

MINUTES
CITIZENS ADVISORY COUNCIL MEETING
May 17, 2016

CITIZENS ADVISORY COUNCIL (CAC) MEMBERS PRESENT:

Cynthia Carrow, Allegheny County
Mark Caskey, Washington County
Terry Dayton, Greene County
William Fink, Bedford County
Jim Sandoe, Lancaster County
Thaddeus Stevens, Tioga County
Burt Waite, Crawford County
John Walliser, Allegheny County
Donald Welsh, Chester County
Jim Welty, Cumberland County
Timothy Weston, Cumberland County

CITIZENS ADVISORY COUNCIL STAFF PRESENT:

Katherine Hetherington Cunfer, Acting Executive Director

CALL TO ORDER:

Chairman Fink called the meeting to order at 10:00 a.m. in Room 105 of the Rachel Carson State Office Building, 400 Market Street, Harrisburg, PA, with a quorum. The meeting was also broadcast via WebEx for the public.

APPROVAL OF APRIL 19, 2016 MEETING MINUTES:

Chairman Fink asked for a motion to approve the April 19, 2016 Council meeting Minutes.

Thad Stevens moved to approve the April 19, 2016 meeting Minutes.
Jim Sandoe seconded the motion, which was unanimously approved
by Council.

PUBLIC COMMENT

Wendy Taylor, with the Sierra Club, came to speak about the need for comprehensive rules for the oil and gas industry in Pennsylvania, specifically around methane pollution from the oil and gas operations. The oil and gas industry is now the largest industrial emitter of methane pollution in the United States. Methane, or CH₄, the primary component of natural gas, is a potent greenhouse gas, 86 times more so than carbon dioxide in the first 20 years after its release into the atmosphere. Methane leads to the formation of smog, which exacerbates asthma in children and contributes to lung and heart disease in the elderly. This is a common health problem, and people in communities are suffering. Spewing methane into the air is also a waste of natural resources. When drilling occurs, communities should be compensated for the loss of the resource. Drilling should not be allowed to send revenues that could help make communities whole into thin air. The technology exists today to capture up to 40% of the methane emissions, or a penny per thousand cubic feet of gas produced. Natural gas producers should not be allowed to waste resources when there is a ready solution at hand. Methane is a strong climate-forcing

agent and is warming the atmosphere at an alarming and unsustainable rate. Man-made global warming is responsible for a host of problems, including evermore extreme weather events and the radical altering of how farming is conducted in Pennsylvania due to the extremes of heat, cold, flooding, and invasive pests. Methane pollution is the major contributor to climate problems that we may not be able to solve if we do not act quickly. Governor Tom Wolf earlier this year proposed a four-point plan to tackle methane pollution from new and existing sources in the oil and gas sector. The Department of Environmental Protection (DEP) has stated that it will follow suit with the best in the nation standards. This effort deserves the full support of the CAC. Pennsylvania should move with all deliberate speed to enact strong methane rules that will protect our citizens and our communities.

CAC COMMITTEE REPORTS:

LEGISLATIVE UPDATE

Katie Hetherington Cunfer announced that the Senate Democratic Policy Committee will be holding a roundtable discussion on public health exposures for lead. The roundtable will be held at the Children's Hospital of Pennsylvania, and it can be viewed on line.

The next regulation of key interest to be discussed by Independent Regulatory Review Commission (IRRC) is the Alternative Energy Portfolio Standards (AEPS). Additions and changes have been made to the regulation, and DEP has been very involved in that process.

John Walliser stated that the Democratic Senate Policy Committee, chaired by Senator Boscola, recently held a hearing in Erie on natural gas drilling and potential impacts to the Great Lakes Watershed. In attendance were Senator Boscola, Senator Brewster, Senator Costa, and Senator Wiley. Senator Wiley was the host of the meeting. A number of presentations were given from the environmental side. At the end, Senator Wiley announced his intention to introduce legislation that would place a moratorium on gas drilling in the Lake Erie Watershed.

Jim Welty added that at the same time the Senate Democratic Policy Committee was holding its hearing, the House Republican Policy Committee was also holding a hearing on natural gas. The discussion was about benefits that could be derived from the growth of the industry, particularly within the southwest and southeast regions. Testifying were Gene Barr of the Pennsylvania Chamber, Dave Steigelmeyer of the MSC, Dustin Coleman, an engineer who does the permitting, and a gentlemen by the name of Greg Floerke, Senior Vice President at MarkWest. The discussions involved the midstream component and the need to do buildout. DEP's challenges with regard to permitting were also discussed. A lot of attention is being given right now to the permitting process because of the delay that is seen in certain regions.

AGGREGATE ADVISORY BOARD

Burt Waite announced that the Aggregate Advisory Board met on May 4. The mining bureau within DEP is going through a generational change, expecting to lose as much as 40% of existing staff within 1-2 years. The bureau is struggling to meet Permit Decision Guarantee guidelines.

DEP REPORT

Secretary Quigley indicated that the theme of his report would be public health and safety. DEP recently announced that it was launching an expansion of the state's fine particulate matter ambient air quality monitoring network to ensure human health is protected in rural Pennsylvania. By the fall of 2017, the network will be expanded to add continuous samplers in 10 northern tier and southwest Pennsylvania counties. The expansion will provide for better assessment of the air quality in regions impacted by natural gas activities. Folks in those regions have air quality concerns, and the only way to determine what is or what is not a problem is to gather data. DEP will be using \$1.5 million in federal funds over the next two years to expand its monitoring network in 8-10 additional counties. All of the data collected will be available to the general public on the Environmental Protection Agency's (EPA) "AIRNOW" system and on DEP's website.

