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Testimony of
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Presented to the
SUBCOMMITTEE ON CONSERVATION AND FORESTRY

of the
COMMITTEE ON AGRICULTURE
UNITES STATES HOUSE OF REPRESENTATIVES

June 13th, 2017

MR. CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

Opening.

Mr. Chairman and Members of the Subcommittee, I am John W. Peterson from Burke, VA, and I am honored to be asked to testify on the value and benefits of USDA's Watershed Protection and Flood Prevention Act (PL 83-566), the Flood Control Act (PL 78-534), and the Watershed Rehabilitation Amendments of 2000 (PL 106-472), representing The Land Improvement Contractors of America (LICA). LICA Member contractors have constructed many of our nation's flood control dams, and helped install most of the other conservation practices on our farms and ranches. I present this testimony in support of what I consider the most beneficial water resource conservation infrastructure programs ever developed in the United States. LICA understands full well the need to use our tax dollars wisely. That makes the work of your Subcommittee very important. It also makes it imperative that the federal programs we have are those that provide real benefit to society, and are not programs that would be nice to have if funds were unlimited. LICA believes these Watershed Programs are examples of those rare programs that address our nation's vital natural resources infrastructure, do so in a way that provide benefits in excess of costs, and are programs that serve as models for the way all federal programs should work.

I will admit my bias in support of these beneficial programs. In my 40-years with the old Soil Conservation Service (SCS), called the Natural Resources Conservation Service (NRCS) since 1994, I have planned watershed projects in MN, OH, IN, and AZ; designed watershed dams in MN, OH and IN, constructed watershed dams as a project engineer in MN, and directed the watershed program nationally for USDA in Washington, DC. After retiring from USDA, and while serving as the Executive Director of the National Watershed Coalition (NWC), I worked

with Oklahoma Representatives Lucas and Watkins, and the late Senator Paul Coverdell (GA) and Senator Blanche Lincoln (AR), as Chairman Lucas championed the passage the Small Watershed Rehabilitation Amendments of 2000, PL 106-472. A good friend, Dr. Dan Sebert from Pawnee, OK, replaced me as the NWC Executive Director. He and the NWC are extremely good watershed program references. Coming full-cycle, I am also now the Chairman of the Northern Virginia Soil and Water Conservation District (NVSWCD). Our District is the co-sponsor of the Pohick Watershed Project, along with Fairfax County. Four of our Pohick Watershed's six flood-control structures have been rehabilitated in recent years, some with assistance from the Rehabilitation Act. I believe my Watershed Program experience has given me a perspective that I hope is helpful to you.

General Watershed Program Observations.

There are about 2,100 Natural Resource Conservation Service (NRCS) assisted watershed projects in the Unites States, covering 145 million acres, with projects in every state. In 1,271 of these projects, 11,845 flood control (or floodwater retarding) dams have been constructed by local watershed sponsors with NRCS assistance. In most cases, a local Soil and Water Conservation District (SWCD) is one of the local sponsors. In some cases, they are assisted by other co-sponsors such as watershed districts or county government. The total average annual monetary benefits these projects produce is $2,257,132,064 (2016 dollars). Nearly $2.3 billion. That is very significant! I have attached a listing of the number of watershed dams located in each state as attachment #1. In addition, over 282,000 acres of wetlands and over nine-million acres of upland wildlife habitat has been created or enhanced by watershed projects. Conservation practices that improve water quality are a vital part of all watershed projects. Practices such as terraces, waterways, grass buffers, strip cropping, and grade stabilization structures, are used to prevent soil erosion and reduce sediment. They also increase the service life of dams and their ability to provide flood damage reduction. There are watershed project dams in 218 Congressional Districts across the nation.

Note that I called these flood control dams floodwater retarding dams. I am sure you all remember the Great Midwest Flood of 1993. From May through September of 1993 record flooding occurred across ND, SD, NE, KS, MN, IA, MO, WI and IL. 50 deaths occurred and damages approached $15 billion. I also managed USDA Emergency Watershed Program then, and was involved in USDA's disaster assistance to the damaged areas. This flood wasn't caused by a single rainfall event, but was more of a prolonged hydro-meteorological event. The rains came to the area, stalled, and stayed for months. One thing that flood event taught me is that we humans don't really control floods. We are very good at reducing flood damages, but we do not control floods. Since then I have referred to these watershed dams as floodwater retarding dams, not flood control dams.

