

H O U R G L A S S



F O U N D A T I O N

Is Lancaster County Running Out of Water?

**A Hourglass Foundation Public Forum
Woods Memorial Room, Franklin and Marshall College
Lancaster, PA**

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Featured Speaker:

***David E. Hess – Secretary, Pennsylvania Department of Environmental Protection
“The Future of Water Resources Begins Today”***

Discussion Panelists:

***Thomas T. Baldrige – President, Lancaster Chamber of Commerce & Industry
Jeanne Sonntag – Chairperson, Lancaster County Water Resources Task Force
Daniel L. Zimmerman – Chairperson, Lancaster County Planning Commission and Warwick
Township Manager***

Is Lancaster County Running Out of Water?



Donald K. Roseman, Jr.

Don Roseman:

Good evening. My name is Don Roseman, and I am the President of the Hourglass Foundation. Tonight, I'd like to start by setting a little bit of the stage for this evening by sharing with you the goals of the Hourglass Foundation.

To have a major and lasting impact on the quality of life in Lancaster County by raising awareness of issues, gathering information and expertise, facilitating discussion, providing direction, and championing the intelligent management of county resources. The foundation works with local officials, citizens, organizations, governments, to find solutions to the immediate and, more importantly, long-range problems of growth.

And that's how we got here tonight. To start, as we do at the Foundation, we look at the issues and where they are headed. About a year and a half ago, an individual brought to our attention an article in the magazine *Civilization*, which talked about the global issues of water, and where and where not water is causing an awful lot of the growth problems of this planet. Most of the major wars that are occurring and arguments that occur are happening over water as the basis of their fundamental disagreements. Here in the United States, in the western part of the United States, water is a very precious commodity and bitterly disputed. So we thought, gosh, at some point, the way the growth of Lancaster County and the eastern United States is going, perhaps we could end up in a situation similar to that, and we don't want to end up like that. We felt we should start to investigate, at least, where we are with water.

We started out by having a number of small groups of people who are part of the puzzle. In doing so, we found where these people who are in charge of or responsible for water issues are. They ended up being at the federal level, the Susquehanna River Basin Commission, (the SRBC), at the state level (the DEP), the county conservation district, a portion of it. At the local level, we've come across the County doing an awful lot of work as part of the County Planning Commission doing work on a Water Resources Plan. And finally local governments, local municipalities that have their own water companies.

The first thing we decided, though, in water, there was two Q's to it: Quality and Quantity. Our issue really revolved around the Quality side. It was there we focused almost

100% of our attention. I will say that recently, though, the nitrate problem creating Quality problems could have significant impact on the Quantity issue, but until this point there has been an examination on the Quantity side only. We continued to hold meetings throughout the summer and into the winter of 2001. And, interestingly enough, we were blessed with a drought, which has created a tremendous amount of interest on the part of the citizens of Lancaster County, and of course all of eastern Pennsylvania. This awareness has been a blessing in a sense, because it has given us an opportunity to become more public with this question and getting more input from the citizenry. From an activity standpoint, the most active group with a citizen basis are the watersheds, not that we have worked with them in any direct way. But we have, of course, become quite aware of their activities and how they are fundamentally working on the Quality side of water at the surface level.

From our perspective, though, the work that was done by the Lancaster County Planning Commission and its Water Resources Task Force has been the fundamental underlying database that we've had available to us to develop what we have in your packet tonight. We have provided you with kind of a background of water, locally and regionally, and it's kind of the full picture of the various parts of water. In addition to that, the way we've focused this forum this evening, is participating with the County in a series called Envision Lancaster County, a series of programs devoted completely to the quality of life of the County. In fact, just recently, they had a significant retreat at Millersville University on land planning and smart growth. The White Paper you have there covers most of the things that we feel are important about water. It covers the drought. It covers the threats to our water supply, where we get our water, where we use our water, and many other things.

One of the things, though, that you'll find as we try to decide how water is best managed in the County, is that we've come across the fact that there are 22 water companies serving Lancaster County. About 270,000 of our County population in 1993, which is the time that the Task Force studied this, 61% of the total population of 438,000 at that time, were served by these public water companies. The rest of us are getting our water from our own sources of our own wells. Of the 270,000, though, only 110,000 people in Lancaster County get their water from the surface. This means 75% of our County's population gets its water source from the groundwater, clearly the most important part of this puzzle. That's why the rain and the drought are so significant to Lancaster County and its water issue. In this water study that was done, they asked the 42 water companies to determine their peak capacity, how much water could they really pump if they needed to versus how much did they produce on a daily basis on an average pumping process. The good news is, at that time, that we have about 135% of capacity, regarding the public water companies working with these groundwater sources. Every day, on an average, we are pumping about 35 million gallons of water out of our aquifer, and about 22 million gallons are coming out of the Susquehanna, essentially, for a total usage of just under 60 million gallons of water.

This drought has been a significant problem for all of the water companies and mostly for a lot of the well-based homes. One of our panelists tonight, Mr. Baldrige, has a small problem. His well went dry a couple of weeks ago, and he is now at 500 feet down to get water. But this is going on throughout the County. In fact, in your White Paper, you will see a little outline

showing just about at every spot within the County there is a story about having to dig a new well or dealing with water when you don't have it. This current drought started, as I mentioned a short time ago, in 2000, but we've had droughts in the past. I got this, this morning: if you're really interested in following this issue. Millersville University's Weather Department has just brought up a Drought Watch, if you will, on their website. In there, they discuss that there were two other major droughts that we've experienced since we started collecting this data. Back in the 30's, we had a 23-inch rainfall deficit. In the 80's, we had a 22-inch rainfall deficit. This deficit that we're in right now, a bit more prolonged, is up to 29 inches. In 1930, when we were down 22 inches, we only had 196,000 people living in Lancaster County. On top of that, I would suggest that the average use of water in your homes was probably about 20 gallons per person. That would yield about 4 million gallons a day of water usage. In 1980, when we had the second one, we were up to 360,000 people and probably then, with the advent of all the modern appliances, we were probably coming in at around 50 gallons per person, so we were using about 18 million gallons per day during that drought. But here in 2000-2001, we are now at 470,000 people, and we're using about 62 gallons a day, average. That's about 29 million gallons a day, a far cry from the first two droughts. To give you another piece of knowledge about water and how much water it takes to do things, we have 950,000 square miles of land in Lancaster County. This rainfall deficit is 29 inches of rain. Over that period of time, if you do the math, how many inches of rain x 950,000 square miles, and divided it down to days and gallons, you will find a shortfall of 75 million gallons or water a day that are not going into our aquifer. As I said earlier, we're using about 60 million gallons a day of water. Not a correct correlation, but just a piece of data to give you an idea of how much the water shortfall is and how important it is for us.

The good news, as we put together our invitation tonight, we titled it, "Is Lancaster County Running Out of Water?" Clearly, it is not actually running out of water tonight, but certainly, with the growth that we see in the County and all the other threats to our water supply, the groundwater supply is definitely of concern. If our house faces the west, at our front door we have a river. That river, even on the worst day in 2000, sent over 2 trillion gallons of water past our front door. On an average day in the year 2000, over 22 trillion gallons of water went by. So I think the answer to our basic underlying question, the threat to the water supply is that I don't think we're going to run out of water. It's a question of how we manage the water we have and the water that's in the ground, because that's the water we're most dependent on.