Staying on the issue of air quality, DEP recently announced that airborne manganese concentrations in Glasgow Borough, Beaver County, exceed the federal guidelines. The Department has partnered with the EPA and the Ohio EPA in the investigation of manganese emissions from the S.H. Bell East Liverpool Terminal along the Ohio River. The border between Pennsylvania and Ohio cuts right through the facility. That facility is being investigated, as well as other potential sources in the area. DEP will work closely with the Department of Health and residents in the Glasgow area to identify opportunities to reduce ambient air concentrations of manganese.

On April 25, DEP cited the Pittsburgh Water and Sewer Authority (PWSA) for substantially modifying its drinking water treatment without pre-approval. The modification occurred in April of 2014. The Authority replaced soda ash, the permitted method of corrosion control, with caustic soda. Preliminary data shows no threat to the public occurred as a result of this change. However, a unilateral decision to alter treatment without consultation with the Department is a violation of safe drinking water regulations. PWSA's public water supply permit requires the use of soda ash because of its ability to prevent corrosion in water pipes and because it helps prevent leaching of lead and copper into the water. Although caustic soda is approved for use by some water systems, it will only be approved by DEP after proof of its effectiveness in each system. The decision to change those controls was done by previous management of the PWSA. The new management has been extremely cooperative with DEP. Customers concerned about their tap water can contact PWSA for a free test kit and instructions. The Administrative Order that was issued requires the PWSA to provide substantial public notification of changes to all customers about its prior change in corrosion control chemicals and the measures it is undertaking to evaluate the impacts, complete two rounds of lead and copper tap monitoring from 100 Tier 1 sites in the distribution area this year, and provide sampling data collected since June 1, 2013. PWSA is required to develop a plan to investigate lead levels within its system, the effect of changes to treatment methods for corrosion control, and recommendations for appropriate changes to assure the best possible corrosion control measures for the system. Additionally, PWSA must outline subsequent customer notices, details of water sampling and analysis, and updates on investigation of treatment change impacts.

Governor Wolf announced a plan to confront the potential of the Zika virus in Pennsylvania. The Pennsylvania Zika Virus Response Plan is a coordinated effort between DEP and the

Department of Health (DOH) and aims to enhance the DOH's surveillance for Zika cases in Pennsylvanians, develop a plan that will allow DOH to test for the virus without using CDC laboratories, enhance DEP vector surveillance of the mosquito species carrying the virus, and ensure collaboration between agencies and partners to educate pregnant woman and the general public about the virus. The Governor has been extremely focused on getting a plan that positions the state to respond if and when it determines the presence of disease-carrying mosquitos or if there are cases of local transmission within the Commonwealth (and there are none at this point), then we would move into control measures. That is a house-to-house type of operation. It would be extremely labor intensive. Five categories of response have been identified. It is a very robust plan. The state has requested funds from the Centers for Disease Control and Prevention (CDC) to help DEP deploy these additional surveillance measures, and the Department is waiting to hear from the CDC. The state has a very solid plan that we believe will be appropriate and will be protective of the public health in Pennsylvania.

On the morning of April 29, a natural gas pipeline ruptured and caused a large fire in Salem Township, Westmoreland County. The Department is working with the federal Pipeline and Hazardous Materials Safety Administration (PHMSA). The Secretary had a call with Administrator Dominguez, who personally visited the site the weekend after the explosion. The Department will be in continued coordination with PHMSA. Administrator Dominguez has assured DEP that it will be clued in at every step of the way.

There was a seismic event in Lawrence County on April 25 that was associated with fracking of a well by Hilcorp. There were actually a number of events building up to an event of about 2.0 magnitude. The well is a Utica well along the same fault line that has produced earthquakes in Utica wells in Ohio. A definitive conclusion has not yet been reached. The seismic data is still being analyzed. Hilcorp immediately stopped the frack job and has been very cooperative. Clearly, any seismic activity is something of a danger and should be taken with extreme seriousness.

PRESENTATION BY MARTINA McGARVEY, DIRECTOR, BUREAU OF LABORATORIES

Martina McGarvey spoke about the 2016 Association of Public Health Lab's (APHL) peer review of DEP's laboratory. The mission of the laboratory is to provide quality data in a timely manner, primarily to DEP programs such as Safe Drinking Water, Clean Streams, Air Quality, Waste Management, Hazard Site Cleanup, Oil and Gas, Mining Reclamation, and Radiation Protection. Additionally, the laboratory provides testing services to agencies such as the US Geological Survey (USGS) and the Susquehanna River Basin. The laboratory works with the Fish & Boat Commission, the DOH, and the Department of Agriculture.

In 2001, as a result of budget deficits and staffing reductions, DEP asked the APHL to do a peer review to assess the lab's strengths and weaknesses and determine how the staffing reduction may have impacted the laboratory at that time. The APHL is an organization that is 50 years old. It is made up primarily of public health laboratories, but also includes environmental and agricultural laboratories. The APHL has approximately 50 public health, county, and local laboratories in their organization. The organization's strength is in their membership, the experience of laboratories with quality reporting data, protecting public health, and also

laboratory operations. The APHL has cooperative agreements and works directly with the CDC and the EPA. The team that came in to evaluate DEP's lab in 2011 and again in 2016 were made up of two staff members from the APHL, Dr. Megan Latshaw, who was the Director of the Environmental Health Division, and Pandora Ray, who was Director of Leadership and Laboratory Improvement. On the team each time was Dr. Michael Wichman, who is the State Environmental Director for the Iowa State Hygienic Laboratory. The primary objectives of the peer review was to identify organizational strengths and weakness affected by budget deficits and staffing reduction and also to identify the core laboratory functions and policies to ensure that the laboratory was continuing to protect public health, protect the environment, and ensure fiscal responsibility to the Commonwealth, the Department, and to the clients served by the laboratory.

