

# **Sample Student Stewardship Projects to Initiate Action**







*Jordyn Schara, an incoming Reedsburg Area High School freshman, is directing a program she has dubbed Wisconsin Prescription Pill and Drug Disposal (P<sup>2</sup>D<sup>2</sup>). The purpose of P<sup>2</sup>D<sup>2</sup> is to dispose properly of excess medications. Schara started the program for two reasons: the first is that improper disposal of medications, both prescription and over-the-counter (OTC), leads to contaminated water in rivers, lakes and streams. The second reason is because she has seen people at parties using medications to get high. "Young people ages 12 to 17 abuse prescription drugs more than cocaine, heroin and methamphetamine combined," Schara said, citing a 2006 national survey on drug use and health. Schara said P<sup>2</sup>D<sup>2</sup> will allow people to dispose of medications they don't need anymore for free.*

For more information visit:

[www.p2d2program.org/wisconsinp2d2.htm](http://www.p2d2program.org/wisconsinp2d2.htm)

[www.girlzone.com/DrugsInWater/](http://www.girlzone.com/DrugsInWater/)



*This billboard was designed through a partnership between Charleston High School and Pontiac Township High School. It was designed by Chris Ashmus, a Pontiac Township High School student whose class participated in the P<sup>2</sup>D<sup>2</sup> program. It is posted near a roadway in Charleston, Illinois.*

[Refer to P<sup>2</sup>D<sup>2</sup>Lessons, p. 10 for donation information related to producing a billboard]



*This billboard was designed by Pontiac Township High School student Samantha Washko, participant in the P<sup>2</sup>D<sup>2</sup> program. It is posted near Bloomington, Illinois.*

# We Love P2D2

Lyrics by Natasha Coan  
Music by Zachary Kohlmeier  
Vocals by Zach, Natasha, and  
Nathaniel Bardwell

Voice

Doo doo doo doo doo...—

Soprano

And you boy, you're ne - ver

Tenor

Our love is beau-ti - ful and clean

Piano

Drum Set

5

S

— cruel or mean See-in' your smil-in' face

T

Look-in' a - round — there's no need to frown —

5

Pno.

5

D. S.



*A P<sup>2</sup>D<sup>2</sup> mail drop box at the Illinois State Police District Six Headquarters. The graphics were designed by Pontiac Township High School art students.*

Students get the word out by creating awareness of the P<sup>2</sup>D<sup>2</sup> Program through a rain barrel art project.



Students paint a collection drop box to inform citizens about medicine dropoff locations.



# Pharmaceutical Reclamation Program

By: Darrius Washington  
&  
Kyle Resin

Sample Student PowerPoint  
Presentation



# What is the Pharmaceutical Reclamation Program ?

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- Pharmaceutical – Pertaining to pharmacy or pharmacists
- Reclamation – the process or industry of deriving usable materials from waste, by-products, etc.
- Program - a plan of action to accomplish a specified end

# Pharmaceuticals in our Sewage

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- Pharmaceuticals in sewage creates a potential problem in a sewage plant's ways of treating sewage. There are 6 main "trouble making" toxic pharmaceuticals, which are carbamazepine, sulfamethoxazole, propranolol hydrochloride, diclofenac sodium, ofloxacin and clofibrac acid, which all affect the anaerobic digestion process.

# Carbamazepine



- Carbamazepine: This is a group of drugs called anticonvulsants, which will lower nerve impulses that causes seizures & pain. Carbamazepine is used for more than just seizures. It is also used for nerve pain such as trigeminal neuralgia and diabetic neuropathy. This isn't just used for nerve pain, but can also treat bipolar disorder.

# Sulfamethoxazole



- TRIMETHOPRIM-SULFAMETHOXAZOLE - TMP-SMX is a commonly used drug, which treats PCP pneumonia, urinary tract infection, enteric infection (shigella, salmonella) and certain STD's; also serves as a prophylactic agent against toxoplasmosis.

# Other Drugs in our Water



diclofenac sodium



clofibrac acid

# Prevalence in the Environment

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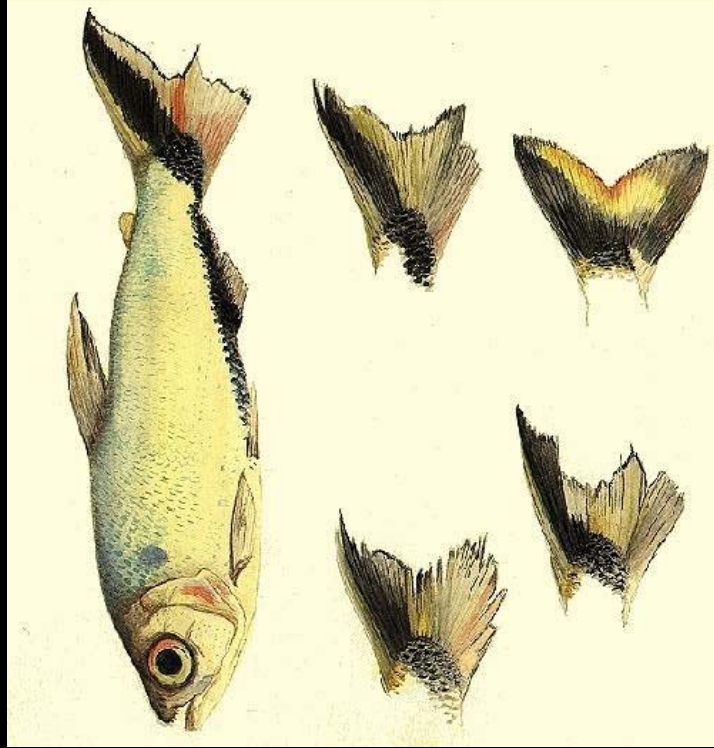
- Pharmaceuticals have been in our water ever since they were first taken by people. It's just that now there is so much of it, that it can be detected and removed.

