Stakeholder Debate: Recreational Water Contamination & Beach Closure

Purpose

To integrate all the knowledge from the Water and Sewage AMBIENT Module by creating a presentation taking a particular ethical stance or point of view.

Overview

This is the culminating experience of the Water and Sewage AMBIENT Module. Students will be asked to work in teams to develop a presentation and handout representing a particular point of view in a Recreational Water Contamination & Beach Closure Debate. This experience will require the students to synthesize their varied knowledge of recreational water, sewage, and their issues, organize this knowledge, and present it persuasively to their peers.

Time

3-5 two hour block class periods with team homework in between; the session is to start the students, the second is to evaluate their progress, and the third is for them to present their debate/role play. This experience should involve time in and out of the classroom to collect, organize, and create the Team Presentations.

Key Concepts

This section particularly focuses on the ethical issues engendered by recreational water, sewage and beach closures. There are many different points of view in the Recreational Water Contamination & Beach Closure Debate, ranging from health and social to economic. There is also the issue of limited public resources to solve environmental problems, as well as how to prevent similar environmental problems in the future.

Skills

Students will work in teams to synthesize their Water and Sewage knowledge to represent a particular point of view persuasively. They will create a handout and presentation materials to help communicate this knowledge and point of view. Finally, using these materials, they will practice public speaking to present their work.

Materials

Computer access to presentation software such as PowerPoint would be useful, but not essential since transparencies could be used to illustrate the speaking points. Although software (such as Microsoft Word or PowerPoint) would facilitate the creation a Brochure, Rap/Song or Poem or a Play, or Poster, these could be done purely on hardcopy incorporating pictures and text. Creation of a video would require video camera equipment.

An overhead projector or slide or LCD projector for presentation of transparencies, slides or computerized PowerPoint presentation.

Facilitator Preparation

You will need to divide the students into groups or teams representing different sides of the debate questions or as individuals/teams representing different roles. Knowledge of and facilitating access to the computerized software with training will optimize this session. Prior knowledge of the Water/Sewage Primer, as well as other modules, will prepare you for the range of issues addressed in this section.

It is recommended that Facilitators initially organize the students into group representing a particular debate or role playing point of view. The facilitators should meet with each group to evaluate their progress in deciding the type of handout, the medium, and the different parts in the presentation. Facilitators should encourage the groups to practice their presentations before and keep to the time limits.

Background

What are the various issues raised by Sewage as an environmental pollutant? Is sewage avoidable, whose fault is it, and is it an economic product? As a political, historical and ethical issue? What does a society do if there are limited resources to correct an environmental issue? How does a society prevent this sort of environmental disaster from occurring in the future? What is the role and responsibility of the individual when faced with an environmental issue?

In the situation of a known sewage spill, when is it safe to open a beach? How do you know if recreational beaches are safe for people, for other animals, for the environment in general? Recreational waters and beaches are used by many people for pleasure, business, and even sustenance, as well as being home to different types of organisms. How much money and resources should be devoted to this issue?

Other aspects are teamwork of the students in synthesizing, creating and presenting data and a particular point of view. If available, the use of various software packages can be incorporated to enhance presentations. Effective communication is one of the objectives of this section.

Procedure

Read the following newspaper articles describing different points of view on the sewage spill, with subsequent closure and re-opening of the beaches and recreational marine waters of Miami.

- **Beach businesses feel impact of sewage spill** Adrian Sainz, Associated Press (June 23, 2000) http://wire.ap.org/
- **Most Miami beaches reopen after sewage spill** CNN (June 29, 2000) http://www.cnn.com/2000/US/06/29/miami.beaches.reopen/
- **By Testing its Waters, Miami Beach gets off "Beach Bum List"** Carol Rosenberg, Miami Herald (July 2, 1997) http://www.miami.com/herald/

Organize a **Beach Closure Debate**, taking different points of view as starting points to discuss the different issues raised by recreational water contamination and beach closures. Have each group develop a **Power Point Presentation** (or similar software) as part of the debate to organize and illustrate while they talk. Have the rest of the students participate as an audience representing US Citizens, Politicians, Scientists, or any of the roles suggested below.

In opposing groups, **Possible Debate Issues** include:

- Public Beaches and recreational waters are an unique recreational, economic, and environmental resource which must be kept open at all costs vs There are limited economic resources and more important issues than Public beaches and recreational waters
- The Public Health demands that access to public beaches and recreational waters only be allowed in pristine conditions vs Human uses of public beaches and recreational waters are more important than maintaining a pristine environment

Have each group in the debate develop a **Brochure** briefly describing the health effects and differing issues of recreational uses of water and beaches from their debate point of view. Alternative work products could include: making a **Video**, creating a **Webpage**, making a **Rap/Song** or **Poem** or a **Play**, or creating a **Poster** to communicate their position on these water issues.

The debate could also involve **Role Playing** using some of the following roles to illustrate different views in the Water Debate.

