

# The Nuts and Bolts of the P<sup>2</sup>D<sup>2</sup> Program

## What is the P<sup>2</sup>D<sup>2</sup> Program?

The Prescription Pill and Drug Disposal Program (P<sup>2</sup>D<sup>2</sup>) began as a collaborative effort between local pharmacies, officials, and Pontiac Township High School students in Paul Ritter's Ecology class and Eric Bohm's Illinois Studies class. The purpose is to educate the public about the harm done to the environment due to the current prescription and non-prescription drug disposal practices and to provide the community with an alternative disposal approach that ensures the quality of our water for future generations.

## History of the Program

The idea for the program started when Mr. Ritter's wife, Jodee, asked what she should do with some unused prescription pills in their medicine cabinet. Not sure about the correct method of disposal, Mr. Ritter posed the question to his Ecology students and they went right to work. The young ecologists accessed information from the Internet, books, journal articles, and through interviews with scientists. They also enlisted the help of local officials from Illinois American Water Plant Manager Tim Tuley, Pontiac's Street Superintendent Chris Brock, and Mayor Scott McCoy of Pontiac, IL. Students' hard work and research-based efforts uncovered startling information pertaining to the effect of pharmaceuticals on the quality of drinking water around the world. They found that scientists with the U. S. Geological Society have detected drugs such as antibiotics, antidepressants, birth control pills, seizure medication, cancer treatments, painkillers, tranquilizers and cholesterol-lowering compounds in varied groundwater sources. (*"National Stream Reconnaissance,"* <http://toxics.usgs.gov/regional/emc/streams.html>, USGS Website, May 2008)

### Informing the Community through Service-Learning Activities

Students also learned that, currently, wastewater treatment methods in the United States are not designed to remove these chemicals from our water supply. Scientists are worried about the impact to humans; i.e., the chemicals in our water could increase rates of breast, testicular, and prostate cancer, as well as lower sperm counts and disrupt hormones. Furthermore, the scientists also fear that increased levels of antibiotics in our environment could lead to eventual increases in bacterial resistance. Through their investigations, students also discovered that people played a role in the introduction of these chemicals based on a lack of knowledge regarding how to properly dispose of their unwanted medicines. From their own research, the Ecology students put together presentations for their local pharmacies, including Sartoris Super Drugs, K-Mart, Wal-Mart and Walgreen's Drugstore. These retailers were asked to allow patrons to bring in unused prescription drugs for proper and safe disposal.

### Civics and Engagement

The initial project inspired a host of students from other classes to get involved. For example, Mr. Bohm's Illinois Studies class led a letter-writing campaign to ask federal, state, and local officials to help educate the citizenry about the benefits of proper disposal of their prescription and non-prescription drugs. Numerous legislators, environmental groups, and educators have returned letters and stated they are encouraged by the work of

the Illinois Studies and Ecology students and hope students in their area will also initiate the program.

### Media and Promotion

The student media group has played an important role on the P<sup>2</sup>D<sup>2</sup> team, informing various television and radio stations, which led to a great public response. After contacting a popular radio show in Bloomington, Illinois, word of the Program spread like wildfire. This project has gained statewide attention from officials in Springfield, Illinois, the State capital. The Illinois Studies class has greatly enhanced the P<sup>2</sup>D<sup>2</sup> program, furthering its goal of inspiring people of the world to be good stewards and take it upon themselves to help preserve our living (biotic) and non-living (abiotic) natural resources.

### Positive Partnership with Law Enforcement

The Pontiac Police Department began the drug collection program after learning from Mr. Ritter about its benefits to the community and positive impacts on the local aquatic environment. Mr. Ritter had done extensive research on the issues of water contamination due to pharmaceutical medication being flushed down the drain in people's homes. In addition, the Salt Lake County Sheriff's Department assisted in creating the Pontiac Township High School program by providing a sample policy and ideas for the locked collection box.

In addition to the benefits associated with the environment, the Pontiac Police Department felt this program could be used to educate the community about the dangers these medications pose to our youth. This program creates a positive interaction between the community and the police force. It brings people into the police department where they are exposed to additional informational resources available to them.

The pharmaceuticals are retrieved from the locked box by the evidence officer. The Evidence Officer is the only one with keys to retrieve the discarded medications. The pharmaceuticals are retrieved, weighed, and photographed in bulk prior to placing in evidence. The items are transported for incineration with other illegal drugs when quantities dictate.