In 2011, Martina was confident that the laboratory would get a good report. As it turned out, compared to other state laboratories, the lab was given an exceptional rating in staff, instrumentation, automation, and with regard to some of the unique tests that the lab provides to the Department, such as the radio chemistry section, a full-year study for the Technologically Enhanced Naturally Occurring Radioactive Materials (TENORM), special microbiological testing for cryptosporidium pathogens, and the fish eating advisories for the Fish & Boat Commission. Additionally, DEP's lab is one of only two laboratories in Pennsylvania that has the ability to do gross alpha and beta testing for drinking water. The lab was also rated exceptional in the quality of work and accreditation. Commonwealth Media Services produced a YouTube video to highlight the laboratory to the Department, to the citizens, and to national organizations such as the EPA and the CDC. The six-minute video was shown.

Martina stated that this was the Laboratory's status in 2011-2013 when it had 76 full-time employees. In 2016, the APHL took another look to see how the lab may have improved on the suggestions and recommendations provided by it in 2011 and also to determine if there were any impacts from the reduced staffing. Successes since 2011 include continued development of the Continuing of Operations Plans, receipt of a very competitive EPA grant to help with electronic data transfers to the EPA's national database, an upgrade of the laboratory information system that provides the data reports to the programs for areas of technology that were lacking or where there was not staff to do the testing. The lab was partnering with universities to help out in those areas. Even with reduced staff, the laboratory was able to implement some new technologies, qualitative polymerase chain reaction (QPCR) or DNA testing to identify species of fecal coliform. The lab was also able to do some research and method implementation for some of the fracking compounds used by oil and gas industries to help eliminate odors in their compoundments. In spite of this, the 2016 peer review has shown, as a result of staffing reductions, that the laboratory has slipped from exceptional to adequate. The lab still has good data quality. It has maintained accreditation so far in the main laboratory. There are four mobile laboratories that have the capability to go out and do testing. Unfortunately, due to staffing, most of the mobile lab staff positions are vacant or the staff works in the main lab to meet the workload. Three accreditations in the mobile labs were dropped; the open path FTIR instrumentation is still maintained. That instrumentation is used on-site for odor complaints and also out on oil and gas operations to test for methane gas and other volatile organic compounds.

The peer review did show that senior leadership is transparent with the staff about decisions that are made. The leadership is certainly aware of concerns and stresses from having reduced staff. Upper level managers, no matter what degree or title they hold, put on lab coats and get in the lab when they're needed, whether it is to do testing or washing of glassware. This was observed during the APHL review.

The critical recommendation from the APHL peer view is to find ways to return the number of staff to 76 full-time employees, from the current number of 56. Another recommendation is to look at salaries and benefits that are not equitable between the managers and the rank and file employees. The APHL suggested the lab pursue the designation as a Commonwealth critical asset so it cannot be shut down during a budget impasse. With the recent budget impasse, the landlord was not paid rent for six months. The lease was written such that the landlord could come in and lock the doors, but the Department was finally able to find ways to pay the rent. The landlord pays the utilities through the monthly lease payments. Shut-off notices were received for our gas, water, and electric. The gas was actually shut off to the lab for about 15 minutes until someone finally made a phone call and it was turned back on. The APHL recommended that the Bureau of Laboratories develop a three-year strategic plan and continue customer service to the programs to meet their needs for emerging technologies and contaminants. Other recommendations are to keep track of projects not able to be accomplished because of staffing constraints, to be more consistent with exit interviews when staff leaves, resigns, or retires, and expand the Continuity of Operations Plan even further in case there is a situation where the lab would lose use of its existing building. The APHL recommended a LEAN management assessment, although they recognize that the lab does not have the resources to perform the assessment itself, recommended the use of barcoding electronics to get information more efficiently into the laboratory information system, and recommended outreach to our critical partners and clients to make sure the lab continues to understand needs and concerns. The APHL recommended that a long-term plan be developed for staffing so the laboratory can address emerging contaminants such as hormones and endocrine disruptors in our streams and also cyanotoxins. The lab does not have the capability to confirm those right now.

DEP's Bureau of Laboratories continues to be well managed, efficient, and highly functional. The lab is able to function with reduced staffing because staff has been willing to cross-train and work outside of their own divisions. The management system continues to assure a high degree of quality and efficiency. The laboratory is driven by a culture of customer service to meet DEP's environmental needs.

As Secretary Quigley mentioned, since the APHL review in February, the lab no longer has redundant staffing. The lab no longer has two or three people trained to do an analysis, and the laboratory is in jeopardy of losing accreditation. The critical concerns with reduced staffing that are reflected in this period for the Bureau of Laboratories also reflects out into the whole Department. All positions are important now. All are critical with the current staffing levels. The laboratory employees say it best. They say day in and day out the work is exhausting, that it is like running a marathon at a sprinter's pace. The employees and the laboratory are at the breaking point. The message today is that the lab hopes to get funding back and fill more positions so it can continue its accreditation and serve the Department and the business of the Commonwealth.

UPCOMING MEETINGS

June:

Triennial Review of Water Quality Standards
Integrated Stream Report
UGS Susquehanna River Water Quality Study

July 19:

Lancaster Green Infrastructure Tour (MS4 and Chesapeake Bay program)

COMMITTEE REPORTS:

MRAB

Katie Hetherington Cunfer reported that the discussion surrounded fees, trying to determine what are going to be acceptable fee increases. The Department is pushing to maximize the fees from the industry to try to cover the difference between the state match and the federal grant. Additional committee meetings will be held with the regulatory, legislative, and technical committees to go over the numbers that the Department is looking to get over the next 6-9 years. There is considerable pushback.

