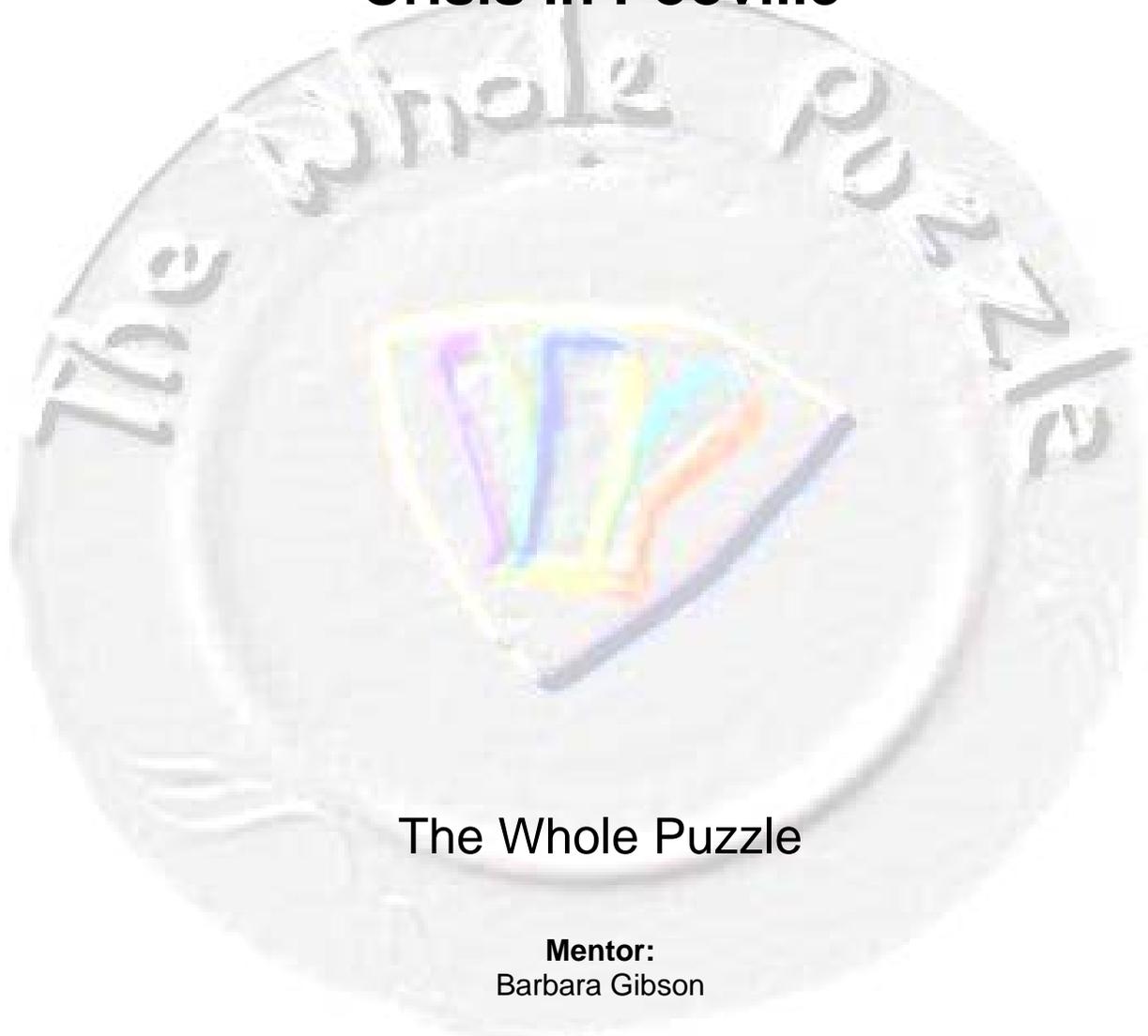


Mid-America Regional Public Health Institute Year 16

## Crisis in Pooville



### The Whole Puzzle

**Mentor:**

Barbara Gibson

**Fellows:**

Krista Click

Cathy Grindstaff

Julie Haan

Jenni Hill

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Sarah Thompson (Wortz)

## **Cast of Characters**

Charmins of Health (COH)  
Local County Health Department

Pooville Voluntary Advisory Committee (PVAC)  
Community Interest Group

Community Rural Assistance Program (CRAP)  
Non-profit Organization Promoting Local Infrastructure