However, the Great Midwest Flood also proved the many benefits of the Watershed Programs. After the floods passed, my SCS colleagues in IA, one of the states effected, looked at watershed projects and 1993 flood damage reports in four Iowa Counties, Crawford, Union, Mills, and Decatur. The result was graphic. The areas that had watershed projects installed requested far less disaster assistance (1). Roger Schnoor, who at that time was the President of the Iowa Watersheds organization (now disbanded) said *"These watershed projects stood out like protected islands in a sea of damage."*

This is just one of several such evaluations that occur across the country that have demonstrated that watershed projects significantly reduce the need for emergency recovery following major floods.

The USDA assisted watershed programs address multiple natural resource objectives. Objectives that can be addressed are flood damage reduction, watershed protection (erosion and sediment control), water quality improvement, rural water supply, water conservation, fish and wildlife habitat improvement, recreation, irrigation, water management, groundwater recharge, etc. That is flexibility emphasizing multiple uses.

People should understand these federal Watershed Program funds are only a part of the total that is committed to this vital national, conservation purpose. The local project sponsors in these "federally assisted" endeavors also have a tremendous investment. As a minimum, they provide all the land, easements, and rights-of-way costs for construction of the structures, as well as being responsible for 100% of the operation and maintenance costs for the life of the structure. Congress increasingly talks of wanting to fund those investments in our nation's infrastructure that will sustain us in the future. Water quality and watershed infrastructure management provide that sustainability, and should be a national priority.

My colleagues on this panel have done an excellent job of telling you about the programs themselves. I will concentrate on what these projects have done, their benefits. And those benefits are very substantial.

I will start by mentioning the results of a complete watershed program evaluation. The most current program evaluation I know of (2), demonstrated the actual ratio of benefits to costs in all those projects completed as planned, was approximately 2.2:1. And the study showed that more benefits were obtained from these projects than had been originally claimed. The actual adjusted economic benefits exceeded the planned benefits by 34%.

The watershed projects produce $2,257,000,000 in average annual benefits (2016 dollars). And those benefits are low because many of these projects have exceeded their “evaluation life” (the economic evaluation that calculates when the anticipated benefits will have repaid the projects costs), and when properly maintained, repaired, and failing components replaced, those dams will continue providing benefits indefinitely. In addition, there is considerably more infrastructure being protected by these projects today than when they were first planned. Properly maintained, our US Watershed Program dams will serve us far longer than their economic evaluated life. And I would add that 2018 is a milestone year in the Watershed Program as more than 50% of the projects dams will have exceeded their evaluated life, and their benefits continue.

The evaluation also mentioned that the projects provided a wide range of social benefits, benefits that enhance the quality of people’s lives. Many of these benefits are not included in the calculation of monetary effects because of the difficulty in assigning monetary values. Yet these social benefits cannot be ignored simply because quantification is difficult. Some of these societal benefits are reducing;

- the threat of loss of life.
- health hazards such as insect breeding pools, sewage overflows, and chronic wet conditions that are particularly hazardous to the elderly and children.
- significant risk and inconvenience associated with damage to roads and bridges.
- disruption of necessary services such as police and fire protection, and the need for emergency equipment.
- pollution of drinking water.
- pollution of water used for water-based recreation.
- interruptions of utilities.

What if other federal programs did so well? Recent budget proposals to limit funding for the Watershed Operations and Watershed Rehabilitation Programs which help communities improve water quality, control erosion, reduce flood damages, protect people's lives, and improve local infrastructure, is short sighted. There are also proposals to reduce funding for USDA's Conservation Technical Assistance (CTA) Program, the very lifeblood of voluntary conservation in the United States. These proposals would eliminate programs that produce net benefits to society as a whole. That simply makes no sense. We in the conservation community should talk more about how these programs benefit all of society, not just in rural areas, but everywhere.

One other national benefit worth mentioning is the availability of Dam Watch, a new web-based application that provides real-time monitoring of rainfall, snowmelt, stream flow, and seismic events that could pose potential threats to dam safety. It will help watershed project sponsors monitor and manage dams so they can better prevent and protect against hazardous, costly and potentially catastrophic events.

Project benefits in select states.

Chairman Lucas's Oklahoma has long been a leader in these Watershed Programs. OK has 129 watershed projects in 64 counties. These projects contain 2107 flood damage reduction dams, and provide Oklahoman's with $91.5 million in average annual monetary benefits. And Chairman Lucas's 3rd Congressional District has 1,040 dams providing his district with $34.5 million in average annual monetary benefits. Oklahoma is probably the best state in having good watershed historical information. Much of that is due to the work of a good friend Larry Caldwell, P.E. (NRCS Retired), who has personally kept that information current. He also keeps national information current.