PRESENTATION BY DAVID ALTHOFF, ENVIRONMENTAL GROUP MANAGER, AND JOSUAH DZIUBEK, ENERGY PROGRAM SPECIALIST, POLLUTION PREVENTION AND ENERGY ASSISTANCE OFFICE

Dave Althoff stated that the Alternative Fuel Incentive Grant (AFIG) program is not a new program. It was originally created in 1992. It was first implemented through a regulation package and was under the ownership of the old Pennsylvania Energy Office when that office was a stand-alone office. It was part of the Governor's Office. About 1994, the Energy Office was placed under DEP. It has undergone a number of name changes. It was known as the Office of Energy & Technology Employment and is now the Office of Pollution Prevention and Energy Assistance. The program is still doing many of the same functions as the old Pennsylvania Energy Office, one of which is handling the Alternative Fuels Incentive Grant program.

The primary goals of the AFIG are to improve Pennsylvania's air quality and reduce consumption of imported oil through the use of domestic alternative fuels. It is a nice fit for the Pollution Prevention and Energy Assistance Office at DEP because nearly everything the program does relative to the alternative fuels incentive program goes back to the reduction of air emissions from the transportation sector.

The program is currently managing 43 active projects, about \$7.3 million in projects. A lot of those projects are vehicle purchase and retrofit projects. In 2013 and 2014, the AFIG program was mainly utilized to provide support for natural gas fueled vehicles, propane fueled vehicles, electric vehicles, and infrastructure tied to those. A number of vehicle purchase and retrofit projects are underway whereby people are purchasing new alternative fuel vehicles or retrofitting alternative fuel vehicles to utilize some of the infrastructure that is being built in the state. There are currently seven innovative technology projects ongoing: two electric vehicle infrastructure charging projects, a hydrogen fueling station up in Northeast, PA, a liquid natural gas (LNG)

locomotive project with GE in Erie, and several piloted/micro liquefied natural gas projects up in the northern part of the state.

Since 2013, the AFIG program has provided grant funds to 66 awardees to support the purchase or conversion of light and medium duty natural gas vehicles. Grantees have been reimbursed for 314 vehicles totaling just over \$1.75 million in program funds. Those 314 vehicles are displacing annually over 750,000 gasoline gallon equivalents. The vehicles are being tracked. Annual reports are being provided for three years after the purchase of the vehicle whereby mileage is tracked and that is then equated into actual diesel gasoline use that is displaced with these alternative fuels. Ultimately, we can then calculate that into environmental benefits. The goal is to assess the program after receipt of three years of annual reports. The AFIG can then report on emission reductions specifically tied to the incentive dollars that were provided.

The competitive grant program is mainly for non-profit and for-profit businesses, school districts, colleges, and universities. What about the residents of Pennsylvania? From 2005-2009, rebates were provided for folks who purchased hybrid electric vehicles. Over 9,000 rebates for hybrid electric vehicles was approved at \$500 per rebate. Total funding disbursed was in excess of \$4.5 million. The next thing was plug-in hybrid electric vehicles and battery electric vehicles. Since 2011 to the current time, the Alternative Fuel Vehicle (AFV) Rebate Program has provided over 2,000 rebates for electric vehicle, plug-in electric vehicles. There is also new interest in Compressed Natural Gas (CNG) vehicles. From September 1, 2011 to the current time, we have invested approximately \$5 million in the rebate program related to electric vehicles, plug-in electric vehicles, CNG vehicles, and propane fueled vehicles. The current rebate announced is \$2,000 for plug-in hybrid electric vehicles. An additional 250 rebates at \$2,000 have been promised, which is another \$500,000 commitment. The goal is to continue the program in 2017 and to begin thinking about what things can be done different to the guideline package. The program is striving for the best projects. These are Commonwealth dollars, so we want to do the best thing that we possibly can with them. This is a competitive program.

Josh Dziubek stated that the 2016 AFIG program is currently open. It is a competitive grant program seeking applications for innovative, advanced fuel, and vehicle technology projects that result in cleaner transportation within the state. Applications are being accepted year-round. One of the submission periods ended on April 29. Those applications are currently being scored. The next submission period ends on August 26. The final acceptance period ends December 30. Eligible applicants include school districts, municipal authorities, non-profits, and corporations registered to do business in Pennsylvania. The program has four project categories. The first is the vehicle retrofit and/or new purchase. The program provides up to 50% of the incremental cost for the purchase or conversion of vehicles to use alternative fuels. That means the difference between what a standard vehicle of that model type would cost and what the alternative vehicle would cost. Next is the alternative fuel refueling infrastructure projects. The program provides funding for two types of fueling stations: fleet refueling projects and home-based refueling projects. For fleet refueling, the requirement is the station has to support a fleet of at least 10 vehicles that are all under 26,000 lbs. Home-based refueling is not necessarily refueling for any individual home. It is for a business that has a vehicle associated with it that would refuel at that business. It could also include apartment or condominium complexes where the individual who owns an alternative fuel vehicle would not be able to install their own

refueling infrastructure, but instead it would be to service the entire community. Biofuel use projects have been done in the past. This is our first year doing it again in a while. AFIG will provide the incremental cost funds to support the purchase of high-content biofuels, at least 5% biodiesel (or greater blend amounts) and/or 85% ethanol. Finally, there is innovative technology. Under this project category, AFIG is seeking to fund projects that develop or demonstrate next phase technologies with the end result of commercialization within the Commonwealth. The project must be the first deployment of its kind of technology in Pennsylvania.