Regional Sewer District (RSD)

State of Bliss Bounty Quicker Picker Uppers (SBBQPU)  
State Department of Health

Area Plan Commission

State Department of Environmental Protection of Bliss Excrement Evacuators  
State Department of Environmental Management

Escherichia County Board of Commissioners  
Local Executive Board

Escherichia County Health Board  
Local Health Board

Emma Fleet  
Concerned Citizen of Pooville

The Law Firm of Black & White  
Emma Fleet's Legal Representation

Sir Ignor Amous  
Director of Local Drainage Department

## **Abstract**

In July 2001, the Escherichia County Charmins of Health addressed the issue of improper sewage disposal in Pooville. Residents were informed and educated about health issues related to sewage flowing into a surface water ditch. The Charmins of Health identified a community advisory group to act as liaison between the citizens of Pooville and the various government and quasi-governmental agencies in order to address inadequate sewage disposal and potential public health hazards. The Charmins of Health mobilized community partnerships between the Pooville Voluntary Advisory Committee, Community Rural Assistance Program, Escherichia County Board of Commissioner, Regional Sewer District, State of Bliss Bounty Quicker Picker Uppers and commercial vendors to identify potential community-wide wastewater disposal solutions. The Charmins of Health efforts were later directed toward more immediate resolution of individual wastewater discharges through the installation of individual onsite wastewater systems. This case study will address the Essential Public Health Service core function of policy development.

## Background

Pooville is an unincorporated community in Escherichia County. The town consists of approximately 125 residences and five commercial properties within three miles of an interstate exit. Homes built before 1950, like many of those in Pooville, were allowed to discharge wastewater from the septic tank directly to field tiles rather than to a leach field. In addition, homes built in the State of Bliss before the 1991 institution of modern statewide guidelines often have undersized systems or no room for expanding the absorption field in case of system failure (Frankenberger, n.d.).

The Community Rural Assistance Program (CRAP) is a non-profit organization funded by federal grant monies that provides free technical assistance to small, low-income, rural communities with concerns about wastewater, drinking water, or solid waste. In September of 2000, this agency partnered with the State of Bliss Bounty Quicker Picker Upper (SBBQPU) to prioritize a list of communities in the State of Bliss with wastewater disposal problems. The communities were ranked based on ratings given to criteria such as lot size, income, population, soils, water, sewage, and other environmental factors. Approximately 400 communities, including four in Escherichia County, made the list. Pooville ranked 86th.

Microbial pathogens in raw sewage can cause illnesses ranging from temporary stomach cramps to life-threatening conditions such as inflammation of the heart (National Resources Defense Council, 2004). Some diseases caused by raw sewage include Campylobacteriosis, Giardiasis, Hepatitis A, Salmonellosis, Typhoid Fever, and Yersiniosis, as well as enteric diseases from *Escherichia coli*.

## Developing Policy

The Escherichia County Charmins of Health (COH) responded to the wastewater disposal problems in Pooville by conducting a door-to-door survey. The survey was preceded by individual postcard notification and a press release regarding the dates proposed for the survey (see Appendix A for press release). The COH enlisted the assistance of State of Bliss CRAP and the SBBQPU in conducting the survey that was designed to raise awareness among residents regarding residential sewage disposal needs.

In the State of Bliss, local COH are responsible for responding to all types of environmental issues. Complaints from Pooville residents to the Escherichia County Health Board (ECHB) in the spring of 2002 resulted in additional investigation by the COH that revealed untreated sewage and high *E. coli* bacteria counts in the drains and ditches along

County Road 0 in Pooville. This led to the investigation of potential sewage discharges. Notice of Violation letters requiring residents to pump and haul sewage were sent to residents suspected of contributing to surface water contamination in the Pooville area.

In Escherichia County, all unsewered areas outside of municipal boundaries are included within a county-wide Regional Sewer District (RSD). Provision of public wastewater disposal within Pooville would therefore be under the jurisdiction of the Escherichia County RSD. The COH advised the Escherichia County Board of Commissioners and the RSD of their findings and of the need for a public meeting to notify local residents of surface water sampling. A powerpoint presentation was shown at a RSD meeting where the COH requested the financial and organizational support of the RSD. The mission of the RSD includes provision of sanitary wastewater disposal to unsewered areas of Escherichia County. The emphasis placed on this issue by the ECHB provided a clear priority for the RSD.

