Item #9A

City of Carson City
Agenda Report

Date Submitted: March 21, 2008

Agenda Date Requested: April 3, 2008
Time Requested: 10 minutes

To: Mayor and Supervisors

From: Public Works Department

Subject Title: Staff report regarding Associated Press news release on pharmaceuticals in drinking water. No action required.

Staff Summary: A recent news report from the Associated Press has caused alarm across the nation regarding the detection of pharmaceuticals in drinking water supplies. Staff will present local issues and Federal guidelines regarding pharmaceutical disposal practices.

Type of Action Requested: (check one)
(____) Resolution (____) Ordinance
(____) Formal Action/Motion (XXX) Other (Report to Board – No Action)

Does This Action Require A Business Impact Statement: (___) Yes (XXX) No

Recommended Board Action: Staff report regarding Associated Press news release on pharmaceuticals in drinking water. No action required.

Explanation for Recommended Board Action: N/A

Applicable Statue, Code, Policy, Rule or Regulation: N/A

Fiscal Impact: N/A

Explanation of Impact: N/A

Funding Source: N/A

Alternatives: N/A

Supporting Material:

Prepared By: Ken Arnold, Public Works Operations Manager

Reviewed By: _____ Date: 3/25/08
(Department Head)

_____ Date: 3/25/08
(City Manager)

_____ Date: 3-25-08
(District Attorney)

_____ Date: 3-25-08
(Finance Director)

Board Action Taken:

Motion: _____ 1) _____ Aye/Nay

2) _____ _____

_____

_____

_____

_____

_____

(Vote Recorded By)

FOR IMMEDIATE RELEASE:
Tuesday, February 20, 2007

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FEDERAL GOVERNMENT ISSUES NEW GUIDELINES FOR PROPER DISPOSAL OF PRESCRIPTION DRUGS:

WHAT EVERY AMERICAN CAN DO TO PREVENT MISUSE OF PRESCRIPTION DRUGS

RELATED RESOURCES

- Read the new Federal Guidelines
- Learn more about Prescription Drug Abuse

(Washington, DC)—In the face of rising trends in prescription drug abuse, the Federal government today issued new guidelines for the proper disposal of unused, unneeded, or expired prescription drugs. The White House Office of National Drug Control Policy (ONDCP), the Department of Health and Human Services (HHS), and the Environmental Protection Agency (EPA) jointly released the new guidelines, which are designed to reduce the diversion of prescription drugs, while also protecting the environment.

The new Federal prescription drug disposal guidelines urge Americans to:

- Take unused, unneeded, or expired prescription drugs out of their original containers
- Mix the prescription drugs with an undesirable substance, like used coffee grounds or kitty litter, and put them in impermeable, non-descript containers, such as empty cans or sealable bags, further ensuring that the drugs are not diverted or accidentally ingested by children or pets
- Throw these containers in the trash
- Flush prescription drugs down the toilet only if the accompanying patient information specifically instructs it is safe to do so
- Return unused, unneeded, or expired prescription drugs to pharmaceutical take-back locations that allow the public to bring unused drugs to a central location for safe disposal

Abuse of prescription drugs to get high has become increasingly prevalent among teens and young adults. Past year abuse of prescription pain killers abuse now ranks second—only behind marijuana—as the Nation's most prevalent illegal drug problem. While overall youth drug use is down by 23 percent since 2001, approximately 6.4 million Americans report non-medical use of prescription drugs. New abusers of prescription drugs have caught up with the number of new users of marijuana. Much of this abuse appears to be fueled by the relative ease of access to prescription drugs. Approximately 60 percent of people who abuse prescription pain killers indicate that they got their prescription drugs from a friend or relative for free.

John Walters, Director of National Drug Control Policy, said, "Millions of Americans benefit from the tremendous scientific achievements represented by modern pharmaceutical products. But, when abused, some prescription drugs can be as addictive and dangerous as illegal street drugs. The new prescription drug disposal guidelines will help us stop and prevent prescription drug abuse, and the harm it can cause.