One of the issues we found as well in studying this thing, and we're grateful to Rich Cairo, who is the staff legal counsel to the Susquehanna River Basin, who produced a White Paper. This White Paper essentially talks about water resources management in Pennsylvania. There is a copy of that in your portfolio as well. That talks about the rules and the laws of water. In Pennsylvania, essentially, Rich says, there are no rules. There are no laws. It was set up initially as riparian rights, and the water that is on your property is yours to use. If the water runs past or on your property, it is yours to use. You dare not take it off the property, but it's yours if it's on your property. Common Law has settled many, many arguments about water, and that's what the bulk of the paper is about. It is how the existing rules of water have been determined actually, through Common Law determination.

There are three levels of control, though, of water. At the federal level, the SRB, there are rules about how much water you can take out of the ground, without at least being under a bit of control. The first is a 100,000 gallons/day limit, very heavy withdrawals, that is managed by the Susquehanna River Basin. At the state level, the DEP and the conservation district, monitor a lot of things about the water. They are the managers of our watershed programs, and our local municipalities manage the balance of our water. As I said earlier, there are 42 of them that have water systems of one nature or another. They are either private water companies or departments of or authorities. To some extent, part of this management issue hinges around the income stream supplementing their overall budgets. Hence, the control of these water companies is a little bit of an issue as well. There are threats to our water system, and that was part of the endgame of the Water Task Force. Its work basically hinged around how we can protect our watersheds and our wells. They have done a lot of work in working and demonstrating how those water protection things could be taken care of. There has not been an awful lot of cooperation from the municipalities that have these wells, but nonetheless they have attempted to bring them into the fold.

This evening, we have invited David Hess, Secretary of the Department of Environmental Protection, down. It is in his sphere of governance that our best hope is to see some changes in the way water is managed and governed. Secretary Hess has a good background, a long background, in government. He has been 18 years basically in the Department of Environmental Protection and its surrounding areas, working for Mike Fisher and David Brightbill. This evening, he is going to give us a discussion about water. Our future for water resources starts now. With that, I turn this mike over to David Hess.



Secretary Hess:

Don, thanks very much. The first thing I want to do is congratulate the Hourglass Foundation for taking on this issue. What they have begun, and hopefully will continue for another few meetings, is public discussion of water resources in Lancaster County. It is a discussion we began in the Department with a lot of other partners statewide for the last year and a half. Some of you may know that we have, along with our other partners, the Department of Agriculture, Community and Economic Development, PENNVEST, and other partners, had a series of Water Forums all across Pennsylvania, 15 of them, including one here in Lancaster County. I had the chance to go to 13 of those forums, so water is not a new issue to me. And Lancaster County is not a new place to me, either. I was born and raised here, and, in the last couple of weeks, I think we were saying earlier, I've been in Lancaster County six or seven times. I'm afraid the County Commissioners are going to send me a tax bill if I show up here too much more often. But it's always great to get back here to Lancaster County.

Water is a critical resource. I think everyone realizes that, and I think Don's introduction was absolutely terrific. I would commend to you this background paper that's in your folder tonight. There is a lot of good information about water resources. I think the question that's raised tonight, "Are we running out of water?", is a good one. Because, in large part, we don't

have the answer to that question. We don't have, as we sit here, a lot of information that we can tell you about water resources. There is some information back there that we gleaned from the U.S. Geological Survey and other sources. For example, there is only really one reporting monitoring well in Lancaster County for the whole county, and that has only been in service for less than two years. We have information from other sources about groundwater resources. We do have information on how much water is running past our front door here in Lancaster County. But, as Don mentioned, we have 42 water companies. We have DEP. We have the Susquehanna River Basin. We have lots of other folks here. But the problem is that everyone has sort of their little piece, and we haven't gotten things together to give us a real picture of what's going on with water resources. So, I would propose to you that we really don't yet have a good answer to that question, "Is Lancaster County running out of water?" We just don't know. And to me, as someone who has been involved in environmental protection issues for a long time, that's a pretty scary question, because people and fish can't get along without water for too long. And, if you don't have a good idea of what you have, you can't answer that question. You don't know what the future will hold. Will we have, in fact, enough water to satisfy our businesses, our commercial needs? Will we have enough water around for drinking? Do we have enough water to maintain our natural systems? This week I had the pleasure of touring the Warwick Township and Lititz area for Watershed Days. Tremendous work going on, all over Lancaster County. Don Robinson had us out on a bus trip last week, seeing what's happening with water quality and watershed restoration throughout parts of the County. Tremendous work going on out there on restoring water quality to many areas that needed restoration. We've seen tremendous improvement already, but we haven't yet touched on the issue of water resources, because, as I said, everyone has their little piece.

It's very interesting to me, and one of our guys came up with this figure, Stu Gansel, who is our Drought Coordinator. Throughout Pennsylvania, if you pumped out all the groundwater, the trillions of gallons of groundwater that Don had mentioned, that are all over Pennsylvania, that would only be a pool of water all across Pennsylvania about 8 feet thick. Eight feet is only about this much, from the floor to about right here. I mean, our business, our livelihood, our environment, in large part depends on a layer of water that is this thick. Now to me, that is pretty amazing. That is pretty amazing, that this thin, blue layer is what sustains our environment, sustains our businesses, sustains our drinking water. And, when you put it in that perspective, when you understand the fact that we don't know a lot about what's happening with this thin, blue layer, I think that question we have to answer is a pretty frightening one. And I think a lot of people statewide are very concerned about it. I mentioned the 15 Water Forums. Everywhere we went in Pennsylvania, people were concerned about water resources. We asked a very simple question of gatherings like this all across the state: What is your most important water resource issue. What are you threatened by in terms of water? And the quantity issue came up over and over again, no matter where we went, and in various ways. It's an issue people all across Pennsylvania are worried about. And, thanks to the Governor's 21st Century Environment Commission, they made a recommendation in 1998 that we do a couple of things. And many of those things we have accomplished since 1998. But one big issue that this commission dealt with, the commission had on it labor folks, it had business folks, it had agriculture representatives, environmental folks, local government representative, academic folks. One of the big three recommendations that they made was that Pennsylvania, once and for all, has to

look at the issue of water resources seriously. And, thanks to that commission and thanks to the Water Forums that we held all across Pennsylvania, we have put together a piece of legislation (and the governor announced it in December) that attempts to get at some of these basic fundamental issues of water resources across the state. It has four major elements, and, in fact, Rep. Art Hershey, who is just over the border in Chester County, and Sen. Jim Gerlach have introduced House and Senate versions of the legislation. It would do four basic things, some very simple things.

One is update the state's water plan. It hasn't been updated for almost 30 years. The basic facts and figures of how much water we have, where it is, how it is being used. Very basic, but something very fundamental to help us answer the question that was posed tonight and the reason we are here. Basic information about how much water we have and how it is being used, all across the state.

The second feature of that legislation is, once you have that information, identify those watersheds in Pennsylvania where the demand for water is going to exceed supply or has already exceeded the available supply in that particular watershed, groundwater and surface water, so that you can focus attention on those problem areas, so that you can get people together in those watersheds and say, Look, you're in the business community, you're in agriculture, you may have a power plant there, you're in government, you're in environmental protection. You need to get together, because you clearly have a water resource problem. You need to get together and figure out what you're going to do with that issue. And, we're not limiting the number of tools that they could adopt or they could recommend to address that issue. But the key is focusing attention on the areas that need the attention, where the problems are.

