Rule made runoff from application of manure, litter, or process wastewater to land subject to the NPDES permit requirements and required all permitted CAFOs to develop and implement NMPs. The 2005 *Waterkeeper* decision vacated the requirement that CAFOs must obtain a permit if they have "potential to discharge" but left open the possibility that Large CAFOs may be "presumed" to discharge. The decision upheld the agricultural stormwater exemption but required that NMPs are part of CAFO permits and must be submitted to the permitting authority for review and public notice and comment, with the rest of the permit. The 2008 CAFO Rule Revision addressed the *Waterkeeper* remand by requiring CAFOs that propose to discharge to obtain permits, and that key "terms" of NMPs be incorporated as part of the NPDES permits and therefore be made subject to review, and public notice and comment. The 2011 *National Pork Producers* decision vacated the potential to discharge requirement and held that only CAFOs that actually discharge are required to have an NPDES permit. The court rejected challenges to EPA's NMP requirement for permitted CAFOs. In 2012, EPA revised CAFO regulations in accordance with the *National Pork Producers* decision. Finally, Mr. Kloss noted that Food & Water Watch (F&WW) et al. filed a petition in 2017 requesting that EPA update its CAFO regulations and ELGs to better address CAFO pollution. In 2022, another coalition of environmental organizations submitted a separate petition to revise the CAFO regulations. F&WW filed a mandamus petition asking the 9th Circuit to order EPA to

respond to the 2017 petition. EPA denied these petitions and instead committed to conducting the ELG Plan 15 detailed study and establishing the AAWQ Subcommittee.

Additional discussion included CAFO permitting details, state programs, and nutrient management planning.

D. USDA Programs on AFOs and CAFOs

James Pritchett introduced Bill Reck from USDA NRCS to give his presentation on USDA Programs on AFOs and CAFOs.

Mr. Reck began his presentation giving an overview of NRCS, stating that NRCS invests upwards of eight million dollars every day into conservation systems that help producers stay profitable and productive. He stated that NRCS supports farmers, ranchers, and foresters by providing personalized advice, making investments in operations and local communities, and improving water, soil, and wildlife habitat. He emphasized that healthy soil is the foundation of what NRCS does. NRCS also funds the development of new technology and emerging markets. Their services are science based, and 90percent of their team is comprised of technical specialists with some external technical assistance (TA) providers who must meet a certain standard and prove they can deliver services. Mr. Reck noted that NRCS provides voluntary services, not regulatory programs. It provides assessment and financial assistance to implement practices and utilizes a nine-step conservation planning process.

Mr. Reck noted the major conservation topics addressed by NRCS are soil health, water quality, water quantity, air quality, and wildlife. He gave a brief synopsis of the NRCS programs, and the funds invested by programs from 2014-2017:

Conservation Technical Assistance (CTA) invested $2.6 billion in the planning and implementation of conservation practices.

Environmental Quality Incentives Program (EQIP) is the flagship program of NRCS that helps producers apply conservation practices. It has invested $3.5 billion in new conservation practices.

Conservation Stewardship Program (CSP) helps producers build on conservation efforts above a base level. For livestock operations, CSP can be used in crop land that is used to support the farm, but not for engineering and manure management practices. CSP has invested $4.2 billion in new and existing conservation practices.

The Agricultural Conservation Easement Program aids landowners in conserving and restoring wetlands and agricultural land and has provided $663 million in easements.

Conservation Innovation Grants are competitive grants to support the development of innovation in conservation tech on agricultural lands.

The Regional Conservation Partnership Program leverages partnerships with other conservation organizations to deliver results for agriculture and conservation.

Conservation Reserve Program provides yearly rental payments for farmers who maintain conservation for 10 to 15 years.

Mr. Reck reviewed the impact of the Inflation Reduction Act (IRA) on NRCS. Signed into law in August 2022, the IRA provides $19.5 billion to assist existing conservation programs and is valid through fiscal

year 2031. He noted that the IRA does not create new programs but gives NRCS additional funds to expand its existing climate efforts.

Mr. Reck noted that NRCS provides assistance to all kinds of animal agriculture. A comprehensive nutrient management plan (CNMP) is a component of a conservation plan for an AFO. A CNMP is used when EQIP assistance includes manure nutrient management, waste storage, or treatment facility. No permitting is done by NRCS and NRCS does not provide farm-specific information to regulatory or permitting agencies. The sections of a CNMP include production area, land treatment, and nutrient management. Resource concerns for livestock are adequately addressed to the planning criteria level for soil erosion, water quality, and air quality.

Terron Hillsman (USDA NRCS; AAWQ Subcommittee ex-officio member) thanked Mr. Reck for putting the presentation together, and thanked Dr. Gene Kim who is a water quality specialist. Mr. Hillsman highlighted the nine-step planning process and how it helps both USDA and the producer understand the suites of practices that are necessary to address resource concerns. There is no one fix to solve all concerns, and there is massive diversity in agriculture. Mr. Hillsman emphasized the importance of getting out there with producers to see what they are doing and what their resource concerns are.

Mr. Reck agreed with Mr. Hillsman and noted that even the language used by people is different from state to state. For example, an NMP is not the same in every state which is why NRCS has state offices.

Mr. Hillsman closed by telling the subcommittee to feel free to use USDA as a resource. He emphasized that USDA NRCS has a long history of helping producers, but things do change, and this subcommittee presents a great opportunity to think outside the box and bring new ideas to the table.

VI. Subcommittee Discussion

A. *Day 1 Discussion*

Discussion Questions:

Can you describe the profile of animal agriculture in your state (if applicable)?

Can you discuss how those animal facilities are managed and/or regulated in your state?

A member stated that in Colorado animal agriculture is highly industrialized and concentrated in locations in the northeast and southeast parts of the state. There is already a lot of animal feeding and a growing dairy presence. They noted that most of the animal agriculture consists of large facilities. There has been a loss of smaller operators due to market conditions, but smaller operators often better manage water quality. They noted that many facilities are not managed by their owners, and many owners do not live in the state or on facilities. They stated they are wondering how these feedlots are regulated, because it appears that not enough is being done by regulators to ensure that waste is managed responsibly.

A member noted that North Carolina is third in the nation in swine production and that they are second in the nation for poultry and egg production. They emphasized that management of waste from livestock facilities and water quality is a concern, that regulations and requirements are not well enforced by North Carolina Department of Environmental Quality, and that most facilities are in low-income communities which creates additional concerns.