AFIG is currently scoring the applications for the first acceptance period. Grant awards will be made by the end of June or July. Any applicant who is not awarded may resubmit, once without any significant changes. The program is open to talking to applicants about why the application may not have been as good as it could have been, with the hope that the application will be resubmitted.

The first acceptance period ended April 29. Out of 54 applications that were started in DEP's eGrants systems, 30 applications were submitted. The 24 unsubmitted applications are still in the system so the applicants who started them can go back and resubmit them at any time. A total of \$7.8 million total grant funds were applied for. \$6 million is available. Fifteen vehicle retrofit and/or purchase applications were received for a total of 183 vehicles. There were 15 refueling infrastructure applications. Just under \$5 million applied for. There were four innovative technology applications for a total of \$1.3 million. Additional data will be compiled during the scoring process. No biofuel use applications were received this time around. One had been started, but was not submitted. No home-based refueling applications have been received.

PRESENTATION BY SARA NICHOLAS, POLICY DIRECTOR, AND MATT KEEFER, ASSISTANT STATE FORESTER, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES (DCNR)

Matt Keefer stated that DCNR's Bureau of Forestry manages 2.2 million acres of state forest and also provides technical assistance and outreach for private forest landowners in the Commonwealth.

DCNR has been involved in the Chesapeake Bay work for a long time. The Department provides recreation and public access, education and outreach work, land conservation, urban tree planting program (TreeVitalize), and riparian forest buffers. DCNR has been involved in buffers for a long time, mostly through service foresters. The foresters work out in the counties and provide technical assistance to private owners and farmers working on riparian forest buffers.

A riparian forest buffer is that area along a stream, just adjacent to a stream, in what is called the riparian area. The idea is to take areas where the forest has been removed and replace that area with trees that will evolve into a forest over time. For the Chesapeake Bay program, for an area to count as a forest buffer, there has to be a minimum of 35 feet to receive the full credit. A reduced credit will be received for anything less than 35 feet in width. Current science shows that to get the maximum benefit a buffer should be around 100 feet wide.

Buffers provide a number of benefits and values to both society and the environment. They help to clean up the water and provide habitat for aquatic and terrestrial ecosystems. A lot of wildlife depends on the riparian area corridors. Forests along the streams provide additional benefits for air quality, aesthetics, connections for wildlife, and also things like carbon sequestration. There is a lot of science around forest buffers, and so we know that as we continue the program there will be additional information that comes forward.

As it relates to water quality, riparian buffers are important in that they have been one of the most cost-effective and efficient best management practices for removing nitrogen, phosphorus, and sediment from waters entering into streams. They help by converting agriculture land or urban land uses to additional forest land use. Agricultural studies show that riparian buffers also reduce upland pollution. Each acre of forest buffer reduces nitrogen from four upland agricultural acres. Riparian forest buffers are the second most important BMP for reducing the nitrogen load.

A lot of acres and miles of buffers were installed in the early 2000's. Since then there has been a decline in the numbers. Even though there has been a decline, Pennsylvania has been a model of success. The state has had a lot of acres installed. Currently there are 54,000 acres of riparian forest buffers that are being credited to Pennsylvania in the Bay model, 24,000 of those acres were funded through Conservation Reserve Enhancement Program (CREP). DEP's Stream ReLeaf program and Growing Greener have been a major source of funding. Numbers showing recent accomplishments in Pennsylvania reveal variability from year to year. There was a major dropoff in 2015. A lot of the landowners who are most interested in the program have already enrolled so the low-lying fruit has been picked. There was a delay in the Farm Bill, which caused a lag in sign-ups. The bottom line is we need to establish 9,500 additional acres by the year 2025 to meet the watershed improvement plan goals.

Challenges exist over which DCNR has no control. Fluctuation in commodity prices (corn, soy beans, etc.) and the willingness of farmers to take productive land that is growing crops from which they are receiving income and putting that land into a buffer. Additional challenges include inter-generational land transfer issues, farm transfers to the next generation or a new owner, and a loss of agricultural lands because of development. The Farm Bill has been a major source of funding and if there are hiccups in the Farm Bill, it affects how buffers are funded and installed.

There are challenges over which DCNR does have some control. Thinking about communication, messaging, and marketing, there is a lack of technical assistance, boots on the ground, people out there helping landowners and farmers work through the process. There are challenges with some of the funding sources like the federal programs. The programs are inflexible and sometimes folks do not want to sign a government contract. In addition, some of the projects simply have failed. The trees were planted and they died, so that creates credibility issues. People who see dead trees and messy buffer zones on their neighbor's property do not necessarily want to sign up. Maintenance and making sure landowners know how to maintain a buffer are issues over which the Department has some control.

With the recent decline, there have been a number of both federal and state responses. In 2014, the USDA sponsored a riparian forest buffer leadership summit in D.C. Each state has been asked to form a task force and to define a state lead for public programs. In consultation with DEP, DCNR and the Bureau of Forestry have been asked to take over that role. Also 2014, the Governors in all of the jurisdictions signed a new Chesapeake Bay Agreement with goals and objectives. The most recent activity was the development of two-year workplans. The Bureau of Forestry just completed its two-year workplan last fall.

There are four main components in Forestry's workplan:

The first is leadership and collaboration. A Riparian Forest Buffer Advisory Committee has been formed. It is a committee consisting of more than 50 individuals from state agencies to DEP, Department of Agriculture, DCNR, Fish & Boat, Game, the Forest Service, and then a whole list of watershed groups, conservation organizations, a few Ag enterprises, folks who are actually out there on the ground working with the landowners and farmers. The Committee was designed to give us feedback and move the conversation forward. The first meeting was held in March. The second meeting is scheduled for June 2.