Ranking Member Fudge's Ohio has also been active. There are 27 watershed projects in Ohio covering over 1.8 million acres. To date 77 floodwater retarding dams have been built. Ohio also has a number of non-structural watershed projects underway. Twenty-four of Ohio's 77 dams are classified as high hazard, and some do need to be rehabilitated to meet current dam safety standards. The current cost estimate for upgrading all Ohio's watershed dams to meet Ohio Dam Law is $6.3 million.

In my own Commonwealth of Virginia, NRCS has assisted sponsors with construction of 109 single-purpose flood control dams and 41 multiple-purpose structures. Dams have been installed in 35 watersheds within 27 counties across Virginia at an original cost of over $151 million dollars. Over time, the recreational benefits have exceeded the levels expected during the planning process for many of the sites that were built. Of the 41 multiple-purpose structures, 25 were built with recreation as a purpose. Of those, 11 have public access recreational facilities. Ten of the 15 structures built with water supply as the only secondary purpose also have public recreation. The big surprise was that 16 of the single-purpose flood control dams also have public recreation facilities. Together, 25% of the dams have public access recreation. Fishing, boating, camping, hiking, and bird watching are just a few of the recreational benefits. From the social perspective, the dams have become part of the fabric of the community. In several places, there are lake-based events that bring tourism into the county. All of these activities bring value to the community that is measured not only in the associated economics, but in giving an appreciation of nature, improving physical and mental health, and contributing to the quality of life. NRCS can be proud of the way that the people have made these reservoirs a part of their daily lives. In addition to flood damage reduction, 15 of these structures provide community

water supply and 37 are used for public recreation. Between 2005 and 2016, NRCS also helped communities rehabilitate 10 of those dams at a total project cost of over $22.3 million.

A very unique project, Pohick Watershed, Fairfax County, VA.

I am very proud of a watershed project just across the Potomac River in Fairfax, County, VA, in the shadow of our nation's Capital. It is the Pohick Creek Watershed Protection and Flood Prevention Project (3) whose sponsors are my own Northern Virginia Soil and Water Conservation District which I serve as Chairman, and Fairfax County, represented by the Department of Public Works and Environmental Services (DPWES), and County Park Authority (PA). The original Work Plan calculated the b/c ratio to be 1.4:1. The watershed area is 22,690 acres, and the watershed population in 1965 was only 4,767 people. In 2000 the population had grown to 117,000, and it is about 150,000 today, in a County of nearly 1.2 million, about 14% of the State's population and the most populous County in the Commonwealth. This project planning began in 1965 when erosion from construction activity had virtually destroyed several residential lakes. In addition, a multimillion-dollar sewer referendum opened up the Pohick Watershed for residential and commercial development. These circumstances caused public concern that rapid conversion of land from rural to urban uses was creating irreversible damage to streams and the pleasant hillsides. Planning this watershed project resulted in many national firsts. This was the first watershed project planned in a watershed being converted totally from rural to urban land use. All the dams were planned as high-hazard structures providing protection from the 100-year frequency storms downstream. And the project brought forth new guidelines for erosion and sediment control (land treatment) in urban situations. An erosion and sediment control ordinance was passed by the county in 1967. That ordinance later became the model for the erosion and sediment control law passed by the Commonwealth of VA in 1967. In addition to dealing with urban erosion and sediment control, the project contains six floodwater retarding dams. The County says the major benefits of the project are that it:

- Protects stream valleys from flooding.
- Promotes orderly residential and commercial development.
- Expands water based recreation opportunities for residents.
- Protects wildlife habitat in flood plain areas.
- Influenced the establishment of effective erosion and sediment control ordinances.
- Serves as a laboratory for new ideas on urban soil & water conservation measures.
- Reduces siltation in rivers and lakes.
- Challenges developers and landowners to protect the natural environment.
- Preserves open space in stream valleys.
- Eliminates unsightly and expensive concrete rip-rapped channels.
- Provides aesthetic backdrop for adjacent residential and commercial development.
- Provides improved stormwater quality to the Potomac River and & the Chesapeake Bay.