A member shared that permitting for animal agriculture in Oklahoma is done through the Department of Agriculture, Food, and Forestry. The state primarily has cattle across the state, swine in the eastern half, and poultry in the western half. The Poultry Act of 1988 allowed the department to regulate poultry. Swine are regulated in accordance with the Swine Law, which is relatively intensive, and includes requirements such as monitoring wells around lagoons and setbacks from occupied residences. The state also has a CAFO Act which is more traditional and like other states. The NPDES program is run separately from the other state programs. Many livestock operations are regulated by the state and do not want or need to be regulated by NPDES requirements. Some producers do seek both state and NPDES permits to protect themselves from liability. This member stated that it can be very confusing to explain to people which regulations and programs apply to their facilities.

A member stated that the Vermont Agency of Agriculture issues large and medium farm permits. Vermont is predominantly a dairy state. The agency also administers the state's agricultural nonpoint source pollution regulations. Vermont completes inspections, and if a producer might be a discharger, it is sent to the Department of Environmental Conservation under a memorandum of understanding to determine if a CAFO permit is required. This member stated that it can be confusing for farmers to understand when they are considered a point source versus nonpoint source.

A member noted that Nebraska has both a state NPDES program and a separate state program for regulating animal agriculture. As part of the state animal agriculture program, an inspector visits a farm and reviews engineering plans first to determine if controls are needed (i.e., lagoon, diversions for water). Local counties and natural resources districts get a chance to review a permit application and the public can give feedback. Inspectors continue to visit facilities after permits are issued. Regulators work directly with producers and require training for applying waste. The member noted that animal waste can also be considered a product to offset the use of commercial fertilizer.

A member stated that Minnesota Pollution Control Authority regulates feedlots and manure in Minnesota while Department of Agriculture regulates fertilizer. The state primarily has turkey, hogs, and cattle. Livestock facilities are regulated through either the NPDES CAFO permit program or a separate state permitting program, depending on the number of livestock and discharge status.

A member shared that in the six different states they work in, all states are delegated, and all have an NPDES permit program in addition to a state permit program. They noted that Colorado is a very heavily regulated state where EPA makes oversight inspections in addition to state inspections. Organic farming has also increased the demand for manure, including composted (processed) manure in Colorado. Four of the six states have general permits for CAFOs except Kansas and Arizona. They stated that animal agriculture in Texas includes cow, dairy, poultry, and swine.

A member stated that Iowa has more CAFOs than any other state. Of the 13,000 CAFOs, only 184 have NPDES permits. There is no state permitting program. The state's animal agriculture primarily consists of eggs and pork. The manure being spread causes nitrate issues, and Iowa has been a contributor to the Gulf of Mexico dead zone, and parts of the state experience issues with nitrate in drinking water. The member stated that state regulations have created a safe haven for CAFOs with no process for discovering if a facility is discharging. In Iowa, manure management plans (MMP) are not subject to public review; NMPs are open to public review but it can be very difficult to review those as there is no basis for calculations nor geospatial information. When they can review the calculations, many errors are found. The member noted that the process for reviewing plans is archaic and not digitalized or

automated. Over application of manure is built into the calculation of plans. Additionally, the state regulatory agency is underfunded as their budget has stayed the same for years.

Another member from Iowa explained that some farms in Iowa have state permits, but some are not required to have manure management plans if they have total containment of manure. They also have certification requirements for confinement operators and manure application operators.

A member noted that they have worked with various states with permit programs for large, medium, and small programs. All states had NPDES permits but all had different regulations. The member noted it would be useful to have a list not only of federal requirements, but also state programs. They stressed the importance of best management practices and noted that they may not work uniformly across different regions. BMPs in Minnesota would not be the same that work in a state like Arizona. There is no one-size-fits-all as each state is different.

A member noted that in North Carolina pigs and chickens are treated very differently; swine have a liquid animal waste permit program. Farms are required to develop a waste utilization plan (NMP), and this is incorporated into a certified operator training program. The Department of Environmental Quality inspects permitted farms once per year. They noted a lot of poultry waste is moved off site and used as fertilizer.

A member shared that in Indiana, the animal agriculture sector is in the top five states for duck, egg, turkey, and swine production as well as a large and growing dairy industry. The state is fourth and fifth in soybean and corn production. The state CAFO program was implemented in 1970 and based on the farm, a producer must prove storage capacity or will send the manure elsewhere. Indiana has delegated authority from EPA but has issued no NPDES permits despite waste being land-applied. The Office of Indiana State Chemist oversees the application of fertilizer in the state.

A member shared that they work for a national environmental organization and agreed that it would be helpful to have more information about requirements in states and numbers of CAFOs. They expressed concern about the lack of NPDES permits, and many CAFOs discharging without permits and causing environmental justice issues. The member noted that in New York, prior permits had been found to not meet federal requirements, and when the state updated its federal permit to comply with the CWA many CAFOs switched to state law permits which are less stringent than the federal permit. The state law permits do not require submission of an NMP and are not transparent.

A member shared that they work on a national level on environmental and public health issues. They acknowledge the concerns about the data gaps and agree that information would be useful. They stated that at a national level they are concerned that stakeholders are not able to access information and that studies show 75percent of CAFOs actually discharge, but only 30 percent have permits. They also noted that permitting has dropped significantly since the litigation over EPA's rules governing CAFO NPDES permitting, but not evenly across states. This member gave the example that in Minnesota most CAFOs have NPDES permits but in Iowa and other states almost none have permits. This member stated there is also an uptick in concern about groundwater from community members. They also noted that biogas digesters are being used by facilities that are land applying, and there needs to be a discussion about how digestate is incorporated into NMPs in a way that accounts for differences between digestate and manure.

A member stated they had worked across many states and noted that there are differences in every state. In this member's experience, in some states entire segments of the industry are virtually unregulated, while in other states there are more regulated entities but not regulated well. The member

expressed interest in developing a shared understanding of state programs, noting that the Soybean Board audit of state regulatory programs might be useful. They stated that even between regulators, people have a different idea of the way the federal regulatory system works and what it means, particularly around land application. This member noted that NRCS phosphorous standards were not designed to be regulatory tools but are being used that way; and that it is essential to get NMPs and the agricultural stormwater exemption right and to have a national floor.

A member shared that Idaho primarily consists of dairy and beef cattle. There are 700,000 dairy cattle, 2 million beef cattle and a state population of 2 million people. In Idaho most dairies are family owned and operated with 2,500 animals per dairy. The margins are exceptionally tight, however, and Idaho sees a loss of 10 percent of family operations per year. This member expressed concern that increased regulation will drive up concentration and reduce smaller family operations. In Idaho no dairy has an NPDES permit but they have NMPs. This member stated that in terms of technology, digesters are not a nutrient management plan because you still have nutrients that need to be managed.