As a result of press coverage of Pooville sewage issues, community leaders began to show enthusiasm about this public health problem. A COH vision for the community gained attention. This vision included searching for a community-wide, affordable and innovative sewage disposal solution for Pooville. The emphasis by SBBQPU for addressing unsewered communities strengthened the cause.

Meeting notices were sent advising the public of the opportunity to discuss surface water sampling and the survey conducted by the COH and CRAP at a public meeting to be conducted at the Pooville Church. At this public meeting, the coalition of regulatory agencies, non-profit organizations, elected officials, and concerned citizens discussed sample results, potential sources of contamination, how systems function, and space requirements for replacement systems. The large community church, with their own onsite wastewater disposal system, provided a meeting location and an established group of involved citizens. This developed buy-in of the vision for an improved community. A sign-in sheet provided at this public meeting enabled those interested in becoming involved in a local committee the opportunity to enlist in the Pooville Voluntary Advisory Committee (PVAC). Meetings of the PVAC were held monthly, and the minutes were distributed via e-mail.

The PVAC acted as a liaison between the various governmental agencies involved and the citizens of the town. The COH were instrumental in educating the PVAC by arranging tours of existing innovative wastewater systems of other small communities. The Escherichia County RSD, the governmental agency that would apply for grant money on behalf of Pooville, also agreed to assist with finding a solution to potential community health problems.

Despite assurances from the COH that the community was moving toward a collective solution to the sewage disposal needs and the continuing surface water contamination, one concerned resident demanded an audience with the ECHB in June of 2002. Assisted in her presentation by a local physician, the case was made to the Health Board that the COH were negligent in their duties and actions and that a more immediate response was required to protect public health (Appendices B and C). She requested that the COH immediately locate the illegal discharges. The resident did not understand that the COH had very few records of permitted septic systems within the community and that the main method of sewage disposal was through community storm drains. The citizen was further concerned with The Pooville Fire Department's annual fish fry event involving hundreds of local residents that was approaching. This event had been held every summer for at least 50 years. Due to the health concerns, she believed the ECHB should cancel the event. The Health Board elected to allow the event to go on, but required the COH to post warning signs along the contaminated ditch and throughout the town. They also required the installation of temporary fencing to prevent access to the visibly contaminated ditch during the event. In addition, staff increased vector control efforts in the area and treated all potential mosquito breeding sites. At the conclusion of the meeting, The Health Board directed the COH staff to use all means available to eliminate the sewage discharging.

The Health Board directed staff to conduct further investigation into the individual sources of the contamination. The COH vision of a community-wide solution to the sewage disposal issues that plagued Pooville since the establishment of the community more than 50 years earlier, was diverted to immediate investigation and enforcement on individual dischargers; thus creating division between those with adequate sewage disposal options and those without. The cooperative relationship established between the community and COH staff was compromised with this decision; thus changing this once cohesive partnership into an adversarial relationship.

The entire county stepped up to assist the COH with their investigation. County Commissioners visited the town, and called the COH with suspicions regarding potential discharger information. Despite suspicions, hard evidence as to specific dischargers was difficult to document. COH dye testing was not effective in locating the sources of contamination. Some suspect homes were dye tested more than once without a positive result. COH staff approached the County Commissioners with a request for financial assistance for locating dischargers. The Commissioners said to approach the RSD, and

funding was ultimately obtained for excavation equipment, contractual personnel and the utilization of an electronic signal sending device (sond).

The arduous task of locating dischargers was conducted home by home. The initial investigation included 28 homes located along the main center street of the unincorporated town for which the COH did not have records of permitted septic systems. During August 2002, thousands of dollars were spent investigating the initial 28 homes. The investigations began by flushing the electronic sond down the plumbing fixtures and trying to track it to a septic tank. What seemed like an easy alternative to dye testing became a nightmare as the legalities of excavation and payment for excavation was questioned. Some septic tanks were located under structures which further complicated the procedure. Once the tanks were located and excavated, the sond was placed on a 'snake' and routed through the tiles. More complications followed as the sond was unable to navigate the several years build up of sludge and tree roots. The changes in the types of tiles used throughout the years to route the sewage made maneuvering the sond impossible. Any proven dischargers received COH Notice of Violation letters with orders to pump and haul their sewage to eliminate the discharging of sewage. Personal finances were diverted to correct the immediate violations. During this time, one food operation lost their food permit, and two homeowners simply walked away stating that it was cheaper to just give their homes back to the bank.

