CHESAPEAKE ENVIRONMENTAL PROTECTION ASSOCIATION, INC.
P.O. Box 117, Galesville, Maryland 20765

NEWSLETTER **Winter 2016-17**

PRESIDENT'S MESSAGE

By Al Tucker

The first newsletter of the New Year offers the opportunity to reflect on the accomplishments of the past year and to project CEPA's plans for environmental advocacy for the upcoming year. During the past year we concentrated our efforts on three main topics:

(1) CEPA Forum: "The Unsustainable Spiral of Growth"

(2) PST-Harwood Landfill: Obtaining commitments from MDE to hold WMI accountable for maintaining wastewater discharge quality and for mitigating toxic contaminants emanating from the landfill.

(3) Alliance For Livable Communities: CEPA took a leadership role in the establishment of this steering group that will advocate for growth regulations that promote sustainability in Anne Arundel.

The forum was held last October 16th at the Anne Arundel Community College; over eighty participants attended. There were three expert presentations: new paradigms for Smart Growth in Maryland, the economic impacts of growth on ecosystems, and planning for sustainable growth.

Prof. Gerrit Knaap of the University of Maryland told participants that demographics and new transportation technologies are rapidly changing how people will live in the future. He stated that voluntary incentives for smart growth have had little impact on growth patterns in Anne Arundel County. Communities that have had success with smart growth have had to resort to regulations to institute measurable change.

Dr. Elliott Campbell from the Maryland Department of Natural Resources used results from the new research area of ecological economics to show that Anne Arundel County receives over $330 million dollars per year in ecosystem services from forests and wetlands.

And Kimberly Brandt from 1000 Friends of Maryland discussed the role that citizen advocacy in Charles County had on radically changing that county's growth to a more sustainable future. These presentations engendered a lively discussion among the participants.

IN THIS ISSUE

At the forum I announced that CEPA, along with five other organizations, would form an advocacy group, the Alliance for Livable Communities, which would participate in the revision of Anne Arundel County's General Development Plan.

With respect to the PST Harwood Landfill, operated by Waste Management Inc. (WMI), CEPA has actively monitored the groundwater contamination issues for more than seven years. This is the largest unlined landfill on the east coast. As we have reported to you in the past, several toxic chemicals have been found in the on-site groundwater monitoring wells. The potential to contaminate the nearby aquifers is high. The Aquia aquifer, the main drinking water source for southern Anne Arundel County, lies only a few feet below, separated only by a layer of clay. Propagation of contaminants in groundwater can take decades, but once an aquifer is contaminated, it becomes almost impossible to remediate. We have worked with the Maryland Department of the Environment (MDE) to enforce existing regulations. At a CEPA Board of Trustees meeting, Ed Dexter from MDE stated that WMI would be held responsible for mitigating the toxic exceedances in the landfill. Subsequently, MDE issued an order for WMI to submit a plan for remediation. WMI tried to argue that the exceedances were from natural causes, but MDE held that even if they were, the landfill disturbance was the cause and therefore WMI would be held responsible for mitigation.

With respect to population growth and land development, the CEPA Board of Trustees is convinced that the current patterns of development are leading to an unsustainable economic future and hence an unacceptable loss of environment. In Anne Arundel County the current practice is to charge developers only 80% of the estimated impact cost for new infrastructure. This fee by law must be spent for new infrastructure to support new development. Thus, from the start, new development creates an unfunded mandate to all county property owners. The current large, unfunded backlog indicates that the county also does not account properly for the maintenance and replacement of existing infrastructure. This pro-development attitude results in an unfunded, unreported structural deficit. If this issue is not recognized, suburban sprawl will continue its unsustainable course. This realization was the impetus for CEPA to join with others to form the Alliance for Livable Communities. In order to protect the environment it will take considerably more than awareness of environmental losses to save our environmental assets. We hope that the Alliance, which represents a broad cross-section of county citizens, will generate public advocacy to move toward a more sustainable future.