A member shared that in Pennsylvania, there is diverse animal agriculture and an increased interest in being connected with food sources. The state has a requirement for NMPs for CAFOs and AFOs. Facilities under the CAFO threshold, even with one animal, are required to have a manure management plan. Farmers will sell manure to other farmers to use for land application. Pennsylvania engages EPA as well as the state's Department of Environmental Protection (DEP) to develop conservation plans. DEP does inspections including unannounced spot checks. Farms are also annually reviewed by the county.

A member shared that as an agricultural economist, in Colorado there is interconnectedness of water, biology, air, and soil. On the economic side, they noted that producers often make decisions based on what they are incentivized by.

Discussion Questions:

Why did you apply for the subcommittee?

Rob Willis (Ross Strategic) introduced the open discussion session encouraging members to get to know one another and generate conversation between the members themselves.

A member shared that they got involved in this line of work 35 years ago and were involved in the work of regulation by the Texas Commission on Environmental Quality and EPA Region 6 to develop the first EPA CAFO permits. They worked with CAFOs to help implement the regulations and have seen a journey of continuous improvement. The member was involved in ELG and NPDES permit review development, and shared they have a passion for the industry, which has come a long way. They did not want to miss this opportunity.

A member shared they applied because Region 6 sent out a newsletter with the announcement of the subcommittee and this member felt they could lend their 27 years of experience as a regulator in this field. This member felt their experience working with the environmental and industry stakeholders could provide helpful perspective. This member noted that there is a lot of political interest in this topic which can be a challenge when revising regulations and standards.

A member shared that for them, this is about protecting the environment. They want to protect the environment we have as well as improve the environment from things that have been done in the past. They are driven by wanting to give our kids an environment we can be proud of; clean air, clean water, and clean places to live, work, and play. They also recognize the need for safe and affordable food. As a

first-generation person in the US, they shared that their parents did not have access to safe and affordable food, so this is near to their heart.

A member shared that their boss asked them to serve on the subcommittee and have the opportunity to listen to different viewpoints and sides. They stated as a regulator implementing these regulations, it is a big task and that any changes require staff, funding, and practical methodology. They shared they have learned a lot from different viewpoints but at the same time regulation must be practical.

A member shared that from a North Carolina perspective, animal agriculture represents about two-thirds of the state's agricultural economy, so these issues are important to North Carolina farmers. This member stated they want solutions to be economically achievable technological solutions, as currently only large farms can afford to implement new technology.

A member shared they got into this because they care about humans. They permitted two CAFOs in Kansas and think they are doing a great job as a state. They noted they have seen such a decline in rural communities, and they live at the top of the Ogallala aquifer which is being depleted by corporations while also worsening water quality. The member stated that if it is the goal of EPA to make sure we have clean water, they think EPA is missing the mark. They want to move back toward healthy communities and whatever the EPA's mission originally was.

A member shared they want to address shrinking agricultural communities. Fifteen years ago, their organization did a study on this issue and looking back they think what really changed things was the tractor. They noted that engineers do not design for growth and people do not want to live far away from amenities. They want to address this issue not just in Nebraska, but across the country.

A member shared that they hear time and time again, especially regarding poultry farms, the way to keep a family farm running is by adding a poultry component. They stated the issue of declining rural communities is a real thing and something they struggle with, noting that one-third of counties in their state are losing population.

A member shared that they think declining rural populations gets back to the issue of economic viability of farms and it is something the subcommittee needs to keep in mind when they think about updating rules or adding new rules.

A member shared they were born and raised in Iowa and have a farming background in their family. They stated the reason they applied for this committee was to represent Iowans who are impacted by the pollution of water by CAFOs in the state. They shared that they have family and friends who are leaving rural areas looking for opportunity, but also because of the quality of life. Water quality is a factor of quality of life, including its impact on health. Iowa has the second highest cancer rate in the country and is the only state with a rising incidence of cancer. The member stated they had been working with their organization to try to get state rules changed by petitioning for stronger rules and after a years-long process, they ended up back at the status quo. They stated they joined this subcommittee because they are unable to create change at the state level and see this role as an opportunity to try to make changes.

A member shared that they wanted to make sure there were perspectives coming from the agricultural communities in the west. They noted that things are done differently in the west. Related to declining rural communities, they noted that they are seeing growth, and they think in part that is due to Idaho's limited government approach.

A member shared that they work in Vermont which is a small state, and that they have to wear lots of hats. As a regulator they have drafted every rule and permit and are the judge and jury of compliance agreements with farmers. They noted there is a lot of pressure to revise regulation. Vermont has nonpoint source rules, and they see how hard many farmers work to comply and meet all the standards they have set up because they spent years working with us to set them up in the first place. The member stated they also want to learn and understand more about nutrient management as it is one of the hardest things for farmers to navigate.

A member shared that joining the subcommittee was an obligation for them as a first-generation farmer. They expressed that they wanted to ensure the opportunity to farm was available to the next generation of agriculture. They stated that many people do not understand what they do, and it is important to make sure they are represented at this table. They noted that some things have economic impacts that producers cannot get past, and they have seen the pork industry change in the last decades improving productivity while also improving water quality and soil. They reiterated that their responsibility is to the next generation.

A member shared they wanted to make sure there was a voice for poultry on the subcommittee. They had worked as a hazardous waste permit writing for Indiana, and it was very much an “us versus them” situation with producers. The understanding of the harm being done by the presence of hazardous waste was not there. They returned to work in 2014, but found the community had changed. Now, the people on the other side of the table expected to be there and would work with the state on permits to get to the point where they were compliant. They noted that there are always going to be bad actors but what they have found is people want to comply, but that regulation needs to be reasonable and flexible. Looking at how companies in Indiana care about their communities, this issue has become a passion.

A member shared that what allowed them to move to Iowa was finding ways to implement new technology in agriculture and thus they were interested in the recommendations this subcommittee will eventually make. They also noted that they received encouragement to join the subcommittee from agricultural organizations and renewable natural gas companies.

A member shared that they applied for the subcommittee because they are the author of the 2017 petition which sought to provide a framework for EPA to update its CAFO regulations. They acted due to seeing family farmers put out of business by CAFOs that were not permitted. They also noted that they worked with Iowa and feel folks in those states do not have much more recourse than to come to the federal level.