# Exposure Concerns

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- The amount of pharmaceuticals in water is well below the recommended dosage, but it will affect aquatic ecosystems. Some fish have been known to have high levels of estrogen and also are not able to repair their own damaged fins.

# What Damaged Fins Look Like



# Something Funny



# Web Sites Used

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- <http://www.iwaponline.com/wst/05005/wst050050335.htm>
- <http://www.healthline.com/multumcontent/carbamazepine#H2>
- <http://www.hivdent.org/drugs/TRIMETHOPRIM.htm>
- <http://www.google.com>

# Pharmaceuticals In Our Water!

By: Karisly Ambrose

Brittany Kolesar

Amanda McBride

Sample Student PowerPoint  
Presentation

# Facts

- In Phoenix Arizona they have found pharmaceuticals in their drinking water !!
- Which is a huge problem for them!
- And us....



- This issue in the U.S. might have been taken care of about 20 years ago if the officials would have fixed the problem.



- **NOW** they have realized that the pharmaceuticals are being put into our drinking water!



Along with pharmaceuticals, personal care products also are showing up in the water as well.



# OH SNAP!

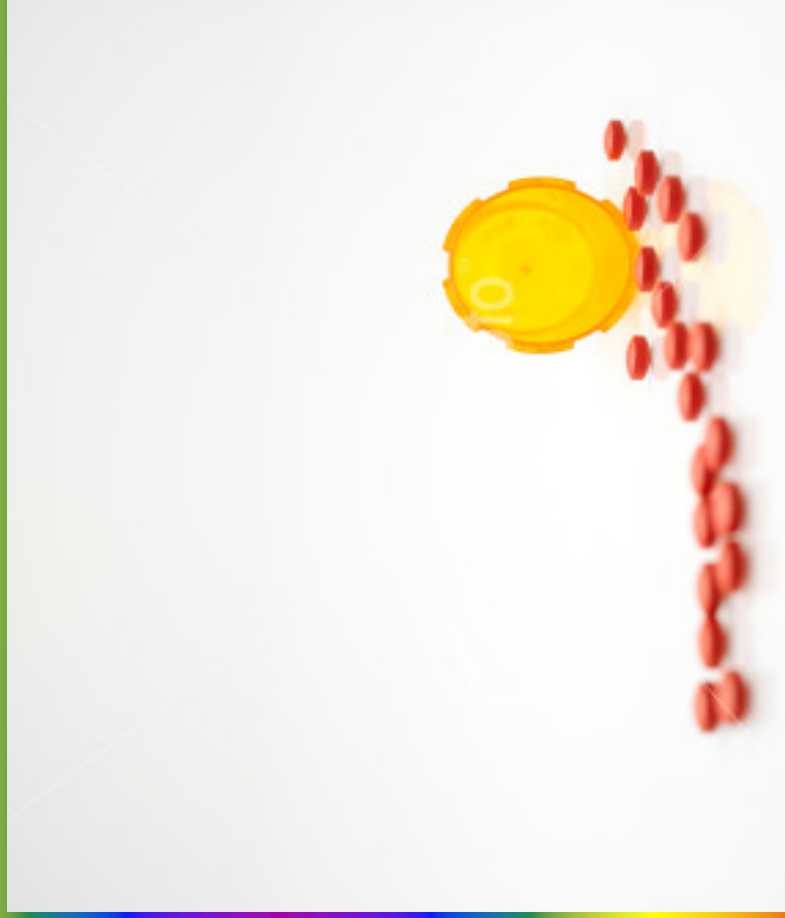
- Farm animals also are a source of pharmaceuticals
  - ingestion of hormones
  - antibiotics
  - veterinary medicines
- Manure containing pharmaceuticals is spread on land and can then wash off into surface water and even percolate into groundwater.



# WHY ARE THERE DRUGS IN OUR WATER?

- Drugs enter the environment in two ways:
- Prescription medicines and supplements that are unwanted are difficult to remove through wastewater treatment.
  - Unwanted drugs are improperly disposed of in the trash or toilet.

# WHY?



# NOOOOO!!!

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



- We need your help.....
- It is not just everyone else who this is affecting.
  - YOU are drinking.
  - YOUR children are drinking.
  - We can prevent this.....right here right now!
- Help us start The Pharmaceutical Reclamation Program.



<http://ag.arizona.edu/AZWATER/awr/july00/feature1.htm>

<http://www.teleosis.org/pdf/GreenPharmacyBrochure.pdf>

[www.google.com](http://www.google.com)



THANK YOU FOR YOUR TIME!!