Emma Fleet, the complainant, also approached the Escherichia County Drainage Board and the Director, Sir Ignor Amous, regarding the obviously contaminated drainage way. Sir Ignor Amous was soon swept up in activities designed to move the contaminated water downstream, away from the central community area. Removal of the problem from the immediate vicinity degraded the urgency of the situation in the eyes of concerned citizenry, and was self-serving for the elected official. Money was spent and energy was diverted from the COH vision. Financial implications drove the issue, causing division between those with adequate sewage disposal options and those without.

News coverage of the drama unfolding in Pooville resulted in a telephone call on behalf of a State Representative questioning how they might provide assistance. COH staff met at the State Congressman's office in hopes of obtaining grant monies to move forward with a community wide sewage solution. The COH continued to work with public health partners, the PVAC, CRAP, and RSD to investigate grant opportunities, conduct community financial income surveys, and to interview potential grant administrators. The PVAC interviewed four engineering firms before deciding on one to conduct a preliminary engineering report.

CRAP directed PVAC efforts with minimal input from the COH throughout 2003 and 2004. Innovative wastewater systems for small communities were investigated by the PVAC despite lingering uncertainties regarding the specific regulatory requirements that would be placed on the community by the State. State government jurisdictional issues hindered the process. Appendix D is a letter from CRAP addressing unanswered questions regarding requirements for drip irrigation technology. These regulatory uncertainties mired this effort affecting the financial outcome and feasibility of the project. The same uncertainties contributed to the unwillingness of conventional engineering firms to risk promotion of innovative solutions without a proven track record in the State of Bliss. In addition, in a three year period there were three changes in CRAP personnel, decreasing continuity and trust between the PVAC, RSD, COH Staff, and CRAP personnel.

While the PVAC continued to pursue the long-term solution envisioned by the COH, homeowners who were selling their homes or renting rooms pursued individual onsite solutions to meet COH Directives. Envisioning a quick temporary fix many had difficulty understanding that they were still required to meet minimum construction standards. Some residents sought more leniencies from the Health Board. The Health Board did not allow any reduction in the requirements for individual onsite system construction. The COH staff continued to promote onsite community options by hosting a May 2004 meeting with personnel from the SBBQPU regarding community onsite options for Pooville.

Throughout this process, various agencies pursued different agendas which resulted in conflicting policies with regard to Pooville. The Escherichia County COH pursued the policy of long-term community solution. When required by homeowner time constraints, this policy was supplemented by long-term individual onsite system installations that met all applicable requirements for new systems. Sir Ignor Amous pursued a policy of alleviation of flow problems in town drains. The RSD pursued an agenda of public utilities as a tool for growth management and promotion of economic development. The SBBQPU and the State Department of Environmental Protection of Bliss Excrement Evacuators continued to struggle with decisions regarding agency jurisdiction. The Escherichia County Area Plan Commission supported rezoning of residential property for development of industrial uses, which would require public infrastructure, along the nearby interstate corridor extending to Pooville.

## Conclusion

The COH reached out to a community that needed a sewage disposal solution. Even with an inspired vision, the urgency of individual needs compromised the outcome. Pooville is not an isolated incident and the obstacles faced are not unique to Pooville. The challenge for leaders is to create a shared vision. Leaders envision the future not with the use of a crystal ball, but by imagining all possibilities, and finding a common purpose that can meet everyone's expectations. Although the COH made strong efforts to flush away the problems in Pooville, with everyone's contributions, the back-up remains in this brown little town.

## References

Frankenberger, J. (n.d.). E. Coli and Indiana Lakes and Streams. *Safe Water Publication*.