James Pritchett noted they have been picking up on shared values and common beliefs that gives him optimism for the subcommittee process. Dr. Pritchett noted that the subcommittee will have to dig deeper and have authentic conversations with one another. He stated he appreciated how folks were coming from a place of curiosity and that this would spark good conversation. There is a middle ground where members can ask follow-up questions and better understand while being mindful of where people are coming from and bringing the attitude of curiosity to the table.

B. *Day 2 Discussion*

1. Day 1 Reflection

Rob Willis (Ross Strategic) welcomed everyone to the second day of the AAWQ Subcommittee meeting. He asked members to share any reflections from the first day:

A member noted that the NRCS presentation was a great reminder of the programs that are in place and a good review of the comprehensive, state-tailored offerings available to a farm when they are ready to take them.

A member shared that they noted how much members live in their own worlds and the importance of knowing what people do differently from state to state as members move forward. They emphasized the subcommittee will need to consider and recognize the amount of diversity.

Terron Hillsman (USDA NRCS; ex-officio AAWQ Subcommittee member) noted that the conversation reminded them that the subcommittee needs to keep in mind that just because things have been deemed safe, does not mean a group of people will feel that things are safe, good, or clean. It is important to keep that context in mind.

2. Process Discussion: Next Steps and Logistics

Rob Willis (Ross Strategic) reviewed the scheduling for the upcoming subcommittee meeting stating it will be held the week of August 5th, 2024. Mr. Willis noted that members requested some sense of schedule and timing yesterday and that the Chair and DFO will be working on that as soon as the meeting adjourns, taking into account the timeline and type of work that needs to be done.

James Pritchett stated that he works with a group that helps find consensus and often they start with an idea that expands over time. This is the process the subcommittee will undergo as it works toward making recommendations for the FRRCC. Dr. Pritchett stated that the work group will start with a level-set and then work to share ideas. Information will be shared via meeting summaries, sharing resources on the SharePoint site, and allowing for communication between meetings.

Dr. Pritchett noted that one goal of this meeting is to identify some work group areas and find out who is interested in each group via a survey to be sent following the meeting.

Venus Welch-White (DFO) reiterated that the DFO and Chair hear the members and recognize that collaboration must occur, and diversity must be represented. Dr. Welch-White stated that work group participation does not preclude members from participating in conversations, but that there will need for diverse representation in the work groups. Lastly, she acknowledged that there will be specific topics that will cross-pollenate across work groups and that she and the Chair will need to develop mechanisms for participation while not reaching quorum. She stated it is her and the Chair's goal that people know how to engage and are given the opportunity to engage.

Dr. Pritchett clarified that while work groups can add in members, they need to maintain their size. To begin, it is important to identify needs.

Dr. Welch-White added that for ad hoc work groups, there may be external speakers and that she wants to include the subcommittee in these, especially for topics that are multi-jurisdictional.

Mr. Willis noted that the upcoming discussion would help set the landscape for the process and asked members for their thoughts about considerations and process.

Discussion included meeting frequency, workgroup formation, information sharing, and timelines.

Mr. Willis introduced the next discussion session stating they will be discussing three proposed work group topics: land application area, production area, and effective management strategies. He stated that for each area, there will be a 45-minute discussion with five minutes at the beginning for a review of definitions, rules and regulations, and a review of the charge.

Mr. Willis stated that for each topic area, the following questions would be posed:

What information or background do you need for this area?

What topics or interests do you have for this area? Why are you interested?

What resources do you know exist that might inform conversations in this area?

3. Land Application Area

Area Introduction

Chris Kloss (EPA OW) began by defining land application area as the land under the control of an AFO owner or operator, whether owned, rented, or leased, to which manure, litter, or process wastewater from the production area is or may be applied. He noted that NPDES permitted CAFOs must have an NMP that meets regulatory requirements and if an unpermitted Large CAFO applies manure to its fields in accordance with appropriate nutrient management practices, any manure that runs off that field is exempt agricultural stormwater.

Mr. Kloss also reviewed the AAWQ Subcommittee Charge regarding land application area stating the subcommittee scope includes issues related to CAFO land application practices, production area practices, and limiting impacts on water quality from CAFOs/AFOs. With respect to land application practices, the subcommittee will consider implementable practices and technologies that are effective in minimizing the runoff of manure and other pollutants, ways of supporting the implementation of these practices and technologies, and how best to address challenges in implementing NMPs.

Mr. Kloss posed several questions for the group to consider:

Are there things we can do to enhance current practices including better management or conservation practices and new technologies like precision agriculture?

- *If they are available, how can we promote them and are they accessible?*
- *If we can implement them, how do we monitor and assess effectiveness to see if they are improving things?*
    - *Is there existing data or do we need to engage in research?*
- *What are the barriers or challenges to implementing these, including affordability and applicability?*
- *How do we implement manure application while keeping in mind the surrounding community?*
    - *Are there best practices that not only manage nutrient issues, but also keep in mind communities directly impacted by AFOs?*

Clarifying Questions

A member asked how the definition of land application area relates to manure applied to land not under control of owner operator.

- Mr. Kloss replied that where the permitting program applies is only land under the control of the AFO operator, but that does not need to limit the discussion of the subcommittee which can refer to any applicable technologies used anywhere.

A member asked for clarification regarding using a certified hauler in an NMP and if this qualifies under the NPDES permit since they are able to do so in their state.

- Mr. Kloss clarified that there is a difference between how states can implement permit programs versus the federal NPDES regulations. For NPDES permits, once manure is taken off site, federal regulations do not apply, but a state can implement their permit program differently.

A member asked for clarification on whether the subcommittee should be looking only at new technologies or looking at existing technologies as well.

- Mr. Kloss clarified that members should look at existing technologies as well, especially because some of them are the best options for nutrient management and conservation. However, if there are any new technologies, we will want to consider those as well.

Subcommittee Discussion

Questions:

- *What information or background do you need for this area?*
- *What topics or interests do you have for this area? Why are you interested?*
- *What resources do you know exist that might inform conversations in this area?*

Members asked questions and offered comments on a range of topics, including the agricultural stormwater exemption, the ELG 15 Plan study, the NRCS 590 standard, phosphorus, and nitrogen indices, among others. Members also made comments as follows.

A member indicated that they want the subcommittee to consider the agricultural stormwater exemption.

- Mr. Kloss stated that the discussion should not only focus on what technologies are available, but also the scope of the permits.
- The member stated that the latest science of NMPs, as well as state permitting requirements and rationales, would be useful to consider, noting that the exemption has played an outsized role in certain states deciding which CAFOs need permits, and which do not.