Looking forward to the new year, we plan[i] to continue the above efforts. However, we have not forsaken one of our signature issues, namely promoting the sustainable use of source water in Maryland, particularly groundwater. We were dismayed to find out that MDE has discontinued the Groundwater Protection Program Annual Report to the Maryland General Assembly due to lack of funding. This report provided valuable insight into the state's groundwater

resources. It outlined issues such as saltwater intrusion into coastal and riverine aquifers, nitrate contamination of aquifers, water depletion and availability issues. Without this report both the general public and our legislators will be blind about the state of pending water issues.

Several jurisdictions now face water availability issues. Charles County, for example, will not have sufficient groundwater to sustain the estimated population growth without finding alternative sources of water. In Western Maryland, the fractured rock aquifers can only support 1.5 dwelling units per acre, thus requiring communities that exceed this density to seek external water sources. More than 53 Maryland water supply plants now remove nitrates from their drinking water, indicating source contamination[ii].

Without the annual report, we will have no insight into the impacts on water supply due to climate change, increased air and water temperatures, changes in precipitation and runoff, severity of droughts, sea level rise, and more frequent and intense storms. The majority of Maryland counties rely on surficial aquifers for their sourcewater. These aquifers depend directly on precipitation for recharge and are the most susceptible to contamination from fecal bacteria, nitrate and stormwater run-off, and impervious surface from over-development. CEPA will raise this issue with policymakers to insure that the public has access to this information.

For a small non-profit that relies on all volunteers for support and operation, CEPA has had a productive year. Our hope is that we will be able to rely on your support to carry on the mission to keep you informed about critical environmental issues that are not being addressed by other organizations.

[i] The 2017 annual CEPA plan should be posted on our website shortly.
[ii] I recommend you read the Bay Journal article on drinking water nitrate contamination in Pennsylvania and the Delmarva Peninsula (Jan/Feb 2017, v26 n10).

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THE FALL 2016 CEPA FORUM – NEXT STEPS
By Mike Lofton

Last October CEPA hosted a public forum at Anne Arundel Community College to examine "The Unsustainable Spiral of Growth". Among the findings:

(1) The Chesapeake region has experienced explosive growth since World War II.

(2) Increases in population and employment foster an expanded local economy. But taxes and fees do not recover the cost of building infrastructure and services or their maintenance and eventual replacement. When those costs are realized local governments often look to additional new growth for revenues.

(3) Growth results in consumption of natural resources including productive farmland, clean water, animal habitat, forest, and open space.

(4) When revenues are not adequate to meet the total costs of growth, the burden is distributed to all residents in the form of additional payments, inadequate services, congested roads, and deteriorating quality of life.

(5) This self-driven spiral of growth is detrimental to all residents and is unsustainable.

See **http://www.cepaonline.org/forums.htm** for more about the Forum.

At the conclusion of the Forum there was enthusiastic support for the formation of an organization to seek a new approach to growth and land use planning in Anne Arundel County. The new Alliance for Livable Communities (ALC) has accepted the challenge.

The Alliance is modeled on a similar successful initiative in Charles County. A steering committee including CEPA, 1000 Friends of Maryland, The League of Conservation Voters, Chesapeake Bay Foundation, South River Federation, Bicycle Advocates of AA County, Bike AAA, and leadership from Growth Action Network will act to:

- Foster citizen awareness and engagement on growth issues.
- Advise decision makers on fiscally and environmentally sustainable growth, and hold them accountable.
- Increase transparency and public participation in the county's planning and development processes.
- Speak out for clean air and drinkable, swimmable, and fishable water.
- Promote communities that are livable, workable, walkable, and bikeable

Are you willing to help? Contact Ann Fligsten, Executive Director, Growth Action Network, annfligsten@gmail.com.

WILL ANNE ARUNDEL COUNTY RUN DRY OF WATER?
By Bill Klepczynski & Al Tucker

(This report is taken from 2 papers by David Andreasen, MDE, MGS (2002, 2007)

Many of us have read or heard about the problems that California is having with its potable water supplies. Many sections of the state have gone to rationing or are having to pay excessive fees for their water. ***Will that happen here***?