The third thing that the legislation will do is put together Pennsylvania's first Water Conservation/Water Use Efficiency Program. When we went out for these forums, and I think its just common sense, people said, We're wasting a lot of water that we use now. Some of the statistics, again, are in this background paper. There are some water supply systems across Pennsylvania that lose 40% of their water that they produce, between the time it comes out of their treatment plant and the time it gets to your faucet. Forty percent is lost. That's a waste of resources. It not only costs money treating that water, it's a wasted resource that is not being used. We have great examples, all over Pennsylvania, of how people are adopting water conservation practices. In fact, we did give out, and a gentleman from Alcoa, where are you tonight? Are there two gentlemen here from Alcoa? They won recently the Governor's Award for Environmental Excellence. And just those award winners, about 215 organizations and companies in the last three or four years, just those 200-and-some companies and organizations, are saving over 6 billion gallons of water by making permanent improvements in the way they use water. And that includes everyone from a food processor to a manufacturing plant that uses processed water. There are terrific examples out there. We need to take advantage of those examples. And in fact last December we held a Water Conservation Congress up in State College, where we gathered all those ideas together, so that we can, when hopefully the legislation passes, move out and start educating people about those practices. The examples are there. People are doing it. Let's not waste the water we have. That was the third major piece.

The fourth major piece, something a lot of folks in Lancaster County are concerned about, is constructing safe water wells. Over one-third of Pennsylvanians depend on individual wells for their water supply. An awful lot of people in Lancaster County do, too. Yet there is not a set of standards for constructing those wells, to prevent groundwater from infiltrating and polluting aquifers. If there is one story I have heard over and over again all across Pennsylvania, it was the story of the farmer who had a development move in next to him. And 30 or 40 wells went into the ground. The guy who was drilling those wells didn't know a thing about how they should be cased, about how they should be constructed, to prevent groundwater pollution, groundwater contamination. And you know the rest of the story. Those wells contaminated the aquifer that farmer was using to water his dairy herd. He had to drill a new well, costing him thousands and thousands of dollars. We need construction standards for new wells that are going to protect the groundwater, and also protect the investment that homeowner or other person has made in those water wells.

Those are the four major things that the Governor's Water Resources Initiative would do. Some people want us to go beyond that. Some people want us to do less. But we think this is the absolute minimum that you need to answer some of the questions that Lancaster is facing tonight. We've had hearings now in the House and the Senate. We've had a variety of interests involved in commenting on the legislation. We are now working with the respective sponsors and the committee staffs. We expect that the House and Senate Environmental Committees will move this legislation before the summer recess, and by the end of this year we hope that a Water Resources bill, which is frankly the last missing piece in the way we protect the environment here in Pennsylvania, will be on the governor's desk by the time the year ends. I've been involved in environmental stuff, as Don had mentioned, for a long time. For at least the last 15 or 18 years, we've been trying to get some basic water resource legislation passed. The drought has helped focus attention on the issue of water resources. It's sort of the exclamation point, if you will, for talking about water resource issues. Because, when your well runs dry, as I guess Tom knows, when you hear that sputtering sound which a lot of people have heard when their well runs dry, that issue of how much water we have and are we running out, really hits home. Folks, I don't think we can let it get that far. We need to know a lot more about water resources. We need to be sure that we're not flying blind any longer on this water resource issue. And again, I want to commend the Hourglass Foundation for the work that you're doing to raise this issue. I know there has been work done before in the county on water resource issues, but now is the time to bring it home. Now is that time that we need to focus attention on this issue, to get legislative action on water resources legislation, and to fill in that missing piece. Again, it is a real pleasure for me to be back in Lancaster County.

I want to leave you with one thought; I think one very important thought. Margaret Mead, the cultural anthropologist, said a lot of interesting things during her lifetime. If you don't know, Margaret Mead was a resident in Bucks County, not too far away. She said something, I think, very profound but very simple at the same time. She said, "Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has." And I think tonight you are on the path to change the world from Lancaster County's point of view, by being thoughtful citizens, coming to hear some of the issues, discussing those issues, not only in this meeting but hopefully in a continuing dialog, because what happens tonight and

what happens over the next few weeks and months is the future of water resources in Pennsylvania. And that future has got to begin tonight. That conversation has got to start occurring in a very way tonight. Because, if we don't, the answer to that question, "Is Lancaster County running out of water?", maybe not in the next five years or the next ten years, but in the next 25 years, will be in fact, yes. I don't think anyone in this room wants that situation to occur. Again, it's nice to be back in Lancaster County. I was, in fact, on my way back to Harrisburg from Philadelphia. Is anyone from Millersville University here tonight? I just wanted to report that the team that Millersville University has sponsored is Tour du Sol, which is a tour that's going up and down the East Coast with solar cars and electric vehicles. Millersville University entered an electric motorcycle. I just wanted to report to you all that they've done very well on the tour so far, so they're going back up the coast. Again, thank you very much for having me here tonight. And I guess, Don, am I standing for questioning during the panel discussion?

Don Roseman:

No, you can sit down.

Secretary Hess:

Okay, very good, thank you.

Don Roseman:

Thank you very much. This forum is going to take on the rest of this meeting this evening. It will take the process of a forum. This evening, we have three panelists with us who represent the various components of the use of water or the management of water. To my immediate left is Jeanne Sonntag. Jeanne was the Chairperson of the Lancaster County Planning Commission's Water Resources Task Force and has devoted the last ten years of her life, minimally, to the study of water in Lancaster County and I believe at this point probably has the best knowledge about the local water situation. Next to her is Dan Zimmerman. Dan is the chairman of the Lancaster County Planning Commission and also the manager of Warwick Township. He brings in the representation of the municipality government that manages our water on a day-to-day basis. On his left is Tom Baldrige, president of the Lancaster Chamber of Commerce and Industry. Tom represents the businesses, those people who absolutely depend on water day in and day out, the Alcoas of the world, the large users, even the smaller ones like myself at Acorn Press, where we have water processing, highly dependent on a very clean and steady water supply. Our challenge tonight with these three is to have questions, which our secretary has, around their expertise areas, and they will be asking him questions, and there will be a dialog about this. We will go from left to right. At the end of that, we will open up the question period to the entire floor, so if there is a question that hasn't been asked yet, we hope you will find a point to be able to ask that question.

But, before we start, Jeanne asked a question. She said, I wonder if we're preaching to the choir here tonight. The first question I'm going to ask is, how many people have never been here before? Is this the first time you've been to an Hourglass Forum? Very good. How many of those people do not have a position in some sort of government? How many are not in government? Very good. So we're not preaching as much to the choir as we thought. One other thing I'd like to say something about before I get away as well, in the back of the White Paper, as

the Secretary Hess mentioned about the materials available, in The study of water, one of the things that is really fun is in the year 2002 the Internet provides you with more information than you could ever believe possible, and I would suggest that, if you are really interested in the water issue at a county level, specifically the entire County Water Resources Plan is on the County's website. You can find out everything that we know about it there as well. Additionally, we have some information here, the Secretary Hess has brought a fair amount of materials. The Commonwealth has printed a tremendous amount of information about water, its sourcing, general information, and that is available as well in the back. We'll start with Jeanne Sonntag, and her first question to Secretary Hess. I think the original plan was a little more that you could see each other, and I don't think I can do much about it. So, Jeanne, I'll let you start.