The second item of Forestry's workplan is to look at funding and try to identify innovative sources to incentivize buffer programs, look at ideas like flexibility and simplicity, complements to existing programs, and the importance of maintenance.

The third component is messaging and outreach, looking at technical assistance, websites, marketing tools, and ways to better utilize staff. DCNR has a cadre of foresters who are very knowledgeable. This is about refocusing the foresters to work harder on watershed issues.

The fourth component is better use of technologies, such as new land cover data and GIS technologies. Using that technology to become more efficient, to do better planning, and be more efficient at utilizing resources, whether it be funding or our staff.

The Bureau of Forestry is looking to create a collaborative, comprehensive, flexible, community-based initiative; provide technical assistance for buffer establishment and maintenance; build and enhance community partnerships that are already out there; complement DEP's current programs and those offered by Natural Resource Conservation Service (NRCS); and connect landowners and partners to funding opportunities. The outcome, if successful, may be 95,000 additional riparian forest buffer acres by 2025, enhanced conservation benefits, and improved partnerships.

Sara Nichols, Policy Director at DCNR, stated that Secretary Dunn really jumped into this opportunity. The Department has a 95,000 acre goal, and it would like to develop a new tool for the toolbox. DCNR has spent two years looking at CREP, which has typically funded much of the buffer work to date. CREP is a fairly inflexible program. It may have saturated a lot of the folks that it was intended to reach. Folks who are not agricultural producers, for example, do not rank well enough to get in the program. Others may have objections to being part of a federal program. Their topography and size may severely limit their ability to put a 50 foot buffer along their streams. There are many reasons to consider another tool.

The agency has been talking to a number of funders, including PennVest. No contracts have been signed yet, but this is currently one of the ideas. DCNR would block grant funding of our own, private philanthropies, potentially the Clean Water Revolving Loan funds, other sources to entities that would then deal with permitted watersheds and landowners where there might be interest.

There is also the potential to derive an income from buffers. If the landowner does not make a rental payment, it would not be double-dipping to allow production of income from the buffer itself. Under current federal programs, there is a rental payment to the farmer, to the landowner, which precludes being able to then derive a secondary income. If there is no rental payment, that opens up the possibility of growing things that anybody could grow: trees, shrubs, all kinds of things that have an annual product. One of the limitations of forestry is the 60-80 year rotation and that does not help with land transfers and other considerations going on. If an annual income could be generated from a buffer, a bunch of things are being done at once. This is pretty active in states like Washington, Oregon, Michigan, Missouri, Wisconsin, and Virginia. Those states led the way with something called a Multifunctional Buffer, which cleans the streams, provides vital habitat, reduces sedimentation, and produces an annual income. DCNR and its service foresters, the folks who work in each county with private landowners, would be the front line of technical assistance. The Nature Conservancy, possibly the Chesapeake Bay Conservancy, have been in discussions with the Department about doing the base mapping so each parcel can be looked at individually, figure out what is going on, figure out what that buffer should look like. Traditionally, buffers have been a very uniform width, 15 or 35 or 100 feet. What would happen if you could undulate that buffer and fit it to the contours of the farmer's parcel, maybe a corporate campus or a church camp? We could look beyond agricultural users and vary the width. Some of the latest research from folks like the Nature Conservancy look at where these nutrients enter the stream. The nutrients tend to follow flow paths, gullies, and little intermittent streams. That is where the vast majority of the nutrient loading happens, and that is where you want to put a battered buffer. A battered buffer at that point would trap a lot of those nutrients, which could mean less of a buffer in some of the other areas.

Because DCNR is not really an expert at growing crops other than trees, the Department has been talking to the Penn State Extension Office. Penn State has a terrific staff of folks who are experts and have had a lot of experience growing nut trees, fruit, shrubs, things like high bush blueberries, hazel nuts, chokeberry, pawpaws, things that are endemic to steams size in Pennsylvania already. They are natives, but they produce incomes. The Department has been developing a list of species that would do well. They have to be hardy. There is actually a lot of data from other states and from Pennsylvania on what annual incomes these produce. Some crops produce a range of \$3,000 an acre up to \$57,000 an acre, which far exceeds commodity crops. Installing these species would build in an incentive to maintain them well to keep them there. Right now a lot of folks are coming out of contracts for buffers. If a crop is there, there is less likelihood of withdrawal. The Department is looking at the Yellow Breeches in Cumberland County and York County; Lost Creek in Juniata. Juniata is one of those counties that has suddenly surged in interest. The county has a lot of good networks in place so the Department has been talking to partners up there. The Juniata River has some of the worst water quality pumping into the Susquehanna so it is on everybody's target list. State park system folks are discussing where buffers could be placed in our own state parks. This would not only showcase

buffers for visitors to see how this is done (we get 38 million visitors a year), but to actually clean up waste where there are periodic closures for different nutrients coming in at a higher rate.

A multi-use riparian forest buffer design was developed by the US Department of Agriculture (USDA) Agra-Forestry Center showing a typical zonation. A lot of folks familiar with the world of buffers know this three-tiered system. In this case, it is a little different. There is a zone right against the stream of 15 feet where there would be no harvest whatsoever. This would remain natural buffer. Put it in, maintain it, not expect too much for it. A second zone, which would be trees and shrubs, would be harvestable. There are 35 species being looked at for an annual crop, but, because of compaction, no mechanized harvesting would be permitted. A third zone could allow for willows for biomass where you could have a mechanized harvesting. Things like perennial crops of fruits, nuts, and floral trees and shrubs. The Department is searching far and wide trying to find crops that would build incentive for people to buffer streams with things that they consider useful. One of the most common complaints heard about some of the federal Farm Bill buffer programs is that it is wasted ground, it is just growing trees. Of course, foresters do not see it that way, but if a farmer could grow something in that zone that produced, the hope is that it would not be considered wasted ground. It could be quite productive ground.