Ground water is the only source of potable water in Anne Arundel County (AAC), Maryland. Ground water pumped from individual wells tapping the Aquia aquifer supplied approximately 1.6 million gallons per day (Mgal/d) to an estimated population of 26,400 in 2000. An additional 0.18 Mgal/d was withdrawn from the Aquia aquifer for mobile home parks and irrigation. Withdrawals from the Magothy aquifer totaled approximately 0.22 Mgal/d in 2000. Total water demand in Southern Anne Arundel County may increase from

about 2 Mgal/d in 2000 to 2.8 Mgal/d by 2020 to support a population of 32,750.

The Aquia and Magothy aquifers are the most likely sources for future withdrawals, given their relatively shallow depths, although deeper aquifers in the Potomac Group are also available. The natural water quality of the Aquia is generally acceptable for self-supplied domestic use. However, the Magothy aquifer contains iron concentrations at levels requiring additional procedures that add to the cost of the water.

This raises the important question: will there be a reduced supply of water in the southwestern counties of Maryland in the future? The area is growing and several authors have mentioned that such a problem might exist by 2044. David Andreasen in 2007 has made mention of this possibility ***if*** nothing is done to curtail the current usage and growth rate in this area. Fortunately, he did not just raise the issue, ***he also made suggestions*** as to help solve or delay the inevitable.

Withdrawals from public-supply wells operated by the Anne Arundel County Department of Public Works on average totaled approximately 26 million gallons per day in 2002. Of that amount 2.2, 17.2, and 6.2 million gallons per day were pumped from the Upper Patapsco, Lower Patapsco, and Patuxent aquifers, respectively.

In response to increased pumping, water levels in southern Anne Arundel County have dropped to as much as 90 feet below sea level. Currently there is adequate available drawdown to sustain the withdrawals. Average-day water demand, however, is projected to increase nearly three-fold to 73 million gallons per day by 2040, with an estimated maximum-day withdrawal of 140 million gallons per day.

An increase of that magnitude could cause significant drawdown resulting in: (1) water levels falling below the regulatory management level in some areas; (2) well operational problems; (3) increased pumping costs; and (4) reduced stream base flow (flow coming from groundwater).

To minimize this regional drawdown effect on increased future demand, Andreasen proposed that ***withdrawals*** from Anne Arundel County's public-supply wells ***be optimized*** using a numerical, three-dimensional ground-water-flow ***model***. This model proposed ***varying and alternating the pumping rates*** from different wells to prevent the drawdown levels from exceeding regulatory management levels in the aquifers.

The results of this study indicate that sufficient ground water is available to supply the projected demand through 2040 (73 Mgal/d average day) from the Anne Arundel County Department of Public Works well fields, while at the same time supplying ground water to other users in the County as well as the surrounding counties (including Baltimore City).

Meeting the projected demand will require construction of new wells and well fields. When withdrawals are optimized using Andreasen's model to minimize drawdown, simulated water levels did not fall below the State-mandated management level near the well fields by the end of the simulation period (2044). However, the increased withdrawals resulted in relatively deep water levels that increased pumping lift, which would lead to greater energy costs. In addition, the increased withdrawals may eventually reduce base flow to streams within the recharge (outcrop) areas of the aquifers pumped.

Fortunately, ***northern AAC*** uses the Upper and Lower Patapsco aquifers for the majority of their users and these aquifers seem to re-supply themselves in between periods of variable pumping.

One of the authors (Klepczynski) worked with theoretical models in another field and in that field models did not accurately predict the future because the physical parameters used in the models were subject to change. For groundwater, (1) the parameters used to predict an aquifer's response may vary unpredictably with time; and (2) the water in some areas of an aquifer may be depleted faster than the aquifer can resupply it. In addition, there are external factors that may not be accurately included in the model such as population growth, salt-water intrusion, climate change, etc.