Jeanne Sonntag:

Thank you. Good evening, everyone. It's a pleasure to see all of you here, and I was delighted to see all the hands go up. That's really super, to see people that are here for the first time, and we hope that you will go away from this forum with a bit more knowledge about what is going on under the ground and in our surface water. One of the questions that I had for Secretary Hess has to do with agriculture, since we're such a heavy agriculture community. We all realize that Lancaster County has a huge livestock population, and most of those animals and fowl ingest some kind of chemicals, for growth, for whatever, for disease. Therefore, my question would be, should we be aware and concerned, since there is little or no testing done by water systems or private well owners, for these materials in our water supplies? And, is DEP currently investigating or doing any research in the growing incursions of antibiotics, prescription drugs, and hormones into our water supply?

Secretary Hess:

Why did you start off with the easy question first?

Jeanne Sonntag:

Well, I just thought we'd stone you right now, since you're here. I just thought maybe you might be interested in this, too. I've been reading a lot about this in lots of newspapers, and it's a problem.

Secretary Hess:

That is an easy question for us. I think this is stump the Secretary night. No, it is certainly an important issue, antibiotics in the environment. I know that the U.S. Environmental Protection Agency has a number of studies going on right now. We, however, don't have any of those studies going on, in terms of antibiotics, in terms of the general environment. Obviously, the water suppliers themselves have to go through a lot of different testing. There has been, in the past, some, I will call them "mini studies", on antibiotics in some water supplies. I don't know offhand what the results of those were, but it's generally a new issue, a very new issue.

Again, the scientific community at EPA is only beginning, I think, to scratch the surface of that particular issue, and that's probably the most direct answer I can give.

Jeanne Sonntag:

I think that's a very honest answer, because I don't think anybody could give a much better answer than that. This is a very new issue. Could I follow up on something? Is that allowed?

Don Roseman:

Yes. One time. I've got to keep a reign on Jeanne.

Jeanne Sonntag:

All right, thank you. It's kind of going on with this idea of information trading. You mentioned what EPA is doing down there. My question is, may we as a population look forward to a unifying computer database, established at local, state, and federal levels, using current EPA funding that is now available down there to establish this kind of network? We need this, because we need frequent interchange of information and commentary on laws and things that they're doing down there. We also need to enable local municipalities in Pennsylvania to reach wise land use and, of course, water resolutions, and we feel that this is one way we can do it. One of the things I know they're using is an extensible markup language, the XML, down there, and I wondered if that is going to be plugged in as far as DEP is concerned? And I hope so.

Secretary Hess:

Actually, interestingly enough, Pennsylvania has been a leader in making water quality information about different sources that we regulate available on the Internet. In fact, you can go on our website now (and if you need the address, it's on every piece of material that we brought along tonight). We make that available in a number of different ways. All the facilities that we regulate we map out in a GIS format, so you can plug in your home address and find out what kind of facilities we regulate, whether it's a source of air pollution or water pollution, for example. And you can click on that source and find out what's happening with that particular facility. We are now in the process of going sort of one level deeper and will be making available, probably in the next year and a half or so, all the monitoring reports and basic information that we get from, for example, a wastewater discharge that an industry or a sewage plant would have, for example. We have also been a leader in collecting and putting on the Web information that watershed groups put together as part of their regular water quality testing, for example. The tools aren't probably as user-friendly as they should be. We are now testing within the department, in fact, a new tool, a watershed-based tool, that would basically allow you to go on the Web, find that live watershed, and in particular areas, what information is available as to, for example, water quality reports, and what water resource information is available. As part of the governor's water resource information or legislation, we would in fact create a particular database, an online database, so you could go in very easily and pick up some of that information that a lot of people would want to see. It's not there yet in terms of water resources. As I mentioned, we have to put those pieces together. But we've have been talking with the River Basin Commission and a lot of other people on making this next version of a State Water Plan something that's dynamic, something that's electronic, not something that is a physical

report that you have sit on a shelf somewhere. People can actually use it as a good tool. It's sort of a longwinded answer, but some of the information is out there now, but a lot more is coming over the next two years.

Don Roseman:

Thank you. Dan?



Dan Zimmerman:

Good evening. Many of my questions tonight will be based on how water resources affect public water suppliers. (That's part of my background.) And also about water resource and land use planning. My first question, Secretary Hess, would be the concept of a water budget. That term is now being used; it's a fairly new term. If you could define what a water budget is and how you see the concept of water budgets and how they affect public water suppliers.

Secretary Hess:

A water budget is sort of a simple thing in concept but something that is very difficult to do in reality. If you're setting up a water budget for a watershed, for example, the water budget is something very simple. How much water is there? How much water does the watershed get? And also how much water is used? So that you have sort of the inside and then the flowing outside. So that you get the picture of how much water is there, how much water is being used, so you can create this idea of, will the demand for water in that particular watershed outstrip the supply of water? A very simple sort of concept, I think, for people to understand, but very difficult to do in practice, because you need to know an awful lot about your groundwater. As I mentioned, there is some information available, but not a lot. There is more information about stream flow and river flow, as was mentioned before, because we have a better handle on that. But it is something that is easy, I think, to understand, but sort of difficult to put together in practice. In fact, only about 5%, as the background information in the Hourglass report shows, only about 5% of municipalities in Pennsylvania, even have any notion of what a water budget is. And that's something that you need to have, if you're going to look at, take a holistic view of, what's happening with water resources in your particular watershed or your particular municipality.

Don Roseman:

Thank you. Tom Baldrige, your first question for Secretary Hess?



Tom Baldrige:

Thank you and good evening. And thanks to Don and Dave, you now all know my personal bias on this issue, having had the loss of a well. I will tell

you, though, from personal perspective, it has really refocused my thoughts on the issue, because you learn how quickly you can't take it for granted. Our well at our house is a hand-dug well that had served the house for 140 years. It was 70 feet deep. Twenty feet away from that well is where they dug the new well, and it's 525 feet deep, so they were able to get the water flow that they needed. It is indicative of how challenging this issue is, and I can assure you that, when it hits you right at home, what you have taken for granted for a long time has a whole different perspective. It's also a way to really get to know your neighbors, because to spend ten days sharing a bathroom with the Chuck and Liz K. family was an absolute delight. Now, we've gone down so far, they use our bathroom, because they can't use theirs.

For my first question tonight, what I'd like to do is maybe take a little different approach that one might expect from someone from the Chamber of Commerce. I do think that this issue of water usage as a business issue is not an issue. Like, I think, most individuals, until it impacts you in some way very directly, it is not an issue you take for granted, no different from the electric utility or other utilities that might serve you personally or you as a business. So, is water a big issue with the business community collectively? It is not, and therefore it has not created a lot of discussion or generated a lot of concern. However, there are areas within the business community that I think rely very heavily on water or the perception of their water usage can be of significant impact to their future success. It's kind of with that angle that I'd like to ask my first question. It's specific to the family farm, which is in Lancaster County certainly a business of great significance. Every time there is a drought or frequently whenever there is an issue of concern over water, family farms are often looked at as a culprit, rather than a help, be it pesticides or chemicals that are used, or just the usage to run a farm, the perception of that is frequently viewed as a negative. Does the state give any credence to the fact, or attention to the fact, or credit to the fact, that an average-size dairy farm of about 85 acres with 60 cows is actually a net gain into the community of 30 million gallons per year of water as a result of its ability to do the groundwater recharge? With that side of the issue often not noticed, I'm wondering if the state takes that into account when they're looking at ways in which they should regulate water usage?

