



GREEN CHEMISTRY

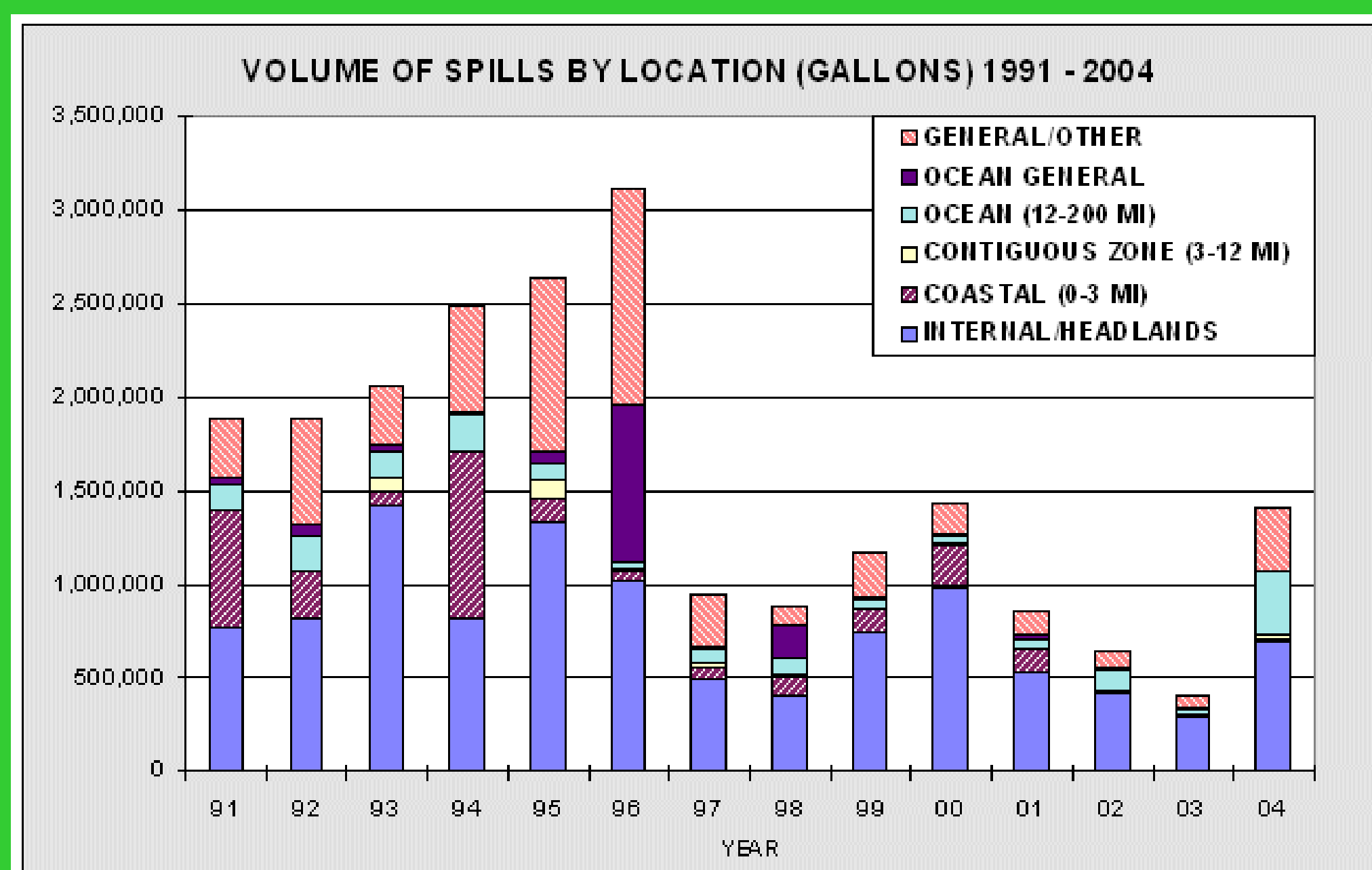
Clint Burgess, Hamida Idouraine, Khadjia Ouaddi, and Catherine Towers

Prevention: It is better to prevent waste than to treat or clean up waste after it has been created.

The Goal:

To educate and raise awareness of the community about prevention using green chemistry.

Background Information



Oil Spills:

Every year about 360 million gallons of oil enter the ocean. Cleaning up oil spills is difficult, costly, and does not always fully rehabilitate affected areas, prevention is the key.

The Exxon Valdez (March 23, 1989) and the BP (Prudhoe Bay) pipeline incident (March 21, 2006) were the two major oil spills in Alaska.

The Exxon spill covered 1,300 miles, took four summers to clean up the spill, and cost about 2.1 billion dollars.

The BP pipeline company had to shutdown their chain in Alaska. The total cost of the clean up has not been confirmed.



Bird covered in oil as a result of the Exxon oil spill



BP incident more than 190,000 oil leak onto the snow

Nuclear power plant leaks:

Nuclear power plants operate in most states in the country and produce about 20 percent of the nation's power. An accident at a nuclear power plant could release dangerous levels of radiations that could affect the health and safety of the people living near the plant.

Forsmark Nuclear Power Plant is a nuclear power plant in Sweden. On July 25, 2006 one reactor was shut down after an electrical fault. This incident was considered the most serious accident since the Chernobyl disaster, and it was pure luck that melt down was prevented.



Bird covered in oil as a result of the Exxon Oil spill.

Effective prevention that could might be take are:

- Clear, concise, technical safety directives that are based on sound engineering principles
- Strong containment structure
- Safer design
- More thorough investigation of incidents
- Study in much greater depth of past explosions

Effective prevention plans includes:

- Newer driving and oil handling technology
- Maintaining vessels and improving pipeline coating materials
- Building more spill-resistant vessels
- Improved piloting; training of ship and tanker crews
- Training of storage and pipeline facilities crews
- Preparing for spill response through effective training, planning, and practice drills



Oil spill training exercise.

Conclusion

Prevention is the best way to protect the environment. It focuses on ways to avoid creation of waste before it needs to be cleaned up. This can be done by using less hazardous materials in manufacturing, being careful to prevent spills and, maintaining equipment in top condition.

References

- www.commondreams.org
- <http://en.wikipedia.org>