Unfortunately, Charles County and the Eastern Shore have additional complications to their water supply. Charles County does not have enough water to sustain their projected growth. It must get additional water from other nearby sources. On the Eastern shore, the wells have to be significantly deeper than those for AAC. Hence, pumping and water treatment costs are significantly higher almost to the point of being prohibitive.

At this point in time, the situation is not dire. The ***suspected*** looming shortfalls caused by some unplanned depletion of aquifers or inadequately modelled growth in domestic and agricultural usage can be offset by planning to develop safe, reliable alternative water resources. **One such possible alternative source** is the use of Reclaimed Water (RCW). RCW is one of the most reliable alternate water supplies available, because wastewater discharge, unlike surface water supplies, does not depend on precipitation and is relatively well controlled through regulation and treatment. It is already being done at a moderate scale in Charles County. As the Water Reuse Foundation has reported, the use of RCW for **non-potable** applications reduces demands on other water resources, encourages a higher level of control over the fate of pollutants, and minimizes discharges into the environment. These are a few of the things to consider when investigating the possible use of RCW in Anne Arundel and nearby counties.

References:

1. David C. Andreasen, "*Optimization Of Ground-Water Withdrawals In Anne Arundel County, MD From The Upper Patapsco, Lower Patapsco, And Patuxent Aquifers Projected Through*", 2014, Maryland Geological Survey.
2. David C. Andreasen, "*Future of Water Supply from the Aquia and Magothy Aquifers in Southern Anne Arundel County, Maryland*", 2002, Maryland Geological Survey.
3. Stephen A. Davis, "*Guidebook for Water Reuse On-Site Inspection*", 2012, Water Research Foundation.

WILL THESE ENVIRONMENTAL REGULATIONS SURVIVE?

By Gary Antonides

Donald Trump has promised to do away with many regulations, particularly those that President Obama has initiated. This is supposed to unburden businesses from the costs associated with the regulations. However, he has not, in general, indicated why the original purposes of the regulations are not justifiable. Nor has he been very specific or consistent in his comments. For example, he said climate change is a hoax perpetrated by the Chinese, then said he was joking,

and then said he would not do away with any regulations that have to do with safety or the environment. He has also vowed to dismantle the EPA in almost every form.

As far as the environment is concerned, it seems to be the consensus that at least three major initiatives may be revoked, changed, or ignored. Unfortunately, when politicians or the media talk about these regulations, they usually don't deal with the regulations in any detail. The purpose of this article is not necessarily to justify these regulations, just to inform readers about them. The three regulations covered are:

- Paris Climate Change Agreement
- Clean Power Plan
- Waters of the U.S. Rule

Paris Climate Change Agreement

https://www.nytimes.com/2016/11/11/us/politics/donald-trump-climate-change.html notes that Mr. Trump has already vowed to "cancel" the 2015 Paris climate agreement, which commits more than 190 countries to reduce their emissions of planet-warming carbon dioxide pollution. Mr. Trump cannot legally block other countries from fulfilling their Paris agreement commitments, but he can, as president, choose not to carry out the Paris plan in the United States. That could doom the Paris agreement's goal of reducing carbon dioxide emissions enough to keep atmospheric warming from increasing 2 degrees Celsius (3.6 deg. F.) above pre-industrial levels. This is the point above which, many scientists say, the planet would be locked into an irreversible future of extreme and dangerous warming. Since 1880, it has already risen about .85 deg. C.

Without the full participation of the United States, which is the world's second-largest greenhouse gas polluter after China, that goal is probably unattainable, even if every other country follows through on its pledges. And, the experts say, without the participation of the United States, other governments are less likely to carry out their pledged emissions cuts.

After the election of Mr. Trump, global negotiators, including U.S. Secretary of State Kerry, gathered for a 12-day conference in Marrakesh, Morocco to hash out the next steps for the Paris accord: how to verify that commitments are being met, and how to pay for enforcement by poor countries that cannot afford the technology or energy disruptions.