### P<sup>2</sup>D<sup>2</sup> Program Identity



The P<sup>2</sup>D<sup>2</sup> Program has created a logo that should be incorporated into other schools' instructional and promotional materials that have incorporated this program into their local setting. Please visit the Program's homepage to access the logo. <http://www.p2d2program.org>



Pill Bottle Phil has been a popular costumed character used at many community events, education conferences, and other public gatherings to get the word out about the P<sup>2</sup>D<sup>2</sup> Program.

If you would like to borrow the costume or create one of your own, please contact Paul Ritter at 815/844-6113 or [PRitter@pontiac.k12.il.us](mailto:PRitter@pontiac.k12.il.us)

*P<sup>2</sup>D<sup>2</sup> : An Award-Winning Education Program*

**Proclamation by Illinois Governor Pat Quinn--P<sup>2</sup>D<sup>2</sup> Day in Illinois**

On May 1, 2009, Governor Quinn officially honored the P<sup>2</sup>D<sup>2</sup> Program and its significant achievements through a State Proclamation.



**2008 Governor’s Green Youth Award for Excellence**

The hard work and commitment of students to exhibit environmental leadership and stewardship was recognized. These awards, administered by the Illinois Environmental Protection Agency, acknowledged outstanding environmental protection and conservation projects by Illinois’ young people. “These projects demonstrate the innovative ways young people throughout the state are working to protect Illinois’ environment,” said Illinois EPA Director Doug Scott. “Through these awards, we hope to teach other young people about the importance of environmental protection.”



**2008 Lt. Governor’s Environmental Hero Award**



On April 21, 2008, Lt. Governor Pat Quinn saluted the students and teachers of Pontiac Township High School who are taking immediate and preemptive action to reduce the amount of prescription and non-prescription drugs in the water supply.

“The students and teachers of Pontiac Township High School are not waiting around for tests to prove that their drinking water may contain trace amounts of drugs,” said Lt. Governor Quinn. “They dove directly into the problem and surfaced with a solution. We want to salute these students and teachers for launching the P<sup>2</sup>D<sup>2</sup> Program.”

On October 23, 2008, PTHS received the **2008 Governor’s Pollution Prevention Award**, presented by Illinois Governor Rod Blagojevich.

*For full text of the press releases recognizing the positive contributions of the P<sup>2</sup>D<sup>2</sup> Program, please visit this Webpage, <http://www.p2d2program.org/Contacts.html>.*

# Creating a Prescription Drug Disposal Program in Your Own Community

The following information is also described on the P<sup>2</sup>D<sup>2</sup> website. An overview of the Program website follows this section.

## *How to Begin*

- Decide which students and which classes you want to be involved in the project.
- Create a list of the pharmacies in your area.
- Have the students research problems associated with pharmaceuticals in the water.
- Instruct students to research currently accepted disposal methods of pharmaceuticals.
- Contact all area pharmacists and local officials and ask them if they would be willing to help discover possible solutions/prevention methods of improper disposal of pharmaceuticals in the environment.
- Have students provide formal presentations of their research to area pharmacists and local officials that will inform them of the possible pharmaceutical disposal methods that are available in your area.
- Develop an informational brochure/poster for display at various businesses with all contact names and numbers. In addition, create a flyer with the same information that can be easily stapled to small paper bags.
- Contact all local media outlets (both print and broadcast) to inform them of the program and its many benefits.
- Branch out to other schools, corporations, etc. and share your program. Serve as a mentor to these newly partnering schools.

## *Who Should You Partner With?*

- Pharmacists
- Public Works Director
- Water Department and Sewage Treatment Plant Manager/Operator
- Solid Waste Management Districts
- Mayor
- County Board Member
- Local Farm Bureau Staff Member
- State Legislator
- U.S. Congressional Leaders
- University Scientists
- Government Agency Researchers
- Media Outlets (radio/tv stations, newspapers, etc.)

### ***How to Work with Your Community to Start a Drug Collection Event***

- Generate a list of the special/important people in their community who should become involved in this project.
- Have your students reach out with letters or phone calls.
- Invite these community members to the school to listen to presentations given by the P<sup>2</sup>D<sup>2</sup> students.
- Combine pertinent information from everyone's PowerPoint presentations to create a comprehensive presentation to give to these important community members.
- Have students choose representatives from the various student workgroups in the class to deliver the presentations to each target group; e.g., a pharmacist, wastewater treatment plant official, police officer, representative from the Mayor's office, City Council member, County Board member, Rotary Club member, etc.
- The representatives (business members, decisionmakers, interested citizens, etc.) should be invited to the school to learn about the P<sup>2</sup>D<sup>2</sup> Program because it will bring them to an "environment" that the kids are familiar with and are comfortable in. This approach also demonstrates to the community members the learning environment where the P<sup>2</sup>D<sup>2</sup> Program is being taught and implemented.