Secretary Hess:

I think the simple answer to that is, yes. In fact, Penn State has done some studies specifically for the Susquehanna River Basin Commission on exactly that issue. When you are trying to construct this water budget, what are the kinds of land uses and who contributes to recharge is a very important thing. This drought in particular, I think, highlights the question, because really the brunt of the drought that we've had has really fallen on well owners in particular, because it takes a long time (and this is sort of common sense) for rainwater to soak 70 or 100, or in your case, Tom, I guess 500 feet into the ground. In fact there are a lot of people who say that we did now recover, in terms of groundwater, from the 1999 drought that we experienced. So, when you're looking at constructing this water budget, you do look at the kinds of land uses, and for this, for county and local officials who may be in our audience, farms certainly do deserve an open space, in particular deserve a lot of "credit" for the recharge that they do contribute to groundwater. And this is something that is taken into account now by the Susquehanna River Basin Commission and will be when we, through the update of the State Water Plan, do our Water Resources Plan.

Jeanne Sonntag:

I'd like to talk about legislation for a minute. Being a League of Women Voters member, I'm always interested in legislation, how it's going through, and how it's going to be changed before it gets passed. And I have a question. When I looked at the first draft of the Water Resources Conservation and Protection Act, I wondered, and several people that I know who were looking at it with me wondered, who will make up the group that is going to identify these so-called critical water planning areas? I think that's going to be a very powerful group, because, of course, that's where the funding is going to flow first, which it should. I mean, there's no problem with that, but I'd like to know, will there be citizen representation on each one of those boards that look at the critical water planning areas and define those.

Secretary Hess:

Absolutely. That's going to be a tremendously important feature of this legislation. Because at the state level there would be a Resources Advisory Group put together that would include not only citizens but, members from agriculture, business, environmental groups, a broad cross-section of groups that have an interest in water. But, more importantly, I think, when you get down to identifying those critical watersheds that do have problems, the people who are closest to the problems need to be those folks who are involved in solving those problems. I think that's a key thing that we've learned over the last eight or ten years in environmental issues. Those folks closest to the problem from a broad spectrum of interests should be the folks that help to solve the problem. DEP being make one partner, Susquehanna River Basin Commission in this area being another partner, but it is agriculture, local officials, business, citizen members, that need to be involved in that process. And it needs to be an open and public process, and that's what we built into the legislation.

Dan Zimmerman:

I was going to ask, you made mention of the Susquehanna River Basin, and in reality there are really two layers or regulatory entities that regulate water usage. I think there is the Delaware River Basin, the Susquehanna River Basin, I don't believe there is a river Basin in the western part of the state...

Secretary Hess:

No, not the western third.

Dan Zimmerman:

Maybe just give us some background, what is the structure of a river basin, what are the functions, and then how do DEP and river basins interact or complement each other?

Secretary Hess:

The Susquehanna River Basin, I think, was formed by interstate compact, approved by Congress in 1968, if memory serves. I was just in elementary school then, so I don't remember that far back. And they have responsibility for a massive watershed that stretches from New York to the Chesapeake Bay. They have four states involved. They have lots of territory, about the middle third, if you can picture of the state of Pennsylvania, the middle third of the state is

basically the Susquehanna River Basin Commission. And they have, over time, developed a series of regulations and requirements on the withdrawal of water based on representatives from each of the states and also the federal government. They basically, as Don had mentioned, have responsibility for actually approving ground and surface water withdrawals that involve water use of over 100,000 gallons a day. Those would be rather large water uses. And that permit responsibility is something that they do on their own in consultation with us. But that is primarily their responsibility. They have also been responsible for some rather large flood control and water storage projects in the entire Susquehanna River Basin to lessen flood damage but also provide water storage in the river basin. Basically, DEP, if you sort of go down one size watershed in the Commonwealth of Pennsylvania we only regulate basically two things with water withdrawals. Thanks, to a 1939 law, we regulate water withdrawals done by only one type of user, and that is water suppliers. We don't regulate industry. We don't regulate other kinds of water withdrawals ahead of time. We also, with respect to water suppliers, do regulate, as I mentioned, not only the withdrawals, but also every individual well or other source of water that water suppliers use as part of their operation. So, our responsibility right now under law is very narrow. We do, in times of drought as you probably know from the last couple of months, have a broader responsibility that we coordinate local Susquehanna River Basin Commission. We can require, as the Commonwealth of Pennsylvania, major water users in times of drought to put together contingency plans and to do that sort of activity. But generally our responsibility with respect to actual withdrawal of water is extremely limited to that 1939 law that just allows us to regulate water withdrawals by water suppliers. When you think of it, 1939 was a pretty long time ago.

Don Roseman:

Now watch it, there are people here who remember that date. Dan, do you have a question #4 that might want to be added onto this right now?

Dan Zimmerman:

As a follow-up, there seem to be different formats throughout the state, as you indicated in the western portion, then water withdrawal, I assume is regulated by DEP to some fashion. Do you see the need for DEP to be a consistent force throughout the state in regulating groundwater withdrawal?

Secretary Hess:

As you pointed out, Dan, the Delaware River Basin Commission in the eastern part of the state, again look at the state in sort of thirds. The Delaware River Basin Commission does have even more authority to regulate water withdrawals than the Susquehanna does. But if you go to the western third of Pennsylvania, there is no river basin commission. There is only our authority to regulate one type of withdrawal, and that is public water suppliers. I think at this point in time what we wanted to do with the Water Resources legislation is put together a foundation of information by updating the State Water Plan statewide. If you can believe this, there is really very little, next to no, information on water resources in the western part of the state, except for some of the Corps of Engineers projects that are out in the western part of the state to keep water running by the point in Pittsburgh. But generally throughout the whole western part of the state there is no basic, fundamental water resource information. And even in

the Susquehanna River Basin, it's very, very basic. And that's why we want to, through the update of the State Water Plan, have a consistent amount of information on water resources across the entire state to use as a foundation for going on to the next steps. But we do not see, at this point, a need for DEP to get into a brand new water withdrawal permit program. We want to see where the issues are, see what the problems are in these critical water areas first, before we figure out what tools are needed to solve those particular problems. I think one of the reasons water legislation has not passed in the last 18 years in the General Assembly is because of this diversity in Pennsylvania between the western, the central, and the eastern parts of the state. We need to find a common ground, a common set of things that people can agree on, and those are the common things that we include in the legislation. Permit authority and that sort of thing is not something that is agreed to by everybody in the entire state. But I think, just like most people, once the problem is identified, once the magnitude of an issue is identified, I think people will act. But I think that is left for sometime in the next few years.

Tom Baldrige:

Dave, I mentioned earlier that this water issue is not a huge issue for business in general, yet you also in your talk gave an example of how businesses have gotten together and conserved a significant amount of water usage. In the interest of kind of educating the public, are there other best practices that businesses have employed that have proved to be successful, and can they be implemented by other businesses in Lancaster County?

Secretary Hess:

Absolutely. In fact, you have examples in neighboring counties. For example, I think most people are familiar with Herr's potato chips and snack foods product line. Herr's plant, in the lower part of Chester County, does a tremendous amount of recycling of water, reuse of water, within their plant as a food processor. And they also go one step further. After they treat water that they can no longer recycle through their plant, they spray irrigate that water out on fields that they have nearby. Again, the idea is to recharge the groundwater.

There are many examples of companies who have put in place closed loops. In other words, they may have a manufacturing process in which they do use water, and they clean that water over and over again and only add water to make up for the amount that may evaporate or be lost in the system. We have on our website through the Environmental Award Winners many examples of where that sort of system has been very successful in other parts of the state.