- Scientist against beach closure
- Scientist for beach closure
- Environmental health specialist involved in monitoring for toxins and organisms at the beach and marine waters
- Reporter of local newspaper
- Scientist studying the habitats of the endangered Florida Manatee
- Scientist arguing for alternative monitoring methods of recreational marine waters
- Small Business owner working on the beach
- Fisherman/woman using the beach and recreational waters
- Parent with small children using the beach and recreational waters
- Life guard employed by county
- Manager of the beach employed by the county
- Owner of hotel on the beach
- Politician with limited monies and resources for public and environmental health
- Lawyer representing the county suing the construction company that broke the sanitation pipe
- Lawyer representing the construction company that broke the sanitation pipe
- Windsurfer who regularly uses beach and marine waters
- Director of the Health Department
- Historian interested in the historical segregation practiced on this beach
- Resident of a home near the beach

Further Investigation

Students can use their handouts and presentation to discuss Water and Sewage as an environmental issue for other students, families and neighborhood organizations.

What would the student(s) do to rectify this issue if it occurred in their own neighborhood or family? What can one individual do? What can a group of people do? How can this situation be prevented for Water and Sewage and for similar environmental issues?

Students can assess environmental issues for their own neighborhoods, prioritize these issues, and create plans of how to address these issues to either remediate or prevent them.

Student Assessment

Give the following presentation design components to each student team as a guide to their group presentations:

- Decide what facts are important to include to support their particular view point on the Water and Sewage issue
- Design a Handout that summarizes this information and their point of view (ie. Brochure, Video, Webpage, Rap/Song, Poem, Play, Poster)
- Practice and keep their presentation within the time allotted
- Each group member should take part in the Presentation, even if it is just to read or explain one piece of the presentation
- Each group member should answer at least one question from the audience at the end of their Group presentation.

Assign points for the following components of the Team Presentation:

- Were the handout and presentation easy to read/effective at communicating the facts and the particular point of view?
- Were pictures/maps/illustrations used?
- Were proper science terms used?
- Was each group member actively involved in the presentation?
- Did the group report their sources?
- Could the group members answer questions from the audience about the facts and defend their point of view?

Beach businesses feel impact of sewage spill

Friday, June 23, 2000

By ADRIAN SAINZ, Associated Press http://wire.ap.org/

MIAMI BEACH — South Beach's Penrod's Beach Club is usually bustling with tanned and thirsty patrons these summer days, but a big sewage spill that sent up an economic stink changed all that.

The spill from a broken pipe on the edge of a major shipping channel and tidal inlet has force the banning of bathers along a 25-mile stretch of beach.

Despite successful efforts to reroute sewage from the broken main to an auxiliary pipe, people are still advised to stay out of the water from north of Miami Beach south to Key Biscayne.

"We're about 60 percent slower than normal," said Penrod's manager Madonna Conti. "It's frustrating, and I feel bad because our staff works on tips from customers."

High-ranking county officials said the mess would soon be flushed away by a succession of ocean tides.

"We don't have the slightest doubt that the current pollution levels will dissipate," said Miami-Dade County Manager Merrett Stierheim. "But there is no question that (the spill) has had an adverse impact on business on the beach."

Meanwhile, the Miami-Dade Environmental Resources Management Department confirmed Thursday that the marine contractor that drove a concrete piling through the sewage main didn't have a permit for the work.

In contrast to Penrod's beachside troubles, hotels are relying on their swimming pools and planned leisure activities to keep guests entertained.

"We've had no cancellations," said Anton Ramus, manager of the Shelborne Beach Resort, about five miles north of Penrod's. "Some people have called to know what's going on, but everything here is normal."

Managers of three other hotels along the affected strip of sand from Sunny Isles Beach south to Cape Florida are optimistic that tourists will not cancel reservations.

"We've had absolutely no one leave," said Loews Hotel public relations director Jeff Abbatichio. "Guests are a little upset they can't go in the water, but as long as we have the pool, we're fine."

Other county officials said Thursday that the marine contractor driving pilings in a Miami Beach marina submitted an incomplete permit application and had yet to pay the permit fee, so one had not been issued.

Alyce Robertson, assistant director of the environmental management department, said it had issued a "field notice," the first step in issuing a notice of violation. She said the case is under extensive review for other possible violations.

Raw sewage that would have been carried by the pipe to a treatment plant on Virginia Key is now being pumped 2 1/2 miles into the ocean through a 48-inch line. The waste was rerouted from the broken 54-inch main to the backup line late Wednesday.

The broken main will not be made whole for at least five days, according to Barbara Sanitize, spokeswoman for the Miami-Dade Water and Sewer Department.

The stay-out-of-the-water advisories won't be lifted until two days of safe test results are in from 45 sampling sites in the contaminated area, according to the Miami-Dade Health Department.

Sample analysis involves the culturing of bacteria and takes 24 to 48 hours.

"We can't predict when it will be safe again," said Miami-Dade Environmental Health administrator Samir Elmir.

The U.S. Department of Interior said in a Thursday statement that Biscayne National Park, which is just south of the affected area, is open and is not affected by the spill because of natural tidal flows.