A member asked if the subcommittee would receive information on the ELG 15 Plan study and how the work of the group will interplay with the study. They noted that a lot of the subcommittee's questions could be answered using that study.

- Mr. Kloss stated that the study and this subcommittee are complementary.

A member stated that information on how the regulation lays out requirements for land application rates, and how that relates to state standards as well as the NRCS 590 standard would be useful. The member stated that regulations lay out two methods for rates, and a lot of states do not know this, and instead adopt NRCS standard. The regulation is complicated and hard to understand, so this could be an area with a lot of room for improvement of language in the regulation.

- The member continued, stating that the confusing part of the regulation is narrative versus linear calculations, crop need, and risk assessment. This is different from phosphorus and adaptive management for nitrogen. The member stated that it would be helpful to compile all NRCS 590 standards for states as well as state regulations. They also recommended pulling research and publications from the SERA-17 Group for phosphorous indices.

A member reiterated that a lot of states employ different methodologies for rate calculation and following the 590 standard and stated that knowing actual rates used in different areas will be important in seeing how much it varies. They also noted that the subcommittee will need to look at both phosphorus and nitrogen indices, agreeing that SERA-17 is good to look at.

- The member continued, noting that land application and nutrients change depending on manure type and regionality, so utilizing a manure database from the university, would also be useful.

A member stated that there is an overarching issue of under-permitting and the fact that we know a lot of large CAFOs are discharging without CWA permits that they are required to obtain. They expressed concern that if we are looking at effective practices rather than actual permitting, the group will miss an opportunity to control pollution and protect water quality. They recommended having a work group dedicated solely to under-permitting.

- The member also noted that there is a USDA study (10 years old) that indicates large CAFOs do not have enough land to perform land application. Updated information on this topic would be useful as we consider what land application looks like

A member noted it may be worth looking into what manure haul certifications look like in different states and what states do on the CAFO side of things. They indicated this information would be useful for people to feel confident that farmers are taking science-based action and following their NMP.

A member stressed that farms need flexibility, especially considering weather changes, and while permitting is based on animal numbers, it is more helpful for farmers to have a max plan so that they have the flexibility to work within a designated capacity. There is an opportunity to look at your NMP and make adaptive changes as you go. It is also important to help farmers understand what a violation is and give them the appropriate information. This allows farmers to reconcile and meet regulations without violation.

Another member stated they liked the idea of an under-permitting work group.

- The member also noted that states are not adequately incorporating runoff from digestates from anaerobic digesters, which is an emerging issue, into NMPs and NRCS practice standards does indicate that nutrient density may be higher in digestate and pose unique risks when land applied. They believe this is an important issue to tackle in permits, so information on this would be helpful to have.

Terron Hillsman (USDA NRCS; AAWQ Subcommittee ex-officio member) asked the group what USDA could provide. He stated that the Conservation Effects Assessment Project (CEAP) report that is put out every few years to look at trends in conservation practices and effects based on monitoring data can be provided, and a work group can be briefed on this report.

- Mr. Hillsman also noted that he has heard the 590 standard questions have come up, and if the subcommittee wants to look at how states utilize it, they should also look at enforcement on the state level because NRCS does not enforce it.

A member stated that, while not specific to land application, but including land application, the NPDES permit is currently inflexible when it comes to new technology. Because there is no provision for using new technology while remaining compliant, producers are de-incentivized to use it.

A member noted that they are interested in the idea of available land for manure application and concentration of CAFOs and nutrient loading that is occurring in certain watersheds. They stated that knowing the numeric nutrient criteria and standards in different states would be useful and noted some states do not have this.

- The member continued, stating it would be helpful to think about the actual limits of nutrient loading in waterways and how manure contamination relates to that in our watersheds and where we are seeing CAFOs and lots of manure application.

A member noted that as members discuss land application, it seems like they are also talking about effective management strategies within the land application area. They asked why effective management strategies is proposed as a separate work group given the subcommittee has guidance to address emerging technologies and complimentary or additional technologies. The member also noted that there are differences and benefits of digestates versus manure that these will have different management strategies.

- Mr. Willis replied that in the subcommittee charge there is land application, production area, and a series of things that fell into a third area that has been called effective management strategies.

A member asked for clarification on if delegated states must have water quality standards (WQSs) as part of basic plans.

- Mr. Kloss replied that states do not have to have numeric nutrient criteria. They can have narrative water quality standards and different ways to implement them. It is up to state discretion as to how they implement them.

A member stated that information on feed additives and manure stabilizing technologies is an emerging area that is not cost effective yet but may be in the future. Information on those topics would be beneficial to have.

A member stated that it would be interesting to look at the Section 319 Nonpoint Source Program (NSP) at EPA as well.

- Mr. Kloss replied that the work group can have EPA representatives come in to talk about Section 319 grants and their use.
- Dr. Welch-White stated that as part of the Section 319 grant public comment period, FRRCC recommendations were made around some of those topic areas and these recommendations can be shared.

A member noted that looking at different EPA regions and regional approaches to oversight of states might be valuable. They also noted that in their experience there are regional differences.

A member noted that there would be value in defining terminology and providing background on mechanisms and chemistry involved. They stated that this information would be helpful to get everyone on the same page before work groups meet.

A member stated that any EPA case studies or success stories to reference would also be useful.

A member stated that background on the value of manure producers and nutrients, and what other environmental benefits this might offer, would help the subcommittee understand the producer's perspective.

A member stated that it would be helpful to have information on soil test phosphorous levels as it relates to the question of available cropland and effectiveness of practices.

- Dr. Welch-White added that different types of manure contain different types of nutrients and interfaces differently with the needs of soil.

Mr. Kloss noted the land application area and production area may have some overlap.

4. Production Area

Area Introduction

Chris Kloss (EPA OW) began by defining the production area as the part of an AFO that includes the animal confinement area, the manure storage area, the raw materials storage area, and the waste containment areas.

Mr. Kloss also reviewed the AAWQ Subcommittee charge with regard to production area stating the subcommittee will evaluate practices and technologies for manure storage, including treat and discharge systems, digesters, and nutrient treatment technologies.

Mr. Kloss posed several questions for the group to consider:

Can the subcommittee find a way to minimize the amount of manure relative to the land application area?

When it comes to digestate, what treatment opportunities exist to reduce nutrients?

What actions can be taken without inadvertently pushing the scale of operations one way or the other?

Can clean water benefits and natural gas incentives be combined?

Subcommittee Discussion

Questions:

What information or background do you need for this area?