You have water suppliers who have done tremendous work tightening up their leaks in their water systems. In fact, we've had, through the Pennsylvania Rural Water Association that works with smaller water systems all across the state, great examples of where they have helped water companies. I mentioned that some water companies lose maybe as much as 40% of their water. They've tightened that up to less than 10% in some cases, and even better. So, I think there are great examples that can be pointed to. There are also great examples of communities that have, through their land use planning processes and their watershed restoration efforts, encouraged groundwater recharge in areas. I don't want to steal Dan's thunder, but I think Warwick Township, in some of the riparian work around Lititz Run, and Don Robinson can give you some other examples throughout the county, of where they have chosen to do different

things with their stormwater and actually installed riparian buffers and open areas along streams to take up the flow of water and also encourage groundwater recharge. These are best management practices that I think are available with very little research that others can adopt. I think it's the broad range of things, everything from communities' encouraging groundwater recharge to businesses' adopting closed loop practices to encouraging spray irrigation. You have to obviously look at the right tool for the right purpose, but there are lots of examples around that people can use. I think that was very clear from the kinds of things that came out at our Water Conservation Congress up in State College in December. We have those examples on our web page on the Water Resources page, too, that people can use.

Tom Baldrige:

If I could just ask a quick follow-up. Does Pennsylvania have incentives for that type of behavior, or is there any plan to offer incentives to encourage businesses or communities to adapt those types of principles?

Secretary Hess:

We don't have any incentives yet. That's one issue that came up at our Water Conservation Congress. But I think there is an incentive right now built into the system, because, if you're a business that uses water, obviously if you buy that water from a public water supplier, to the extent that you can use less, obviously that cuts your water bill and goes right to your bottom line. Same thing with the water suppliers. If you save more water in your system that you treat, that's less water literally going into the ground. So I think there are a lot of incentives. Consultants like the use of the phrase "low-hanging fruit". I think there is a lot of low-hanging fruit out there that people, once they've thought about it a bit, and a lot of incentives they can make up just with cost savings, that I think is a good incentive. Obviously, with the state budget the way it is, us folks in the state government don't like to talk a lot about new monetary incentives.

Tom Baldrige:

I was just looking for a little help with my well. But that's all right.

Jeanne Sonntag:

Well, I'm going to ask you another question about money, even though you say you don't particularly want to address that. In all the years that I was associated with the Conservation District, I observed the work that the Chesapeake Bay technicians had done on many, many of the farms in the bay area, and they have provided all kinds of technical assistance for water conservation practices for a long, long time, and seeing that those practices were installed on the land. Now, it also is apparent that the cost share for carrying those Chesapeake Bay technicians has shrunk, and I just wonder if Pennsylvania, the Commonwealth, your shop, whoever it would be, have any plans to increase its support for this important watershed protection, because it seems to me that this conservation work, these technicians, are already out there, and they're available. It's a resource we need to support.

Secretary Hess:

I'd agree with you 100%. I don't think we can ever provide enough funding for the conservation districts. I think from our perspective at the Department of Environmental Protection, conservation districts really led the way in doing a lot of things that we're concerned about now with watershed restoration, with nutrient management, managing manure and farms. Certainly [regarding] the specific issue of Chesapeake Bay technicians we and the federal government have provided a lot of funding for conservation districts and the Department of Agriculture has provided a lot of funding to conservation districts for one reason: they do an absolutely terrific job. I see that more than anybody, because I've had the pleasure of, well, just take last week. Last week I was in four different counties, including Lancaster. I think I was here twice, wasn't I? And don't tell the other counties I visit Lancaster so much, but I was in York, I was in Adams, I was in Franklin, and I was in Lancaster County just last week; all four conservation districts, all doing different things. Envirothons to educate kids. I was on the watershed tour. I was at the Manocasee River with my colleague from Maryland, Larry Martic over in Adams County, to talk about riparian buffers; all different things the county conservation districts do. I continually sing their praises.

We have provided, I think, over the years, an increasing amount of support to Chesapeake Bay technicians, who do a lot of the nutrient management, manure management kind of role. Some counties that are able to spend the money, frankly we've given them more, like Lancaster. I think I'm right on that, aren't I? (Not really.) But you spend your money better than a lot of other counties. Let me rephrase that question. We've also added support through Governor Schweiker's Growing Greener program for watershed specialists, and they've done a really terrific job. We have another program that we, and the Department of Agriculture help out with, which is called the Dirt & Gravel Road Program, where we give money for different projects. I can't give enough money to county conservation districts, and I will readily admit that. They do an absolutely tremendous job. And I'd like to give them more money. And we try through every opportunity we can to do that. But, like I said, I don't like to talk about money with a budget like we have. But I made this statement with the Growing Greener program, and I'll make it again tonight. The Growing Greener program, as some of you may know, supports watershed restoration efforts in particular. And I have made this statement. We had to defer some Growing Greener funding for this year, and the governor proposes deferring some funding next year for Growing Greener. I have made the commitment and in fact am carrying out the commitment to support county conservation districts 100% as we did the last couple of years on watershed projects, support watershed project funding for watershed restoration projects 100%. I'm cutting back funding things that DEP does to support county conservation districts and Growing Greener projects, because I feel so strongly about the job they do. And I know the commissioners here in Lancaster County provide great support to the districts. You know, I visited all 67 counties my first year as Secretary, and I think I've met every district manager almost on their home turf, and I know the great job they do. Don, you owe me that dinner now. Seriously, they do a terrific job.

Dan Zimmerman:

If the state does conduct a Water Resource Plan update, and the areas are identified that have limited water resources, can you see a time in the future when land use approval and growth

would be directly linked with water resources, and actually would be an entirely new concept that growth would be limited to correlate with water resource availability?

Don Roseman:

Before you answer that, let me add a little bit more to the flavor of that question with something that Jeanne had asked as well. What should the relationship be between the new state program and local comprehensive planning and local water resource planning, tying all this together into one comprehensive place where this management is handled?

Secretary Hess:

I think, with respect to water resources and land use, I think the answer to that question is, yes, I think there will be a time. But I think it has to be within the context of the way a community plans logically for land use. I see a time, and certainly the Water Resources Initiative anticipates, that DEP, one entity, would be sort of the honest broker of water resources information, laying that foundation as I said, for other decisions that may come. But, communities right now under the Municipalities Planning Code have the authority, and, in fact, as a result of the Growing Smarter Initiatives that were passed two years ago, are directed that they should include water resource considerations in their comprehensive planning, and that should be reflected in their zoning. Municipalities have the authority now not to necessarily say, you can only withdraw 50 gallons today from that particular well, but in the broader sense, of doing a comprehensive plan and also zoning in the community, they can take water resources into account. If, in fact, there is not enough water through one way or another, to provide for development in the county, they can right now, under the Municipalities' Planning Code, use their broad land use and land development tools to limit development if they want to. We have always strongly urged, and I think another way that the Water Resources Initiative would help, is that it will effectively create a standard for how you create that water budget, how you determine demand and supply, and how you would plan for water resources. That's something that I think is sorely needed across the state. But it has to be done in the broader context of a community's planning tools. As I said, I think that becoming an honest broker of water information is one good step to help communities in that process.

Tom Baldrige:

Are you aware of, if there are any, the number of businesses that have created a drought contingency plan in Pennsylvania? If so, what encompasses it, and is there anything that you can share with us that would assist local businesses in creating such a plan as well?