The Pohick Watershed Project is operated and maintained by the County DPWES and PA, and they are one of the best project sponsors in the entire United States. Our dams are impeccably maintained, and constantly used for recreation by residents. I would invite any of you Subcommittee Members to travel to Fairfax County for about 4 hours some day, and I will arrange for County Officials to join me in giving you a first-hand tour. You would be impressed.

I will share a comment from the Chairman of our Fairfax County Board of Supervisors, Sharon Bulova, on how she feels about the Pohick Watershed and the relationship the County has with NRCS.

The county would not have been able to upgrade the emergency spillways on four of our PL-566 high hazard dams to comply with current dam safety standards in a timely fashion without the great partnership and funding through the NRCS. The county's PL-566 high hazard dams can now safely convey the stormwater flows from a probable maximum precipitation event which correlates to roughly 27 inches of rain in a 6-hour period as a result of these recent upgrades. The lakes are considered a valued asset by our community, providing flood protection for many downstream residential and commercial properties, roadways and a railroad while also serving as a recreational amenity. These lakes also have been designed and serve to improve downstream water quality in the Pohick Creek watershed, the Potomac River and Chesapeake Bay by capturing sediment and other pollutants. NRCS has made a positive impact on the health, safety and welfare of Fairfax County. – Chairman Sharon Bulova, Fairfax County, VA

Why watershed Programs?

The watershed as the logical unit for dealing with natural resource problems has long been recognized. PL-566 offers a complete watershed management approach, and should have a prominent place in our current federal policy emphasizing watersheds and total resource management based planning. Proper watershed management improves water quality. Why should the federal government be involved with these watershed infrastructure programs?

- They are infrastructure programs whose objectives are the sustaining of our nation's precious natural resources for generations to come.
- They are not federally owned, but federally assisted, locally sponsored and owned, operated and maintained. They do not represent the continued growth of the federal government.
- They are locally initiated and driven. Decisions are made by people affected, and respect private property rights.
- They share costs between the federal government and local people. Local sponsors pay between 30 - 40% of the total costs of PL-566 projects.
- They produce net benefits to society.
- They consider and enhance environmental values. Projects are subject to the discipline of being planned following the National Environmental Policy Act (NEPA), and the federal "Principles and Guidelines" for land and water projects. That is public scrutiny!
- They are flexible infrastructure programs that can adapt to changing needs and priorities.
- They are programs that encourage all citizens to participate.
- They can address the needs of low income and minority communities.
- They are targeted to address the most serious resource problems.
- And best of all - they are programs the people like!

Every State in the United States has benefited from the Small Watershed Program.

Some suggestions.

There are some suggestions I would like to make concerning this very important watershed legislation. I believe the objectives of this legislation should be expanded to include more non-structural water quality practices, and allow the law to provide cost-sharing in developing rural water supplies (without water there is no rural development).

With the "downsizing" the NRCS has experienced, I would be remiss if I did not express concern as to their ability to provide adequate technical support to these watershed programs. NRCS

technical staff has been significantly reduced, and budget constraints have not allowed that expertise to be replaced. Traditional fields of engineering and economics are but two examples where expertise has been lost. I see many states where NRCS capability to support their responsibilities is seriously diminished. This is a disturbing trend that should be halted. This downsizing has a very serious effect on state and local conservation programs. Local Watershed and Conservation Districts and the NRCS combine to make a very effective delivery system for providing the technical assistance to local people - farmers, ranchers and rural communities - in applying needed conservation practices and watershed programs. But that delivery system is currently strained! A healthy federal partner is critical to this partnership success. Many states and local units of government also have complementary programs that provide financial assistance to land owners and operators for installing measures that reduce erosion, improve water quality, and maintain environmental quality. The NRCS provides conservation districts, through agreement with the USDA Secretary of Agriculture, "on the land" technical assistance for applying these measures. The delivery system currently is in place, and by downsizing NRCS, we are eroding the most effective and efficient coordinated means of working with local people to solve environmental problems that has ever been developed. Our system and its ability to produce food and fiber is the envy of the entire world. In my view, these watershed infrastructure programs are most important in terms of our national priorities.

U.S. Chamber of Commerce President and CEO Tom Donohue recently wrote, “After years of talking about failing infrastructure, we finally have the bipartisan buy-in, political will, and public support to do something about it. The president has pledged to act on this priority—and the public supports it. According to a new U.S. Chamber poll, fully 70 percent of Americans want the federal government to invest in infrastructure. By similar margins, the poll showed that Americans understand that infrastructure investment will grow the economy, help businesses, and create jobs.” Our watershed project infrastructure should be a major part of this infrastructure investment.