Retrieved November 1, 2007, from

<https://engineering.purdue.edu/SafeWater/watershed/ecoli.html>

National Resources Defense Council. (2004, February). *Swimming in Sewage*. Washington,

DC: Mark Dorfman

## Teachers Guide Questions

Policy Development is the focal point of this case study. The essential public health services regarding Policy Development include:

- \* Inform, Educate, Empower
- \* Mobilize Community Partnerships
- \* Develop Policies

1. Give examples from this case study of the essential public health services regarding policy development.
2. Did this case provide a means for the COH to become a leader in Public Health? How?
3. How did political pressures influence the process of this case?
4. How would you address the political barriers when enforcing corrections of sewage disposal issues in this community?
5. The COH benefited from media attention. There was interest from the community, but everyone came to the table with their own agenda. What could the COH have done to increase buy-in from all partners?
6. How could the COH leaders win the support from the community to reinforce regulations?
7. Based on the information provided, what leadership skills needed to be demonstrated to lead this project to a more successful conclusion?

## **Appendix A**

### **Press Release**

#### **Pooville, State of Bliss**

**For release February 22, 2002**

The Charmins of Health will host a public meeting in Pooville to discuss community sewage disposal needs.

**A public meeting will be held March 1, 2002  
7:00 P.M.  
Pooville Church**

This meeting will provide an opportunity to discuss surface water sampling and the survey conducted by the Charmins of Health and Community Rural Assistance Program (CRAP). The residents of the area will be offered assistance as they evaluate their options for correction of sewage disposal needs within the community. The Escherichia County Regional Sewer District has also agreed to assist with finding a solution to potential community health problems.

For more information, please contact:

Director of Charmins of Health  
State of Bliss Bounty Quicker Picker Uppers

# Appendix B

## ESCHERICHIA COUNTY, HEALTH BOARD 01 JUNE 2002 OFFICE OF ESCHERICHIA COUNTY

Re: Emma Fleet, Pooville

Concerns over E Coli in area, since the late 1980's and earlier

### I. Introduction

- A. Litigation in past over presence of human and animal fecal matter, circa 1990.
- B. Litigation identified offending septic sites, properties with no septic system, farm field tile, all to the north of town. Disease resulted.
- C. Communications with Health Board Attorney this month as to State Code.
- D. Efforts of concerned citizens for welfare of the Pooville Community and Escherichia County.

### II. Our Requests, Expectations

- E. Local Health Officers and Boards are empowered by the State Code.
- F. Local Officers enforce health laws, rules, regulations.
- G. Local Boards are responsible for action.
- H. Local Officers, Boards, have powers of inspection.
- I. No one may permit or maintain any condition that may cause disease.
- J. An Officer with knowledge of unlawfulness shall order abatement.
- K. Board with knowledge shall file suit to stop unlawfulness.
- L. Local Officers, Boards, may enforce.

{We believe this means "shall," not just "may."}

### III. Urgency

- M. We are finished with waiting. All Federal, State & Local means will be employed under law and common sense to bring the condition to an end.
- N. The conditions will lead to disease, deplorable living conditions, loss of fair market value, and erosion of confidence in Government.
- O. A solution will have the opposite effect, on all counts.

Respectfully Submitted,  
The Black and White Office

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The Black and White Office, Counsel, Emma  
Fleet  
Pooville

*Fleet & Pooville*

## Appendix C

### ***THE BLACK and WHITE OFFICE Attorney and Counselor at Law***

June 15, 2002

Escherichia County Health Board Attorney  
Escherichia County

Re: Charmins of Health, Ms. Emma Fleet

Dear Mr. Attorney:

To follow on our meeting last Monday, and in advance of the special meeting 10 June at 7 p.m., I outline on our position on the Pooville situation and raw sewage, in particular as it affects my client, Ms. Emma Fleet.

Ms. Fleet and her employer, are impatient with the pace of action of the Charmins of Health and the various Officers of the County. Given the presence of festering bacteria and germs on Ms. Fleet's land, this is understandable.

The problem is festering and open sewage, caused surely by defective or non-existent septic systems to the north of Ms. Fleet. As your Clients know, there is a lagoon or open field of sewage to the south of the Main Building in Pooville, west side of road.

The problem in Pooville dates back to the 1990s, but surely much earlier than that. The fact the residents and County have not solved the problem is alarming. I realize you are new to the situation. County, Court, and press records of all this abound, and I will do my part to bring you up to speed. Your Clients I am sure will give you their views.