In preparing their presentations and deciding who to invite, students are always encouraged to think outside the box. One interesting example of an unlikely community business partner was an ATV dealership that wanted to deliver the P<sup>2</sup>D<sup>2</sup> message. They connected with Paul Ritter and got ahold of the P<sup>2</sup>D<sup>2</sup> logo, which they affixed to the side of their ATV quad vehicle, which brought visibility to the Program with a new audience.

### ***How to Branch Out to Other Schools to Get them Involved in the P<sup>2</sup>D<sup>2</sup> Network***

So far, the P<sup>2</sup>D<sup>2</sup> Program has expanded beyond Illinois to schools and communities in Wisconsin, Washington, Texas, and Florida. Teachers at Pontiac Township High School continue to work diligently to involve schools in many more states.

"We encourage our kids to divide and conquer," says P<sup>2</sup>D<sup>2</sup> Program Coordinator Paul Ritter. "We are always looking for new school partners to give away our P<sup>2</sup>D<sup>2</sup> Program." Ritter and his students will communicate with a town that has expressed an interest or a school that seems to be a good, logical choice. For example, a pharmacist from LaSalle-Peru, IL, asked Ritter about the Program, so he visited him after school hours to talk about it. Ritter has contacted fellow science teachers at other schools; emailed superintendents of other school districts; and called police departments and pharmacies to describe the Program and invite their participation.

An example of P<sup>2</sup>D<sup>2</sup> Program expansion is the very successful partnership between Pontiac Township High School and Westfield High School in Houston, Texas. Students in the Spanish National Honor Society learned about the P<sup>2</sup>D<sup>2</sup> Program and decided to help spread the messages to the Spanish-speaking community by translating the P<sup>2</sup>D<sup>2</sup>

Website into Spanish. Mr. Xavier Salat-Foix was the lead teacher in that project. The description of that Spanish Web development project is found later in this section. The website is located at <http://www.p2d2program.org/espanol.html>.

Sometimes, a young person will become inspired after learning about P<sup>2</sup>D<sup>2</sup> and work on an individual basis to implement the project. For example, a 14 year old student from Reedsburg, Wisconsin, Jordyn Schara, worked in her own community to inform the public and organize a collection event.

Paul Ritter is very interested in getting Indiana schools on board, especially because that state has a very active Household Hazardous Waste Program in each of its counties. The Indiana Department of Environmental Management engages schools to help students develop life-long recycling habits to help preserve natural resources.

### ***Student Participation at Community Events—Getting the Word Out***

It is important to get the students involved in after-school activities and public events to share their projects and spread the P<sup>2</sup>D<sup>2</sup> message. For example, the Pontiac students exhibited the project at the September, 2009 Farm Progress Show in Decatur, IL. P<sup>2</sup>D<sup>2</sup> students participated at *It's Our River Day Festival* held at Navy Pier, Chicago, on September 19, 2009. Students displayed the P<sup>2</sup>D<sup>2</sup> rainbarrel to show that water is our most precious resource. This event gave our kids the opportunity to reach out to other young people. Art is a big part of P<sup>2</sup>D<sup>2</sup>. Not only does the artwork created by students get the message across, but it also provides youth with a skill they can use throughout their life.

P<sup>2</sup>D<sup>2</sup> Green Day was an expansion of the Prescription Pill and Drug Disposal Program. About 500 pounds of unused prescription and over the counter medicines were collected for proper disposal in McLean County. P<sup>2</sup>D<sup>2</sup> students were involved in delivering the important program messages as they helped pharmacists hand out magnets and flyers to inform visitors of proper disposal methods. They also helped evaluate the effectiveness of this collection event by counting the number of cars that came through to drop off unwanted medicines.

There are many examples of approaches to publicize these collection events found on Illinois-Indiana Sea Grant's Unwanted Medicine Toolkit Page—*Disposal of Unwanted Medicines: A Resource for Action in Your Community*. Check out these helpful approaches, including sample flyers, postcards, and other public outreach materials at <http://www.iisgcp.org/unwantedmeds/ch4.html>.