Secretary Hess:

There is right now on our website a Drought Information page. On part of that page, there is a sort of a template, sort of a "This is what you need to do to create a drought contingency plan" right on the website right now. Because, when the governor originally declared a Drought Emergency in 24 counties in the south central and eastern part of the state, we at the same time called on businesses and other water users to start the process now of putting together a Drought Contingency Plan. We provided that template for them to use. Water suppliers for a long time have had that sort of a template, but businesses did not. That's why we needed to put that information out there. So on our website we have that all laid out. Or, if they

call our drought number, we can send that to you if you don't have Internet access. And, in fact, although we don't know a specific number, we have got a lot of phone calls on our Drought Information line from businesses interested and other large water users interested in putting those contingency plans together. I do know, in fact, talking to members of the Food Processors Association, for example, particularly in Adams County, they have a number of companies who have challenged their managers to cut back right now on their water use and to put together that contingency plan. So we know it's (pardon the pun) percolating out there. But we have, I think, a good starting point for a contingency plan on our website.

Tom Baldrige:

Just as a quick follow-up, do you see that contingency-type planning ever becoming a mandate to business?

Secretary Hess:

It is only a mandate now under our drought regulations when we call for it. But the interesting thing is that we know of a lot of different examples of companies, as I said some of them we recognized with Governor's Environmental Excellence Awards, who have for the first time looked at their water use, looked at their costs, and just on their own decided, hey, if we can cut back on our water use, we can cut back on our costs. So, there are a couple of good reasons to look at water use, aside from just the good government or good stewardship role. You can actually reduce your costs if you look at that area.

Jeanne Sonntag:

I think there is a lot of concern, and there should be, among the population in our area particularly, about the quality of our groundwater and protecting the quality of our groundwater, and what we are putting into our groundwater. So the question I would have for the Secretary is back to wells again. During times of drought, people will have to drill a new well, because their old well has gone dry. And the thing that concerns me is, what is going on as far as those old wells are concerned, because those wells are like a straw into the earth and into our groundwater, and does DEP or does anyone in the state have authority to say, you'll cap it with this cement, you'll do this, that, or the other thing?

Secretary Hess:

The quick answer to that is, "no".

Jeanne Sonntag:

I figured that.

Secretary Hess:

But, there's a "but" here. One of the elements of the Water Resources legislation, and also frankly some separate legislation that Rep. Maryann Daley from Montgomery County introduced, is on that issue of abandonment, how you properly seal a well and abandon a well. Because, as you point out, they are perfect channels for polluting the groundwater. Your neighbors in Chester County have a very specific program to regulate wells, both the construction and the abandonment of wells. They have been active as well in this issue. I think

we've gotten a lot of questions about that, as you can imagine, because wells have been the thing that has gone dry, the thing that has caused the largest number of questions, and I think that is particularly appropriate that the initiative include a program to license drillers, not only for the fact that they know how to close a well, but for the fact that, when you're drilling a new well, you need to know what you're doing. I would encourage you to learn more about that particular piece. We have some information back on the table about that particular piece, because that is very critical. Every single well, as you point out, is an opportunity to pollute the groundwater.

Jeanne Sonntag:

Well then, we have sinkholes that are very prevalent in areas of our county, and that's another concern with what's going into the groundwater.

Secretary Hess:

It is, absolutely. Sinkholes are less controllable, though.

Jeanne Sonntag:

They are, exactly. I realize that.

Dan Zimmerman:

In Lancaster County, it is projected that we're going to have continued significant growth, and one element of groundwater source management would be to look at consumer consumption. The trend in the last 100 years is that the average was between five and ten gallons an hour and now averages 60-70 gallons. The state is endorsing green building code standards as an effort to try to improve upon energy efficiency and inside environment standards. Do you see a direction towards Pennsylvania pushing towards green standards for water consumption?

Secretary Hess:

Right now, we have some water consumption standards in place for certain plumbing fixtures. That was done on a national level. The plumbing fixtures, in plain English, toilets. Toilets right now that are sold on the market have to meet certain water consumption standards. That was something that was put into place by the federal government a couple of years ago. We don't have standards like that right now in Pennsylvania. As you mentioned, as part of our green building initiative, we have not only energy consumption standards but also water consumption standards as well. That's just voluntary. One example on the water consumption side, we built an office that we just dedicated formally last month out in Cambria County that houses, I believe, about 62 or 65 people. The amount of water that they consume in a day is equal to a three-bedroom house. And that's a pretty dramatic drop in water consumption, when you think about the toilet facilities and all the other things that go into an office building. But they did it through things like composting toilets and a number of different things. They thought about it very carefully.

But again, I think it's something we have to look at. I always tend to shy away a little bit with mandates, but certainly I think on the menu of things that a watershed that is later designated as a critical watershed area, where they're facing a water problem, either now or in

the future, I think that should be on the list of things that they consider, adopting green building standards that include water consumption standards as well, because the standards are out there, they're available, and they can be adopted by communities if they want to now.

Tom Baldrige:

I think for everybody it's easy to understand when we're in a drought, after six weeks in the summer with 90-degree temperatures and dry, parched land that you're looking at, but I think it becomes more complicated to convince people that there's a drought after three days of rain and a very lush-looking lawn and trees and plants everywhere across the county. What recommendation do you have to a community like Lancaster, to try to keep this issue in front of the public at all times and make sure that they are aware that, just because it rains, it's not over?

Secretary Hess:

That's sort of a question that we faced a lot, because the drought that we have right now, winter drought in particular, when it sort of started, is sort of a very difficult time to tell people, you know, we have a drought out there, and you have to save water. And we face that question after every single rainstorm. It is a matter of education. It is a matter of trying to educate people about this issue. I am absolutely convinced that... (Are there any TV reporters here tonight?) (He left.) This is safe, then. I am absolutely convinced that TV reporters missed that day in junior high when they talked about the hydrologic cycle, the clouds and the runoff and the groundwater and all that stuff. But a lot of people apparently forgot that, because they forget that water doesn't, although at times you think so, come out of thin air. It is a hydrologic cycle. It's a very logical thing. You point out when it rains, particularly some of the bad storms we've had recently, folks can see the water running off. It doesn't soak in. And you have to keep reminding people of that.

Some watershed groups have taken on this issue of education on water resources in a very big way. Your neighbors to the north, the Swatara Creek Watershed Association, has in fact, through a Growing Greener grant that we gave them, gotten into water conservation education, and they have estimated that, over the next five years, they purchased 800 water conservation kits to drive home this point. They estimate that, if they give all those out, if all those are installed in just their watershed, over the next five years they will save over 1 billion gallons of water. Just in a very few hundred water conservation kits. I think this education project that can be taken on by a watershed group, by a county conservation district, by a lot of different people. It's something that has to be kept in the public eye, and that's why I'm glad the Hourglass Foundation is starting this whole public discussion about water, to sort of remind people of that day in junior high, about that hydrologic cycle that they may have missed.

Don Roseman:

Jeanne has more questions than the rest of them had, and I'm going to appoint myself to do something which I always enjoy doing, which is to ask questions in public meetings, anyway. Because her questions, several that are left, are really more citizen-based questions, and they're the kind of thing the Hourglass Foundation would like to see part of the general population's understanding. One of them is, does the state have plans to encourage the reuse and recycling of so-called gray water?

Secretary Hess:

Does everybody know what gray water is? I see some shaking heads. Gray water is sort of the water that you get maybe washing dishes or from your dishwasher or from your clothes washer. It's not the water from your toilet. Gray water in some areas in Europe is something that is typically separated and handled differently from the water that you flush down the commode. At this point, we don't have plans to encourage the reuse of gray water. Gray water still contains a lot of bacteria, a lot of chemicals, and a lot of stuff. Think about what you put down your sink sometime. It still has a lot of things in that could be pretty harmful to groundwater, although I will be the first to admit that my dad last summer put the bucket underneath the washer drain and filled his bucket up and used it out in the garden. So, he certainly put that to use. But that gray water can still contain a lot of stuff that could be potentially harmful to the environment.