What topics or interests do you have for this area? Why are you interested?

What resources do you know exist that might inform conversations in this area?

A member noted that regarding available nutrients from digestate, if producers test before they apply, that nutrient information is available in NMPs.

A member requested information on what limitations exist in this area, such as adjusted gross income limits for NRCS funding permit limitations, noting that there are many producers who cannot upgrade their technologies due to permit limitations.

- Another member noted that building on this idea, it would be helpful to look at the multiple layers of regulation that goes on from local jurisdictions and county permits that restrict options for producers to change their operation.

A member stated they would like to see an emphasis on lagoon liners, and the amount of leaching from waste storage impoundments, to develop a clear understanding of what these do to groundwater. They noted that having information on state laws and regulations in these areas would be useful. They indicated this would help gauge the impact of CAFOs on water quality. The member also stated there is not enough science about where CAFOs are located and their proximity to jurisdictional waterways.

- Another member stated that in addition to liners, the work group needs data on lagoon capacity issues, sludge management, and nutrient concentration. They noted that many lagoons were built a long time ago and are not functioning adequately. As such, well-monitoring data on nitrate contamination, even in areas where groundwater is far from CAFOs would also be helpful.
- Another member stated it would be helpful to have a conversation about how lagoons work, including the use of clay liners, lifespan of lagoons, effectiveness, and impact of plastic liners.

A member stated that it would be helpful to hear about environmentally superior technologies like TerraBlue Environmental in North Carolina.

- Another member agreed this would be helpful to hear about their process considering they went through a lot of economic and scientific evaluations.

A member noted that information about existing technology to create pelletized fertilizers and reuse water would be relevant. They stated they know this technology is used at a large-scale operation in Indiana.

A member noted that a conversation around vulnerable landscapes, such as karst landscapes, and what the protections are in different states would be of interest.

- The member also noted that in their state they have experienced issues with an “LLC” loophole with facilities citing just under the 1,000-animal threshold but using the same infrastructure as large CAFOs. It would be helpful to understand how prevalent this is for evading permitting and learn what states are doing to prevent this type of issue.

A member requested information on the different manure created by different species emphasizing that they cannot be treated as all the same with a one-size-fits-all approach.

A member noted that the idea of treatment would make a lot of farmers nervous because they would presume it implies limits and water quality monitoring. Moreover, farmers want to use those nutrients and water in a lot of places.

A member noted that North Carolina Gas developed different forms of technology that would be worth exploring in the work group. They also emphasized that due to climate change, storms are increasing in severity and frequency, which impacts these lagoons more than they have in the past.

- Another member agreed, stating they think the 25-year, 24-hour storm requirement needs to be revisited, especially with climate change creating more major storms.

- Another member noted that the 25-year 24-hour storm requirement is a construction standard, and potentially outdated given the storm events happening now. The member suggested the work group could consider other storm events like multi-day events and provide exception for those.

Another member stated that storage and impoundment types vary across country by species and geography. Information on this variance would be useful to make sure members are using the correct verbiage. They also noted that USDA studies and standards in this area would be helpful.

A member noted that sludge is not used as an agricultural term. They also stated that regionality (including weather, growing season length, and rainfall) must be considered when looking at the impacts of runoff and waste management. It would be helpful for the work group to consider discharge requirements when water does not need to be collected as it is sometimes cleaner than stormwater.

Teron Hillsman (USDA NRCS; AAWQ Subcommittee ex-officio member) noted there are many resources available from USDA and NRCS on these topics. He also noted that a history lesson on these regulations and practices may help members understand the context of current actions.

- Another member agreed and stated that a lot of science went into the standards that exist today including storage systems and production practices. Previously, that science was performed by experts whereas now research seems to be up to industry to look into these practices.

A member noted that small family farms struggle and for many it is difficult for them to implement changes or upgrades to technologies without any funds available.

Venus Welch-White (DFO) shared that there are a lot of types of digesters with different implications. While they recognize they are not a nutrient management solution, they do have storage components. She would like the subcommittee to think through the wide variety of what these look like and to consider other implications of these technologies.

A member requested a glossary of terms so that everyone is using the same definitions across work groups and the subcommittee.

Rob Willis (Ross Strategic) asked if there were any requests around community impact.

A member noted that Mark Borchardt (USDA Agricultural Research Service) has done some great research about lagoons in vulnerable landscapes like karst and impacted communities and feels their research would be useful.

A member noted that any time there is a new industry, the community is impacted and unhappy. They hope the subcommittee will keep this in mind, especially with new technology areas.

A member stated that there is an enormous amount of scientific literature describing harm to communities from water pollution from CAFOs. They would also be interested in hearing from people impacted by unpermitted CAFO pollution. The member stated it would also be useful to know CAFOs impact on drinking water and expenses associated with treatment.

Mr. Hillsman (USDA NRCS; AAWQ Subcommittee ex-officio member) offered that it would be helpful to look into the planning process for National Environmental Policy (NEPA) assessments.

A member noted that CAFOs also invest in local communities and can have a positive impact. Information on the positive impacts of CAFOs on communities and water quality would be helpful.

A member noted that farmers, in a way, are also included in the affected community, noting that many farmers fear retaliation for being perceived as creating a negative impact. They are dealing with a harsh reality and are under a lot of pressure.

A member stated that contamination for private well users, which are not regulated, would also be an area of research to cover. They noted that people in rural areas are more directly impacted by this contamination.

A member stated that, circling back to the idea of concentration, it would be useful to look at environmental justice (EJ) communities. They said it would be helpful to hear from people directly impacted by digesters, including horrific air quality issues as well as people who cannot drink their water due to CAFO groundwater contamination.

A member stated that looking at reasonable examples of different species and their production would help the group have a shared understanding.

- Dr. Welch-White agreed that this is an area to focus on while keeping in mind geographical differences. Moisture content is critical to consider as well.

A member noted, recognizing land application and production area technology, the charge mentions economic impact. Data around the economic impact of these areas would be useful.

A member noted that they live in an impacted community with nearly 48 farms producing waste within a three-mile radius. The concern for their community is not just water quality, it is also air quality, including methane pollution. Just looking at the number of CAFOs and the growth of the industry causes concern. The member emphasized that hearing from these impacted communities is extremely important.

Mr. Kloss noted that climate change was a great point to bring up, not only in this production area discussion, but in all NPDES permitting. He noted that EPA is coalescing around an approach that takes best available data rather than using historical, less inaccurate data.