Scientific reports released over the last two years have concluded that the measurable warming of the planet because of human activities has already begun. 2016 was the hottest year on record, passing the previous records set in 2015 and 2014. An analysis by Climate Interactive, a scientific think tank that provides data used by many governments, concluded that the policies by the United States would account for about 20 percent of the expected greenhouse gas reductions under the Paris plan from 2016 to 2030.

https://www.nytimes.com/2016/11/04/business/energy-environment/paris-climate-change-agreement-official-now-what.html reports that top energy policy makers and corporate leaders caution that it will be challenging to meet the Paris goals. Many companies have not even figured out yet how much greenhouse gas they emit, much less made plans to curb them. Rapid technological advances in areas like electric cars are not enough to stop the world's long climb in oil consumption, let alone reverse it. A carbon price or tax that would force industries to pay for the pollution they spew is another strategy to reduce emissions, but the financial framework for this has barely started to emerge.

As noted, the goal of the Paris Agreement is to limit the increase in global temperatures to 2 degrees Celsius. But it is also to strive for 1.5 degrees Celsius if possible. Even 2 Deg. C may prove problematic. If every country fully accomplishes its initial pledges, the increase would be closer to 2.7 degrees, according Fatih Birol, executive director of the International Energy Agency, which is based in Paris. In the next several years, countries are supposed to set additional goals for deeper reductions.

Many companies will have to have a strong financial imperative to make sweeping changes to address climate change. Fledgling exchanges for trading carbon emissions rights have attracted limited interest, and the prices on those markets are well below the $100 a ton or more that experts say would force companies to limit their emissions of greenhouse gases. The market price is now only $6.

Worldwide petrochemical consumption is doubling every 10 years. Aviation fuel consumption has surged as hundreds of millions of people in China and other advanced developing countries have become able to afford air tickets. And sales of fuel-guzzling trucks have soared in developing countries.

In the case of electric cars, even though they have increased eleven fold in the last five years, they still represent a little less than 1 percent of all cars sold. According to one analysis, if half the cars sold for the next 20 years were electric, worldwide oil demand would keep rising because trucks and planes are now the main drivers of the growth in oil consumption. Even so, automakers will continue to push electric cars because they are convinced that regulators will keep loading more rules onto gasoline- and diesel-powered cars. "If you don't have 20 percent-plus of your sales in electric cars, you're not going to make it," said Carlos Ghosn, the chairman and chief executive of Nissan and Renault and the chairman of Mitsubishi Motors.

https://www.c2es.org/international/negotiations/cop22-marrakech/summary reports that, despite the looming uncertainties following the election of Donald Trump, governments meeting in Marrakech, Morocco, pushed forward with the Paris Agreement, setting 2018 as their deadline for completing the nuts-and-bolts decisions needed to fully implement the agreement. Marrakech was a transition from the years of negotiation that produced the Paris Agreement to a new phase focused on implementation.

Although the agreement was designed to apply from 2020 onwards, countries moved more quickly than anticipated to ratify the agreement and bring it into force. In the case of the U.S., President Obama was able to accept the agreement through executive action, without seeking Senate advice and consent, because it elaborates the UNFCCC (which received Senate approval). UNFCCC is the United Nations Framework Convention on Climate Change, an international environmental treaty negotiated at the Earth Summit in Rio de Janeiro in June 1992, then entered into force in March 1994.

The threshold for entry into force of the Paris agreement was formal acceptance by 55 countries accounting for at least 55 percent of global emissions, and that was reached October 2016. By the close of the Marrakech conference, it had been ratified by 111 countries representing more than three-fourths of global emissions. Negotiations will resume in May, 2017.