Costs that the program will cover include the plant materials, all the attendant structures that would be needed, tree tubes to prevent damage from wildlife, deer, and voles, and maintenance for three years, which has been a chronic problem with some of the Farm Bill programs. This would involve a 20-year MOU to govern the planting, the site maintenance, and basically care of the buffer. If it is in a context where there is livestock, livestock fencing would be considered.

In terms of funding, some strides have been made. The Department has a commitment from DEP to add this to their next best management practices (BMPs) that they will run through the Growing Greener Program this summer. DCNR's Secretary has committed to run our own grant program with Keystone Rivers funding this summer. The Department is in a lot of discussions with other potential funders, philanthropic, other public sources, and other private sources. There has been some discussion about whether this could be a loan program. If the Department is providing everything that is required to install the buffer, pay for the buffer plants, could landowners give back a portion of their proceeds to create a revolving fund. That is one creative idea that has been discussed. This would be designed to get the maximum credit to meet Pennsylvania's Bay goal for buffers. Stormwater, nutrient, and carbon credits are also being looked into.

As examples, elderberry grows extremely well in these conditions. Elderberry has many uses and people grow it anyway. A lot of these species have been around for a long time. There is certainly an emerging market. Woody florals are being considered. Estimates are variable depending on site conditions. The University of Kentucky is getting up to \$56,000 an acre a year growing willows. These are not hard to grow and they are sustainable.

The pros are that this is a new tool in the toolbox. There is a lot of practice on the ground to be drawn from. We have terrific experts in the Penn State Extension Office and other places who know how to do this who are going to help us. We think landowners will be more receptive to the flexibility inherent in this. Some of the cons are the contract is voluntary, people could leave,

but the incentive is somewhat built in. The income and results are going to vary. Soil pH will have to be studied, as well as a lot of other factors. A riparian buffer zone is not a greenhouse. Top income generation that could be obtained in a much more controlled, hot house environment will not be achieved, but the trade-offs are worth it. Wild turkey, bear, and other wildlife will benefit.

PRESENTATION BY JASON SWARTHOUT, DEP/DCNR HUMAN RESOURCES DIRECTOR

Jason Swarthout came to provide an update to his presentation to the CAC in July of 2015 when he discussed the challenges of workforce planning in the Department and the overall complement staffing levels and also to provide information on the civil service and hiring reform that will be very critical to workforce planning and attracting young talent to the Department.

Senate Bill 1154 relating to civil service reform has been introduced in the legislature and is up for vote right now in the Senate. The Bill, which is expected to be passed in June, will allow DEP and DCNR to do vacancy-based hiring. With the current civil service system, an individual takes an examination and is placed on a list. When there is a vacancy, the agency requests a list from the Civil Service Commission consisting of the names of the individuals who took the exam. There is typically a lot of delay and the individual does not really know what job they will be getting. They will know the job title, but not know where the job is located. The list is generic for the whole job title. The first thing the legislation will do is allow the agency to have vacancy-based postings.

The second thing Bill 1154 will do is change the Rule of 3. The Rule of 3 is administrative management of who can be interviewed for a job. Right now the Civil Service Commission says it is the highest three scorers that are available. The change will allow the agency to determine the rule as it sees fit. As an employer, the agency could request a Rule of 7 or a Rule of 12. As long as the agency requests the number ahead of time, the Civil Service Commission will give the agency the flexibility to allow more candidates to be interviewed for jobs, particularly those that are difficult to fill. The third thing is the agency will be allowed email people. Right now all of the correspondence to the folks that the agency is hiring has to be through the mail. The agency will actually be permitted to email folks. The whole focus of this reform is on the user experience. When an individual applies for a job, that person will immediately get an email saying that the application has been received and stating that the person will potentially be contacted for an interview.

The second piece of the hiring reform is the software, which has already been purchased. The goal is to have the Civil Service hiring reform done this June and to start implementing vacancy-based hiring in December. It is a pretty aggressive timeline.

Penn State Harrisburg did a study two weeks ago. Students were asked to volunteer to try to find a job at the state. The folks from Civil Service and from the Office of Administration sat behind a double mirror. The five students were placed in a room. Three of students found the Civil Service website, one found a federal government website, and the fifth student could not find anything. The students were called together and the hiring process was explained to them, how it works today. When asked how many of them would apply, three of the students immediately

dropped out. One student said he or she would apply, but he or she was a public policy major. The fifth student was still on the fence. The students were asked, "What is a civil servant?" The answers were low pay and low skills. Young folks do not look at government as a choice for an employer. There is a marketing campaign and a strategy to try to draw in millennials in coordination with this civil service reform. There is also a workforce planning initiative going on, enterprise wide, aside from the Department. Everyone sees what is coming. There is a lot of bi-partisan support for the Bill.

To recap from my previous presentation, right now DEP has 2,689 authorized salaried positions by the Office of the Budget. That means that is the maximum number of positions the agency has. That does not mean all of those are filled right now. The number of positions filled is 2,400. The Office of Administration has another ceiling. Back in January, that ceiling was actually reduced; the ceiling under which the agency operates on a day-to-day basis. The number was reduced to 2,515. It is not known whether that number is permanent or temporary, but at this point in time the agency is not allowed to move on 188 positions. Those positions were frozen. Everything is broken down by fund. If a fund had 250 positions in it and 225 were filled, the agency was told back in January that the new ceiling is 225. The agency can no longer go up to 250.