Dr. Welch-White emphasized Mr. Kloss's point about taking the climate change perspective and looking at impacts across all program areas. She noted that the FRRCC charge is the intersection of climate change and agriculture.

5. Effective Management Strategies

Area Introduction

Chris Kloss (EPA OW) began by defining effective management strategies as actions that can be taken to limit pollution more effectively from CAFOs. He stated that he hopes the subcommittee will capture the programmatic, implementation, and compliance side of things rather than just technology. Mr. Kloss clarified that he is not asking the subcommittee to take legalistic views as EPA's purview and guidelines are clear.

Mr. Kloss posed several questions for the group to consider:

How can monitoring be leveraged or improved?

Are there areas where the regulations can be improved to have better permitting?

- *Consider especially facilities that are co-located but not operated by the same entity and size thresholds.*

Are there ways to use regulations to incentivize adoption of new techniques and approaches to reduce non-compliance?

- *Can a more rapid uptake of effective practices be incentivized?*

Are there areas where the management impacts the surrounding community more than in others?

A member asked Mr. Kloss for clarity on the purview of the program, asking if the subcommittee is only supposed to be talking about the permitting program or if there are other areas.

- Mr. Kloss stated he does not want to limit the discussion. He noted that NPDES does not have authority over groundwater pollution and if there is something that needs to be tagged or addressed, it can be taken to the state level.
- Mr. Kloss reiterated that NPDES is bound by authority over WOTUS and has limited authority if discharge actually makes its way into a WOTUS.
- Venus Welch-White (DFO) noted that there are quite a few regulations that have implications for this area.

Subcommittee Discussion

Questions:

- *What information or background do you need for this area?*
- *What topics or interests do you have for this area? Why are you interested?*
- *What resources do you know exist that might inform conversations in this area?*

A member identified watersheds with a dense concentration of CAFOs and the cumulative impacts of these locally and downstream in terminal water bodies as an area for exploration. They also stated that how this relates to limits and Total Maximum Daily Loads (TMDLs) would be useful information. They noted that there is a problem with how states implement TMDLs and impair water body permits to CAFOs.

- Another member requested clarity on how TMDLs are not being implemented properly with regard to CAFOs. They also asked if these were permitted or non-permitted CAFOs.
    - The member replied that in areas with dense concentration of liquid waste CAFOs, they are incorrectly treated as nonpoint sources in the TMDL, and therefore only subjected to a voluntary standard. The CAFOs are a combination of permitted and non-permitted.
- Mr. Kloss stated that this is a nuance of whether CAFOs have point-source classification or not by permitting authorities.
    - The member agreed and stated they think it would be a good problem for the work group to try to solve at the permitting stage.
- Another member noted that if there is an impaired watershed, a lot can depend on how the TMDL is being calculated. How load allocation is calculated depends on whether it is considered a permitted facility, and whether the runoff is agriculture storm water runoff. The member noted that information on how TMDLs are being calculated with regard to this will be helpful.

A member noted that information on state best management practices and watershed health programs could be considered as options for addressing these issues.

A member noted that some of the most effective incentives may be outside the scope of the NPDES program. They noted that in Idaho, there is an effective incentive program for new technologies. Having incentives outside a regulatory structure will get more buy-in from producers.

A member noted that monitoring is challenging and costly, so setting standards for monitoring can be impractical. They noted that the use of models is a good alternative, but that models are only as good as what they are built from. They also brought up that geographic location influences monitoring, noting that in Vermont, load reduction for farms is higher than what the farm is producing. This points to legacy phosphorus. In their TMDL, internal loading is built into account for this. They emphasized that this needs to be communicated to the agricultural community and that there is a lot of nonpoint source contamination in stormwater.

- Another member clarified that in the context of the NPDES program, monitoring is required, and states need some guidance on this requirement because it has not been adequately showing up in permits.
- Another member noted that understanding the NPDES requirements for monitoring would be beneficial.

A member noted that information on NMPs and how they are being enforced, monitoring wise, would be useful. They stated that information on nutrient uptake and waste disposal, especially if that difference is too disparate, would be helpful to know. They also stated that dissolved phosphorus is a big contributor to phosphorus loading and a greater understanding of this would be helpful for the work group.

Terron Hillsman (USDA NRCS; AAWQ Subcommittee ex-officio member) stated that NRCS provides monitoring assistance via Conservation Evaluation Monitoring Activities (CEMA). Mr. Hillsman noted that regarding incentives, NRCS struggles. They do not have a lot of data on what drives producers and what the pivoting point is in their decision making. He clarified that incentives have not always been normative at NRCS, and the benefits need to be made visible and apparent to the producer.

A member noted that in their state, NRCS money is available, but rarely gets utilized by CAFOs. They noted that money dedicated to these types of operations would create more opportunities to implement changes.

- Another member agreed, saying that NRCS treats animal agriculture as disparate from other agriculture. They noted that NRCS is often letting perfection get in the way of progress, and if water quality improvement is the goal, accessing these resources must be easier.

A member stated that manure is essential to climate smart and regenerative agriculture and that some incentives already exist around it. They clarified that farmers are inherently not incentivized to apply too much manure to crops so that it kills them. Putting the inherent incentives and climate smart incentives into the discussion is important.

A member noted that leveraging public-private partnerships to create incentives would be worth exploring, especially partnerships that have worked well over time.

A member agreed that there are many NRCS incentives to implement conservation practices, but their understanding is that this subcommittee is talking about EPA and NPDES. They asked Mr. Kloss to clarify

that this is a conversation about incentives for the NPDES program and CWA, stating they are concerned that EPA is going to be looking at redundant incentives. They acknowledge that incentives are important, but not a solution, noting that as an example, incentives are not useful in Iowa when it comes to CAFOs.

- Mr. Kloss replied stating the question is how the existing regulatory framework be structured or restructured to incentivize the adoption of new technologies.
- Dr. Welch-White added that their intention is for the subcommittee to look not only at incentives to implement these technologies, but also access to funds to implement them.
- Another member stated they agreed that incentives, via the permit, to allow for new technologies without being penalized would be beneficial. They noted that certainty is also a big incentive for farmers and the prospect of constant change scares farmers.

A member noted that while regulation is needed, increased regulation means increased cost and cost forces growth. NRCS has a lot of funding, but not all states have an incentivizing cost share structure. They noted that data on cost-sharing structures would be useful.

- A member agreed that CAFOs can get squeezed and not have enough money for the cost share or to afford to be responsible stewards. On the other hand, company owned CAFOs with a lot of funds may feel like they do not have to do much.

A member stated it would be helpful to have CAFO information, permit information, monitoring, and implementation information.