## **Pontiac Police Department's Collection Policy**

### ***Drug Collection/Disposal Program***

1. The drug collection and disposal program provides a safe disposal location for citizens to properly dispose of unused prescription medications.
2. Pontiac Police Department will provide a steel mailbox style collection box in which citizens may deposit these medications.
3. The Evidence Officer will be the sole possessor of keys to the collection box.

### ***Collection Box Specifications***

Standard steel mail courier box. Pontiac High School used one that is 20" W x 49" H x 26" D. Package drop opening: 15-3/4" W x 7" H. Storage area: 19" W x 28" H x 21" D, 160 lbs. Cost: approximately \$550.

## **Pontiac Pharmacy's Collection Policy for Non-controlled, Over-the-counter Medicine**

1. Individuals take their unused and unwanted prescription and non-prescription drugs to participating pharmacies.
2. Pharmacists take the pharmaceuticals and place them into secure bins. Please note that only licensed pharmacists and assistants handle the returned pharmaceuticals.
3. When the bins fill up, pharmacists send them off to be incinerated.
4. The company that incinerates the pharmaceuticals creates energy that is used to power homes and businesses.

# P<sup>2</sup>D<sup>2</sup> Program Website

[www.p2d2program.org](http://www.p2d2program.org)

The P<sup>2</sup>D<sup>2</sup> Program website features award-winning student projects and activity highlights, as well as the history of the program. The site links the latest news articles on the topic of impacts from improper disposal of unwanted medicines. Also included is a link to a useful background toolkit for student research—Illinois-Indiana Sea Grant's *Disposal of Unwanted Medicines: A Resource for Action in Your Community*.

The site describes the important role that pharmacists and law enforcement officials play as partners with high schools in the successful execution of the program. Through this website, helpful suggestions are provided for teachers who wish to start a P<sup>2</sup>D<sup>2</sup> service-learning program in their community.

Over 80% of waterways tested in the U.S. show traces of common medications such as acetaminophen, hormones, blood pressure medicine, codeine, and antibiotics.

StatCounter

- History
- Accepted Items
- Drop Off Locations
- Create Your Own Program
- Frequently Asked Questions
- In the News and Contacts
- HS&C Disposal of Unwanted Medicines
- P2D2 News Videos
- Volunteer Institute
- P2D2 Team Travels To Barcelona, Spain
- ¿Hay más espacio del P2D2 web in español

planet



## The P<sup>2</sup>D<sup>2</sup> Network.

Prescription Pill and Drug Disposal Program  
 Contact Paul To Start Your Program Today  
 815-844-6113  
[ritterp@pontiac.k12.il.us](mailto:ritterp@pontiac.k12.il.us)

### What is the Program?

The Prescription Pill and Drug Disposal Program is a collaborative effort between local pharmacies, police departments, officials, and students. The purpose is to educate the public about the harm done to the environment due to the current prescription and non-prescription drug disposal practices and to provide them with an alternative way of disposal that ensures the quality of our water for future generations.

### Role of The Pharmacy

1. Individuals take their unused and unwanted prescription and non-prescription drugs to participating pharmacies.
2. Pharmacists take the pharmaceuticals and place them in to secure bins. Please note that only licensed pharmacists and assistants handle the returned pharmaceuticals.
3. When the bins fill up, pharmacists send the m off to be incinerated.
4. The company that incinerates the pharmaceuticals creates energy that is used to power homes and businesses.

[Pharmacy Standard Operating Procedures](#)

### Role of The Police Department

1. Individuals can take their unused and unwanted Class II controlled substances to local participating Police Departments.
2. The participating Police Department have a secure drop box that individuals can place their substances in - no questions asked.
3. The substances will be disposed of following proper police procedures.

[Police Standard Operating Procedures](#)



Illinois Governor Pat Quinn gives praise to all of the students, teachers, and community members for their amazing efforts in development of the P<sup>2</sup>D<sup>2</sup> program as a model for all.

Jordan Schars, Finalist, *Wash. Foods Golden Award for Wisconsin P<sup>2</sup>D<sup>2</sup> Program*

### P<sup>2</sup>D<sup>2</sup> Proclamation



Governor Dan Claitor presents proclamation from Governor Claitor declaring May, set as P<sup>2</sup>D<sup>2</sup> Day in Illinois.



Wisconsin P<sup>2</sup>D<sup>2</sup> Program  
 Jordan Schars