DEP's workforce is 95% civil service covered. The hiring reform will take a bottleneck off the front end. Senate Bill 1154 will make a huge difference and really help with recruiting efforts. There is a large union presence in the Department's workforce. About 70% of the jobs are covered. Most of DEP's jobs, 72%, are located in the field, in the regional offices, where the permits come in, where the inspections occur. DEP uses over 250 job titles.

The average age of DEP's workforce now is 47, with 15 years of service. Our leadership is what one would expect: 50 years and 21 years of service. Commonwealth wide, 30% of the workforce is eligible to retire in the next four years. Eligibility does not mean that it will happen. People at DEP and DCNR tend to hang on a little longer because they like what they do and they are very passionate about it. It is still a scary number to see a large wave of people eligible to retire. If anything happens with pension reform that would impact current employees, then I think that 30% number really could come true.

Over 400 positions have been lost over the past 10 years. That does not include the 188, that new lower ceiling that came in January. You have heard the Secretary talking about taking a 14% hit over the past 10 years. The average of other Commonwealth agencies is 6%. Some agencies are higher than that, but DEP is one of the higher agencies and has taken a big hit to its workforce over the past 10 years. The trend seems to be going down.

Workforce planning is important. The agency faces increasing difficulty performing the mission, meeting basic functions, when the workforce continues to constrict. The data shows that 13% of the agency's workforce could leave today and be fully eligible for retirement, 30% eligible within four years. The colleges and universities are having trouble getting kids interested in the sciences and math and getting diverse groups to enroll. The agency is struggling sometimes not only with the composition of the workforce, that they have the right training and skills, but also generationally. In the private sector, the millennials now outnumber the baby boomers. That is

not the case in the Commonwealth. It is difficult to attract kids right out of college. This is mainly because of the hiring process. The students do not understand the process and they do not think of the Commonwealth as a potential employer. Some of it could be pay related. The bigger part is that we do not market the Commonwealth very well, and we do not market DEP very well. The Department is still heavily focused on baby boomers, 45%. That leads to the 30% waiting to retire within the next four years. The Department's percentage of millennials is 16%. The Office of Administration actually put together a millennial hiring taskforce to develop materials, go to colleges, and try to get kids interested in the Commonwealth.

The role of human resources (HR) has always been to provide information to the programs, to say here is who is going to retire, here is who is eligible to retire in the next 3-4 years. HR is establishing what will be called the Center of Excellence. One position will be dedicated entirely to workforce planning. That position will hold the bureaus accountable. We want to hold managers and supervisors accountable for inputting position descriptions, developing staff, doing workforce planning, and the managers will be graded on it in the Electronic Performance Review (EPR) process. This will be driven from the HR side to get some accountability and teeth in it.

HR is trying to give managers and supervisors easier tools. A dashboard will be established for managers so they can log in, see demographics, see workforce statistics, who is eligible, just at the push of a button. The goal is to link it into a training plan so they know who can retire, who are the next people that are eligible for that job, and determine if those individuals have the right training.

Over the past 10 months, an annuitant, who was our former HR Director, came back and put together a guide for HR. An agency aid. When HR meets with its clients, which are our programs, it has a list of almost everything under the sun and new tools in it to give to the Bureau Directors.

We need to align the workforce with the strategic direction. So which way does the Secretary want to take the agency? Do we have the staff to get there? Do they have the training? Do we need to reorganize? That is part of workforce planning. The second piece is identifying gaps. Where are the gaps in the workforce? Within each bureau, what are the hard-to-fill positions? Why are they hard to fill? Is there anything that can be done about that? The plan is then implemented, continually monitored and evaluated. It is really having that communication dialogue all the time with the managers and supervisors.

Again, we developed a customizable approach in this workforce planning guide. The plan is to break down traditional barriers, really develop accountability at the managerial level, and focus on the supply and demand of the human capital. At the end of the day, our concern in HR is about the people health of the Department. Do we have the right people at the right time and at the right place with the right training and learning skills to do the job?

Some of the questions to be asked of the Secretary, the executive staff, and the managers include what type of talent is required? Are there opportunities to use technology like e-permitting? How is that going to impact the workforce? Can the workforce be redesigned? Do we need as many people in that particular field? What is being done to develop talent and maintain it? The

Office of Administration is actually looking at a recruitment and retention strategy. Is enough money being offered to folks? Enough leave? Is the Commonwealth staying competitive with the private sector? A talent management group has been established to try to help the workforce across the board. It is a cyclical process of identifying the gaps, developing a plan, and then re-evaluating the plan.

A Replacement Planning Chart was developed to help to identify gaps. The bureau director completes the form, looking at each of the division chiefs that are currently in the position and identifying the people on staff. It is not pre-selection. It is actually just a gap analysis. Do I have someone on the team that can move up to the higher level position? If no one is there, no one is available, the agency either makes a training plan to get staff trained or starts working with Civil Service to do external recruiting so there are people in place who can move up throughout the organization. That is one simple tool, mainly to identify gaps in the organization.

HR put together a Criticality Assessment Template identifying key employees who are going to leave in the next three years. Dave Allard, the Bureau Director for Radiation Protection, had consistently identified that he could not get kids out of college just because of the way the job was structured by Civil Service, so HR worked with Dave to develop a new position called a Radiation Health Physicist Training. A training series was developed so the agency can hire kids straight out of college now to go into the Radiation Protection field. HR is also looking at how to transition employees up through the organization once they are in.

NEW BUSINESS

Chairman Fink agreed to run for another term as Chair. Don Welsh agreed to run again as Vice Chair.

ADJOURN:

With no further business, Chairman Bill Fink requested a motion for adjournment. Thad Stevens moved to adjourn the meeting, which was seconded by Don Welsh and all were in favor. The May 17, 2016 meeting of the CAC was adjourned at 12:55 p.m.