Every effort will be made for the discussions between our Clients to be civil and productive. But the situation is urgent.

#### **Chapters of State Code**

Permit me to respectfully call to your attention the statutes I will cite to the Board Monday night.

Section 1 (a): The powers and duties in the chapter apply to all local health officers and all local health boards.

Section 19: Local health officers shall enforce health laws ... rules, regulations of the officer's own and superior boards.

Section 21: Each board has the responsibility and authority to take any action authorized by statute or rule of the state ... to control communicable diseases. (Inspections are allowed.)

Section 23 (a): Grants power of inspection, allows orders to issue to protect health.

Section 25 (a): No one may permit, maintain, and condition that may cause disease.

Section 25 (b): A health officer with knowledge of unlawfulness shall order abatement, with specific requirements for such order.

Section 25 (c): The attorney for the local Board shall institute action on receipt of information, to include action for injunction.

Section 26: Local officers, boards, may enforce by injunction.

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Mr. Attorney, these statutes are not discretionary as to the duty to enforce, to act, to make and gain orders, of court if need be. The knowledge has been with the community and officials for many years, and the condition remains patent, dangerous.

We will be contacting each State and Federal elected official in the near future, to gain any assistance available at every level: Federal, State, County. The problem must be solved. The good news is a solution to Emma Fleet surely will be a solution for everyone.

I look forward to working with you. I am sure your opening meeting with the Board will lead to a satisfactory solution. Thank you for your time and attention to our requests.

Sincerely,

THE BLACK and WHITE OFFICE

## Appendix D

TO: State Department of Environmental Protection of Bliss Excrement  
Evacuators  
FROM: Community Rural Assistance Program  
DATE: October 1, 2002  
RE: Requirements for drip irrigation technology

I am contacting you on behalf of the Community Rural Assistance Program. Our organization provides free technical assistance to small, low-income, rural communities with concerns about wastewater, drinking water, or solid waste. We have been advised to contact you with a request regarding the use of drip irrigation as a form of wastewater disposal.

In the course of our work, we have found that small communities face particular challenges in their efforts to implement infrastructure improvements. Specifically, they tend not to have the resources or expertise to maintain the more conventional wastewater treatment technologies used in larger communities. However, the types of alternative technologies available to such communities are extremely limited.

One technology that is ideally suited for use in small communities is drip irrigation. However, communities interested in this technology have found the State Department of Environmental Protection of Bliss Excrement Evacuators do not have clear requirements regarding its use. Engineers, finding no clear design guidelines, have been unable to give clear cost estimates, and therefore must design for the "worst-case scenario", at a considerable cost to the community.

We believe that the future use of drip irrigation will depend on a policy decision at the State Department of Environmental Protection of Bliss Excrement Evacuators. This decision will require coordination between the State Department of Environmental Protection of Bliss Excrement Evacuators and the State of Bliss Bounty Quicker Picker Uppers. Issues at hand include, but are not limited to, the following:

- Jurisdiction/authority issues between the State Department of Environmental Protection of Bliss Excrement Evacuators and the State of Bliss Bounty Quicker Picker Uppers: who should be responsible for approval of soil-based treatment and disposal systems?
- Applicability of land application requirements
- Design guidelines
- Testing limits for drip irrigation disposal: what standards will the systems be required to meet, and what monitoring will be required?
- Revisions needed to the Administrative Code outlining protocol for drip irrigation/subsurface disposal

- A possible memorandum of understanding between the State Department of Environmental Protection of Bliss Excrement Evacuators and the State of Bliss Bounty Quicker Picker Uppers allowing for sharing of expertise

I am sharing this request with the Assistant Chairmen of the State Department of Environmental Protection of Bliss Excrement Evacuators. In addition, I am sharing copies of this communication with representatives from Pee and Poo University, State of Bliss Bounty Quicker Picker Uppers, and members of the manufacturing and engineering communities, who have expressed their interest in clarified drip irrigation requirements. Please let us know what this decision would require, and whether a meeting to discuss the details would be in order.

I can be reached if you have any questions or suggestions as to how to proceed. In addition, I will contact you within the next two weeks to discuss what the next steps should be.

Thank you for your consideration of this matter.

CC: Pee and Poo University  
State of Bliss Bounty Quicker Picker Uppers