Most Miami beaches reopen after sewage spill

June 29, 2000
Web posted at: 8:44 p.m. EDT
(http://www.cnn.com/2000/US/06/29/miami.beaches.reopen/)
(0044 GMT)

“MIAMI (CNN) -- Most of the Miami area beaches closed because of a ruptured sewage pipeline were reopened Thursday, in plenty of time for the Fourth of July.

The Florida Department of Health has confirmed that water quality is normal for the South Florida shoreline from 163rd Street south to 94th Street, and from 54th Street South through Key Biscayne.

That includes most of the beaches from North Miami Beach to Key Biscayne, including trendy South Beach.

"The city of Miami Beach is thrilled that most of our beaches are open now for swimming to visitors and residents in time for the holiday," said Miami Beach Mayor Niesen Kasdin.

Swimming and fishing were banned along some 20 miles of beaches in the Miami area after a contractor drove a piling into the city's only sewage pipeline June 20.

That line carries raw sewage from more than 100,000 residents in the Miami Beach area to the area sewage processing plant in Virginia Key, just southeast of Miami.

Until emergency workers were able to redirect the flow, over 25 million gallons of waste spilled into the bay each day.

Sewage was dumped two and a half miles from the shoreline as an alternative to using the ruptured pipe while it was being repaired.

Advisories are still in effect for beaches located between 94th Street and 54th Street South. The health department continues to test the rest of the beaches and will alert the public to any changes in current conditions.

Hotel and restaurant owners were thrilled with the news of the reopening.

“We're very happy that we are able to offer our guests the beach again now that they're open; we're celebrating, we couldn't be happier," said Lucy Thielen, a front desk clerk for the Beacon Hotel on Miami Beach's Ocean Drive.”

By Testing its Waters, Miami Beach gets off “Beach Bum List”

July 2, 1997
CAROL ROSENBERG Miami Herald http://www.miami.com/herald/

An environmental lobbying group on Tuesday took Miami Beach off its annual list of ``beach bums'' that fail to test swimmers' waters because Dade instituted a $34,950 countywide testing program last year.

Holiday spots singled out by the National Resources Defense Council as potentially endangering public safety included:

* Myrtle Beach, South Carolina, with 12 million visitors annually

* The Outer Banks, North Carolina, with 7 million visitors

* Puerto Rico, with 4 million visitors

* Key West, with 2 million visitors

``We think that given the number of people who swim there -- and vacation there year round -- they really should be testing and notifying the public. It's really a risk,'' said Marci Borman, author of the 145-page 1996 report ``Testing the Waters, How Does Your Vacation Beach Rate?''

The council is a nonprofit organization representing 350,000 scientists, lawyers and environmentalists. It advocates stricter national standards for testing public beaches. Testing is now conducted on a community by community basis.

No national standard
``Pollution continues to degrade coastal and Great Lakes beaches,'' said the organization's Sarah Chasis. ``There is no national standard that protects swimmers. There is no consistency among states or even within states.''

The report found, for example, that Key West's Monroe County has no regular monitoring program and has storm drains near its beaches. Puerto Rico has monthly testing, but doesn't get its results until two weeks later, said Borman, meaning swimmers cannot be told in a timely fashion when to shun swimming. Myrtle Beach does infrequent water testing, according to the report, and The Outer Banks does none.

Of biggest concern to public health, Borman said, are sewage-related bacteria, caused both by leaks and runoff after big storms as well as illegal discharges from boats that wash up on beaches.

Swimming in polluted waters can cause illnesses, notably gastroenteritis. Symptoms of sickness linked to pollution include vomiting, fever, chills, diarrhea and respiratory illness, the council said.

Miami Beach made 1995's ``beach bums'' list, which targets big tourist meccas, but was taken off because the county introduced the monitoring program.

``The county has selected 50 sampling sites, which encompass the more popular beaches as well as the atoll beaches and state parks,'' the report said.

Citing a report from Dade itself, the resources council said the county spent $34,950 on its new testing program to cover its 50 miles of beaches. Broward, with 23 miles of beaches, already had a monthly testing program in place.

Regular tests
Under Dade's new program, county officials test the sample sites every other Week between Memorial Day and Labor Day, monthly the rest of the year, and post notices closing beaches when the tests exceed safety standards.

According to the report, the county closed 36 beaches in 1996 mostly because of sewer line ruptures or storm drain spills.

Nationally, the report found that the number of beach closings decreased over the year before, in large part because of weaker hurricane and storm activities in Florida and California.

There were 2,596 beach closings nationally in 1996 compared with 3,522 in 1995. Florida's beach closings decreased from 830 in 1995 to 174 in 1996. More than half of the 1995 closings were connected with Hurricane Opal.

The council advocates that local communities use EPA standards for testing, always close beaches and post advisories when bacteria or other organisms break those standards and that communities regularly monitor their beaches. It also advocates that in areas where there's a correlation between rainfall and high bacterial levels, communities issue preemptive closings or advisories.