Clean Power Plan (CPP)

The Clean Power Plan of 2015 implements the U.S commitment under the Paris accord. At its heart is a set of

EPA regulations intended to curb planet-warming pollution from coal-fired power plants. If enacted, the rules could transform the American electricity sector, close hundreds of coal-fired plants and usher in the construction of vast new wind and solar farms. The plan is projected to cut U.S. power plant emissions 32 percent from 2005 levels by 2030. But the program is currently under litigation by 28 states and more than 100 companies, and it is expected to go before the Supreme Court.

http://money.cnn.com/2016/09/23/news/economy/donald-trump-regulation/ reports that Trump calls the Clean Power Plan a job-killing regulation. While it would kill jobs in some industries like coal and oil it would create jobs in others such as wind and solar. An analysis by the Federal Register estimates that the regulation would cost approximately 25,000 jobs over a 10-year period across coal, electricity and natural gas industries. There would also be approximately 52,000 to 83,000 full and part-time jobs created over the same time in clean energy industries

Under the law, the EPA sets a goal for reducing carbon emissions. Then the states decide how they'll meet that goal. Since the Supreme Court put a "stay" on the law in February 2016, the EPA cannot yet enforce it.

https://www.epa.gov/cleanpowerplan/fact-sheet-overview-clean-power-plan#print describes the Clean Power Plan as fair and flexible. It will reduce carbon pollution from power plants, the nation's largest source, while maintaining energy reliability and affordability. Fossil fuel-fired power plants make up 31 percent of U.S. total greenhouse gas emissions. These are the first-ever national standards that address carbon pollution from power plants. The CPP provides states and utilities ample flexibility and the time needed to achieve these pollution cuts with reasonable cost.

Fossil fuels will continue to be a critical component of America's energy future, and the Clean Power Plan ensures that the remaining fossil fuel-fired plants will operate more cleanly and efficiently while the capacity for zero- and low-emitting power sources is expanded.

The final rule is the result of unprecedented outreach to states, tribes, utilities, stakeholders and the public, including more than 4.3 million comments EPA received on the proposed rule.

The transition to clean energy is happening faster than anticipated. Actually, carbon and air pollution are already decreasing. The CPP accelerates this momentum.

The transition to cleaner sources of energy will better protect Americans from other harmful air pollution, too. By 2030, emissions of sulfur dioxide from power plants will be 90 percent lower compared to 2005 levels, and emissions of nitrogen oxides will be 72 percent lower. Because these pollutants can create dangerous soot and smog, these historically low levels mean we can expect to avoid 3,600 premature deaths, 1,700 heart attacks, and 90,000 asthma attacks in 2030 and every year beyond

The Clean Air Act, last amended in 1990, created a partnership between EPA, states, tribes and U.S. territories with EPA setting goals and states choosing how they will meet them. The final Clean Power Plan follows that approach. EPA is establishing both interim and final carbon dioxide (CO_2) emission rates for fossil fuel-fired electric generating units. The goals are in terms of the rate of fuel use in pounds per megawatt hour as well as a mass-based state goal measured in total short tons of CO_2. States will then develop and implement plans that ensure that the power plants in their state achieve the interim goals over the period of 2022 to 2029 and the final goals by 2030.

In setting goals, the EPA considered the ranges of reductions that can be achieved at a reasonable cost by (1) improving the heat rate of existing coal-fired power plants, (2) using lower-emitting natural gas plants, and (3) using new zero-emitting renewable energy sources (like wind and solar). The rule also gives states the option to work with other states on multi-state approaches, including emissions trading. Trading is a proven approach and creates a financial incentive to reduce emissions where the cost of doing so is the lowest.

The EPA, the Department of Energy (DOE) and the Federal Energy Regulatory Commission (FERC) are coordinating efforts to monitor the implementation of the rule.

Each state plan must include provisions that will demonstrate that the plan is making progress toward meeting the 2030 goal. The rule provides 15 years for full implementation of all emission reduction measures, with incremental steps for planning and demonstration that progress is being made.

EPA is creating a Clean Energy Incentive Program (CEIP) to reward early investments in wind and solar generation, as well as energy efficiency programs that deliver results during 2020 and/or 2021. The outreach and engagement with stakeholders and the public will continue now that the rule is final.