A member stated that agricultural stormwater issues would fit within the regulation improvement aspect of this work group. They noted that EPA performed an analysis on CAFOs in 2008, but updates on what CAFOs are discharging would be helpful to have.

A member asked about staffing limitations.

VII. Public Comments

Christina Gruenhagen, Iowa Farm Bureau Federation

Ms. Gruenhagen lives in Iowa, where she noted livestock is an important value add for rural areas and environmental justice communities. Iowa is a CWA delegated state, that also has a comprehensive state regulatory program of its own. All livestock are subject to regulation that corresponds to the size of the farm. In 2007, a petition was filed asking EPA to take back the CAFO program. After 12 years of intense scrutiny of the program and approximately 13,000 farms, EPA dismissed the petition in 2019, finding it did not warrant withdrawing the program from Iowa. Ms. Gruenhagen then introduced the Coalition to Support Iowa's Farmers, which provides free services to livestock producers to understand regulatory requirements and reduce environmental risk. This coalition has existed for 20 years, complementing both state and federal regulations.

Mary-Thomas Hart, National Cattlemen's Beef Association

Ms. Hart observed that U.S. beef cattle are unique because of the hybrid production method, which has environmental benefits. Feed yards play a critical role in that. Globally, Ms. Hart stated the U.S. has become a blueprint for the world for how to build a sustainable production supply chain that provides a

sustainable, affordable, and efficiently produced product. Ms. Hart asked that the subcommittee keeps producers centered in the conversation, because of how important producer buy-in is to make these goals become a reality. Then, she requested that any ad hoc working groups remain publicly open so that producers and other important stakeholders can access both the process and the final product. Transparency is important. Ms. Hart's final comment touched on the conversation about state-federal interplay, and how cooperative federalism is an important principle to keep in mind.

Lauren Lurkins

Ms. Lurkins is from Illinois, with 20 years of experience in environmental law and policy. 10 of those years focused on agriculture, helping farmers figure out what the laws are and how to comply with them. She shared three reflections from today. The first was mirroring Ms. Hart's last comment about cooperative federalism. Ms. Lurkins noted how valuable it is to have a diverse group working all together sharing different lived perspectives, and that doing this will get us where we need to go. The second reflection was about data – Ms. Lurkins felt that this committee was struggling with old data (i.e. the NRCS information is about 6 years old). She noted that innovation happening every day impacts the permits, the laws, and the daily lives of ranchers and farmers. Ms. Lurkins shared her third reflection, which was thinking about this whole issue and the regulatory structure from the perspective of an individual farm/ranch family. When it comes to EPA federal rules, the role of state agencies, extension education, outreach, engineering, and legal support is very important to get people to comply. Ms. Lurkins underscored that the committee continue to put themselves in the shoes of individual farmers and ranchers and consider the next generation.

Christopher Heaney, Associate Professor at Johns Hopkins Bloomberg School of Public Health and Environmental Health and Engineering, Epidemiology, and International Health

Dr. Heaney started by noting it would be important to recognize the perspective from public health and environmental health. The subcommittee should consider literature and scientific contributions that are made from partnerships between academics, residents, community members, workers, etc. Mr. Heaney stated that this perspective is important because sometimes community members or facility workers have concerns but aren't always comfortable speaking out. These are sources of economic development and jobs. These perspectives help provide evidence about the mode of production and kind of contaminants and represent concerns about emissions, air quality, and drinking water. Mr. Heaney cited the example of North Carolina, where the regulatory permitting framework is that they are permitted as non-discharge facilities, that they have detected contamination and pathogens offsite from facilities in surface waters. He encouraged the subcommittee to think about the concerns of residents and workers at these facilities, from a public health perspective.

Matt Rayl

Mr. Rayl owns a public horse facility in southern California and has been a scientific-thought leader for his community of stable owners. He has followed stormwater issues for the last 30 years and has struggled with AFOs/CAFOs as it relates to horses. Mr. Rayl thinks the difference in animal unit rating between horses and cows does not reflect the environmental impact of this condition. He cited: horse manure has less nutrients than cow manure; horses produce less manure; horses are not feedlots; horse stables are cleaned daily; and stables do not have the same density. Mr. Rayl's hope is that the subcommittee will review the science and properly designate what a small, medium, and large CAFO is as it relates to horses.

Ben Weinheimer, President, and CEO of Texas Cattle Feeders Association

Mr. Weinheimer has worked as a CAFO subject matter expert his entire career. He had three points to share with the subcommittee. First, the national technology based ELG for CAFOs has served stakeholders well for 50 years. He stated they concur with and support EPA's decision that a presumption of discharge for all facilities is not warranted. Many CAFOs have chosen to obtain permit coverage, either from EPA or a state regulatory agency. A one-size fits all approach is not appropriate. CAFO operators need the latitude to implement site-specific technology that fits their geography, climate, and manure management system. Allowing for site-specific implementation helps to meet requirements, both technically and economically. Second, consideration must be given to federal and state permits. EPA regional offices have an important role in compliance and oversight, while states do the enforcement. Third, Mr. Weinheimer requested that during the review of the ELG, that the EPA and AAWQ Subcommittee maintain a focus on surface water quality issues that are bound by the CWA authority. He also requested that the committee and work groups be transparent throughout the process, especially regarding discussions about technical requirements for production areas, land application practices, and record keeping as part of nutrient management plans. Mr. Weinheimer finished by inviting EPA staff and contractors to visit cattle and feeding operations to ensure that the most appropriate, science-based, and economically feasible technical recommendations are brought forward.

VIII. Wrap Up, Closing Remarks, and Meeting Adjournment

James Pritchett (Chair) mentioned one of the contracts we have within the subcommittee is valuing everyone's time. The subcommittee wants to work intentionally recognizing the value of everyone's time. Dr. Pritchett thanked the attendees.

Venus Welch-White (DFO) also thanked members for attending, noting that almost all members were here in person.

Submit written comment to Aawq@epa.gov by June 15, 2024, 11:59 pm EST.

For all press inquiries, please contact press@epa.gov.

For more information https://www.epa.gov/faca/frrcc-0.

Dr. Welch-White adjourned the meeting.

Respectfully submitted by Venus Welch-White, EPA Designated Federal Officer

Certified as accurate by James Pritchett, Chair of Animal Agriculture and Water Quality (AAQW) Subcommittee of FRRCC and reviewed by Beth C. Sauerhaft, Chair, Farm, Ranch, and Rural Communities Federal Advisory Committee (FRRCC)