We're not encouraging the recycling of that water. What we would like to, as an alternative, encourage, is the pollution prevention, get it at the source. Why are we producing that much water that we have to get rid of in the first place? Let's put those water conservation showerheads on, the conserving faucet nozzles, let's get a washer that produces less water to begin with. Let's get at the source of some of these problems, rather than trying to perhaps do something with recycling gray water.

Don Roseman:

Staying on that public health question, in light of the growing citizen concerns over mosquito-borne diseases, an issue with abandoned tires, the question is, has the DEP investigated potential public health dimensions to its policies of building retention basins and artificial wetlands in or near populated areas to reduce the flooding and restore creek/stream corridors? Because they would hold water that would potentially be the same as mosquito breeding grounds.

Secretary Hess:

I think this question has been brought up a lot since the West Nile virus issue came into the public eye. The kinds of mosquitoes, fortunately, that carry West Nile virus don't typically breed in wetlands or retention ponds or things like that. They're more of the kind of mosquito that breeds in containers or tires, as you mentioned, sort of more contained environments. So, the direct public health threat there probably is pretty minimal. But, if you have a good, functioning wetland, and I think this was pointed out on the tour we took last week, there are some great examples of that around Lancaster County, with the diversity of plant life that attracts a diversity of birds and other wildlife, you don't have a problem with mosquitoes. You don't have the kind of problem we used to have in the "old days", because it's a good, healthy, functioning wetland. We are looking, though, at the issue of stormwater retention ponds, because, and some of you may be familiar with the fact that we put out a White Paper at the end of last year for comment, that would really shift in a different direction the way we have handled stormwater in the past by creating new best management practices, as we call them, to design stormwater retention ponds so they don't simply retain water and get that ponding effect, but encourage stormwater to recharge into the ground, to soak into the ground, rather than simply

holding it then running off into a stream. And you'll see some of those best management practices come out in the next couple of months that maybe will help avoid some of those issues. I have a stormwater retention pond near where I live that, in fact, does just act as a pond. It doesn't go anywhere. It just sort of evaporates, and that could be a potential mosquito breeding area, certainly.

Don Roseman:

I will look into the audience and ask if there are any questions that we have not covered this evening.

Secretary Hess:

Make it an easy one, would you? These guys have been tough on me tonight.

John Minnich: (*Question from the audience*)

I was down in northern Maryland just two weeks ago, across the Conowingo, down toward Havre de Grace. There is a huge natural gas fire near an electricity plant that's being built there, and another one that's going to be built not far from there, which will use mammoth amounts of water, which will not recharge because it will be mostly evaporated. Can anyone explain to me the approval process, why no commission or state might have been involved in that? It would seem there has to be some type of cooperation there. Apparently, this is something that will take enormous amounts of water from the Susquehanna.

Secretary Hess:

The Susquehanna River Basin now would issue a permit for that. For any large water user like that, they would have to make provision under the Susquehanna River Basin Commission rules, for replacement water or make-up water that they do consume. If they do consume that water or if it evaporates out, before the Susquehanna River Basin Commission issues that permit, they have to have a source of make-up water or replacement water available from an impoundment or from another source, to make up for that water that they do consume. Some of that water does pass through, cooling water. Some is consumed. But, in the process of considering that permit, the Susquehanna River Basin Commission does take that into consideration, and there are regulations that they have. The state, at least Pennsylvania, does not have a legal authority to regulate that. That is now just the bailiwick of the Susquehanna River Basin.

And a lot of the existing larger users, power plants and those sorts of larger users now, do have similar sorts of requirements. They had to and have to have a source of replacement water. In some cases, they've bought water in the Conowingo Pool, for example. That's one of the reasons the Susquehanna River Basin Commission...It is something that sometimes costs more, and that's why folks don't take advantage of some of those technologies. But there are good examples around, and we have, in fact, up in Penn State, we funded, through a Growing Greener project, a porous pavement project that I think is going to yield some additional good results in terms of actual data and information. Those examples are out there. The Water Conservation Congress we had in December showed that they are, and it's just a matter of finding them and frankly us. And that's one thing that the Conservation Congress taught us, I think, that there are

lots of these examples out there from business and industry and whatnot. We just have to organize and get a lot more of that information out there, because folks have been doing this. It isn't new. Folks have been doing this stuff for quite a long time. It's a matter of getting the information out, doing the missionary work you need to do to spread the word on some of these things.

Don Roseman:

I'm going to ask one more Jeanne question that was on her list. It relates to what Karen just asked. The question is, is there any consideration within the DEP or even the state government itself, to use tax credits, trade-ins, or rebates for any of these water-saving devices? Jeanne had asked a question regarding efficient toilets and shower heads, but certainly a program that would recharge the groundwater would be as applicable to this question. Instead of using Growing Greener grants, apply for it but use it in a way that's available to you, take advantage of it on a tax credit.

Secretary Hess:

Now, you asked me that question when we have a \$1.2 billion deficit this year. Probably not this year or next fiscal year, I can tell you that. It is something that I think a number of states have taken a look at, particularly in the western areas, but I don't think we have any immediate plans to do that. I think there are a number of incentives around, just cost savings and things that would lead people in that direction. And also I think the other practical thing is, my experience has been, not only in the water resources area, but in the whole area of pollution prevention and energy efficiency. If people learn about better ways of doing things, and you show them the better way, nine times out of ten they're going to do it. I mean, again, I'd like to go back to our Environmental Excellence Award winners. We have 215 Environmental Excellence Award winners in the last couple of years. They have saved 6 billion gallons of water. They have recycled 145 million tons of waste. They have eliminated 143 million tons of air pollution. They save now nearly 60 million KWH of electricity. That's not because they were good guys, necessarily. It's because there were cost savings, they wanted to do their process in a more environment-friendly way. I think, as I said, if you show people a better way of doing something, nine times out of ten they do it. But it's a matter of again doing that missionary work to tell people.



John Jarvis, Don Roseman and Secretary David Hess
(From left to right)

Don Roseman:

Secretary Hess, thank you very much. This has been a most informative evening, and I hope everyone here has gained a little bit of insight into water, Lancaster County's water, and water in general in Pennsylvania. I would really like to thank our panelists this evening for

coming out and taking an evening out of their time to talk to us and ask these intelligent questions of the Secretary. I have a small token gift for them.

Our secretary, John Jarvis, is an illustrator without peer when it comes to illustrating Lancaster County and its environment, particularly in the world of a map. This is a map that we have been giving to other speakers, and I'd like to present this to you this evening.

Secretary Hess:

That is terrific. Thank you very much.

Don Roseman:

The Lancaster County Envision program continues next week, I believe, with a study of retail. It's the 22nd. I would highly encourage you, if you have any interest at all in the retail aspect of this county, to attend. It's at the County Courthouse, the 6th floor. Just be there. It's kind of an all-day affair. I thank you very much for attending this evening. If you have any interest at all in this legislation that is currently in committee at this point, both in the Hourglass County Matters and also in the White Paper is an outline of what this legislation is. I'd highly encourage you to make your wishes known to our legislators. They need to know that we feel this is important, too. Thank you very much for attending.



Don Roseman, Secretary Hess, Jeanne Sonntag, Tom Baldrige and Dan Zimmerman
(Left to right)