The Land Improvement Contractors of America (LICA) dates to 1951, and represents those earthmoving contractors that have installed many of the watershed dams and most of the conservation practices on our nation’s landscape over time. They work closely with Soil & Water Conservation Districts and their motto is “Dedicated to the Professional Conservation of Soil & Water.” The focus of LICA is to encourage high standards of workmanship in resource management land improvement practices, and to promote private enterprise in land improvement contracting. Training and safety are key LICA activities. They have also worked very closely with NRCS over the years.

Let me close by sharing the LICA Creed.

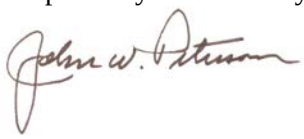
The LICA Creed

Land, the Foundation of the Nation,
the basis of all wealth,
the heritage of the wise, the thrifty and prudent,
the poor man's joy and comfort,
the silent partner of man,
the producer of food, fiber, and fuel.
The basis of factories,
the foundation of banks,
all that man builds is from the land.
We often take it for granted, or even abuse it,
and yet many unthinking and unknowingly pass the land by.
What man finally does with the land will be the deciding factor of his survival.

LICA and I pledge our full support to you as you continue your most important work. I have nearly sixty-years' experience in natural resource watershed infrastructure conservation, and would be pleased to serve as a resource as needed, as would our contractor members.

Thank you for allowing me this opportunity.

Respectfully submitted by:



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References.

1. An Iowa NRCS PDF showing Crawford, Union, Mills and Decatur Counties entitled "Watershed Projects and 1993 Flood Damage Reports in Four Iowa Counties."
2. Evaluation of the Watershed Protection and Flood Prevention Program, USDA-SCS.
3. Pohick Creek Watershed Work Plan, Fairfax County, VA. January 1967.

Attachments.

1. Table showing watershed dams constructed in each state.
2. Committee on Agriculture, House of Representatives, Witness Disclosure Form.
3. John Peterson's Biographical Summary.

ACCUMULATION BY STATE OR TERRITORY	PROGRAM FUNDING CODE OR PROJECT AUTHORIZATION					TOTAL
	PL-566	PL-534	PILOT	RC&D	OTHER	
Alabama	100	0	0	7	0	107
Arizona	21	0	2	2	0	25
Arkansas	181	0	24	3	0	208
California	15	0	1	0	0	16
Colorado	87	0	55	3	0	145
Connecticut	29	0	0	1	0	30
Florida	10	0	0	0	0	10
Georgia	218	117	12	10	0	357
Hawaii	8	0	0	1	0	9
Idaho	3	0	0	0	0	3
Illinois	55	0	11	0	0	66
Indiana	132	0	0	2	0	134
Iowa	1,066	485	29	35	0	1,615
Kansas	800	0	14	17	0	831
Kentucky	182	0	17	1	0	200
Louisiana	35	0	0	0	0	35
Maine	16	0	0	0	0	16
Maryland	16	0	0	0	0	16
Massachusetts	29	0	0	1	0	30
Michigan	13	0	0	0	0	13
Minnesota	37	0	8	6	0	51
Mississippi	188	367	0	5	0	560
Missouri	1,148	0	30	25	0	1,203
Montana	16	0	0	3	0	19
Nebraska	619	0	106	13	0	738
Nevada	8	0	0	0	0	8
New Hampshire	24	0	0	0	0	24
New Jersey	19	0	0	1	0	20
New Mexico	75	0	2	2	0	79
New York	52	0	2	5	0	59
North Carolina	101	0	11	2	0	114
North Dakota	39	0	10	1	0	50
Ohio	48	0	16	0	0	64
Oklahoma	987	1,107	6	7	0	2,107
Oregon	6	0	0	0	0	6
Pennsylvania	82	0	0	9	0	91
South Carolina	97	0	7	1	0	105
South Dakota	33	0	2	21	3	59
Tennessee	133	0	9	1	0	143
Texas	697	1,242	60	4	0	2,003
Utah	40	0	3	2	0	45
Vermont	4	0	0	0	0	4
Virginia	118	29	3	0	0	150
Washington	3	0	0	0	0	3
West Virginia	77	81	7	4	1	170
Wisconsin	85	0	2	1	0	88
Wyoming	12	0	0	1	1	14
Puerto Rico	2	0	0	0	0	2
TOTALS	**7,766**	**3,428**	**449**	**197**	**5**	**11,845**