Waters of the United States Rule

In August 2015, the EPA created the "Waters of the United States Rule" which allows it to regulate land use to prevent water contamination. For example, if a farmer wanted to convert wetlands to farmland, they may need a permit in order to do that. The rule is under the same Supreme Court stay as the CPP, and is not currently being enforced.

There are costs associated with it, as EPA's own analysis shows. Projects can get delayed, and it will have an impact on developers, manufacturers and the mining industries. The EPA's analysis notes benefits and costs.

https://www.epa.gov/cleanwaterrule/what-clean-water-rule-does says that the EPA and the U.S. Army Corps of Engineers finalized the Clean Water Rule to protect the streams and wetlands that form the foundation of the nation's water resources. Protection for many of the nation's streams and wetlands under the Clean Water Act as amended in 1972 has been confusing, complex, and time-consuming as the result of Supreme Court decisions in 2001 and 2006. The Clean Water Rule ensures that waters protected under the Clean Water Act are more precisely defined, more predictably determined, and easier for businesses and industry to understand.

Specifically, the Clean Water Rule c**learly defines and protects tributaries that impact the health of downstream waters.** While the Clean Water Act protects navigable waterways and their tributaries, the Clean Water Rule provides protection for headwaters that science shows can have a significant connection to downstream waters. The rule also protects waters that are next to rivers and lakes and their tributaries because science shows that they also impact downstream waters.

PROFILE OF A TRUSTEE
Joan Turek

Dr. Joan Turek joined the Board of Trustees in 2012. She has been very involved in community activities for many years, and is a valuable addition.

She was born in California, the daughter of a Naval Officer specializing in special weapons, and lived all over the U.S. while growing up. She went to 15 schools before going to college. She graduated from high school in Clarksville, Tennessee. She earned her BA from the University of Connecticut with Distinctions (1960), and her Masters (1962) and PhD in Economics (1968) from Yale.

Dr. Turek was employed in the Office of the Assistant Secretary for Planning and Evaluation (ASPE), Department of Health and Human Services (HHS) from 1972 until January 2017. In her last position she was a Senior Economist in the Office of Science and Data Policy. . For over 25 years, she managed ASPE's technical support operation which provided a full range of services including scientific programming, computer and graphics support, centralized access to information through the Policy Information Center and statistical policy coordination. Since 1976, she has been responsible for managing the Transfer Income Model (TRIM) a key tool in ASPE's analytic capacity which is used in providing policy advice to the Administration, the Secretary and other senior governmental officials on alternatives to existing tax, income transfer and health programs. She was the primary contact for the Federal Poverty Guidelines issued by HHS for much of that time. In recent years, she has conducted research on the quality of income data on Federal surveys. Her last article will be published in the International Journal of Public Statistics next June. Throughout her career, she has directed and conducted applied quantitative research, both in governmental and private organizations. She retired with 47 years and 10 months of Federal service.

Dr. Turek is past chair of the American Statistical Association's Committee on Statistics and Disability. She was President of the Federal Executive Institute Alumni Association in 1994 and 1995 and also served in other positions within the organization.

Dr. Turek is also very active in her local community. She is on the Board of Owensville Primary Care, a Community Health Center, and was a member of Anne Arundel County's Planning Advisory Board (PAB) for seven years. In addition, she was a member the South County Small Area Planning Committee (1999-2000). She was Secretary of the South County Coalition from 1995 to 2000. She was a founder of the Harwood Civic Association and is the current president. . She was chairman of the board of the South County Exchange (2003 to 2007) which grew out of the International Exchange (1998). She is also a board member of the Sierra Club AA Chapter. She received their award for community service in 2008. ,

She has lived in Harwood for over 37 years at Oakwood, which was the main house of a tobacco plantation. It was built by Sprigg Harwood who was a Maryland State Senator, State Treasurer and one of the two leaders of the movement to get Maryland to secede from the union. Oakwood is on the National Register of Historic Places.

Joan's hobbies include bridge, gardening, needlework and painting. However, she says her main hobby is working on local land use issues.

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