Health and Human Services Secretary Michael Leavitt said, "Health care providers, pharmacists, and family should be alert to the potential for prescription drug misuse, abuse, and dependence. In addition to

supporting the new prescription drug disposal guidelines, they should address prescription drug misuse honestly and directly with their patients or loved ones when they suspect it. People in need should be encouraged to seek help for drug problems and if needed, enter treatment."

The new Federal guidelines are a balance between public health concerns and potential environmental concerns.

While EPA continues to research the effects of pharmaceuticals in water sources, one thing is clear: improper drug disposal is a prescription for environmental and societal concern," said EPA Administrator Stephen L. Johnson. "Following these new guidelines will protect our Nation's waterways and keep pharmaceuticals out of the hands of potential abusers."

The new Federal prescription drug disposal guidelines go into effect immediately. As part of the National Drug Control Strategy, the Bush Administration has set a goal of reducing prescription drug abuse by 15 percent over three years. In addition to promoting awareness of the risks involved with using prescription drugs for non-medical purposes as well as they need for adults to strictly control access to pharmaceuticals within their homes, the Administration supports the implementation of Prescription Drug Monitoring Programs at the State level. Currently, 33 States have such programs in place.

For more information, please visit www.whitehousedrugpolicy.gov.

Water Environment Federation®
Preserving & Enhancing the Global Water Environment

Resource Paper for Public and Press

Microconstituents in the Water Environment

What is the Issue?

Modern science has produced innumerable products and medicines that have improved the quality and longevity of our lives and afforded many conveniences that we have come to take for granted. There are approximately 82,000 chemical compounds in commerce today and some of these are employed to produce these benefits. Not surprisingly, virtually all compounds used by humankind find their way into the earth's air, water or soil. This is not a new phenomenon. What is new is that our analytical testing methods are more and more sensitive -- so sensitive that we can now detect the presence of compounds at very minute levels.

Of course, with time and exposure to the elements of nature (wind, sun and water), these substances breakdown at varying rates into their basic constituents. In some cases this is a rapid process and in others it may take a very long time. Continually refined analytical methods are providing improved insight into the sources, transport and disposition of these substances. The positive and potentially negative affect these compounds have on human beings and other organisms varies depending upon the nature of the compounds and type of exposure as well as factors such as concentration, dose or quantity and duration of exposure. To illustrate this point one can observe that pure water can be fatal if consumed in too great a quantity over too short of time period while other materials can pose unacceptable risks at very low concentrations.

Considerable study therefore precedes the introduction of new products or compounds. The Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) have primary regulatory authority over the development, use and ultimate fate of these man-made compounds. There are also ongoing local, state, federal, academic and research association study efforts regarding their effects on aquatic life and human health. Such information and analysis is of value in shaping continuously evolving regulation of these materials' manufacture, use and disposal.

Existing water and wastewater treatment processes significantly reduce the levels of such substances and to date state and federal regulatory authorities have not found cause to require further reductions. It is prudent and responsible, however,

that local, state and federal agencies continue cooperative efforts to carefully monitor the presence and effects of such compounds.

The Water Environment Federation (WEF) is not a research organization but is committed to facilitating information flow about the water environment and wastewater treatment. WEF formed a community of practice as an information resource to convey the current state of knowledge and practice on this subject to our members, the public and other interested organizations. As an education and outreach organization, WEF is committed to advancing understanding of this and other water related subjects. We hope to aid public and membership discourse on this highly technical subject. We also hope to acknowledge and support continuing efforts to safeguard the public and our environment against unacceptable impacts from these and other materials that find their way into the nations waters through conscientious monitoring and assessment. WEF is working hard to ensure that the public understands the water environment – and has some framework within which to consider this subject.

What are microconstituents?

Microconstituents are natural and manmade substances, including elements and inorganic and organic chemicals, detected within water and the environment. We call them microconstituents as a prudent, conservative course of action to ensure that we continue to assess their potential effect on human health and the environment and on the world's various water bodies. WEF is working with the wastewater and scientific communities to standardize a definition that will help the public put the issue into an appropriate context. WEF realizes that other definitions will continue to be used but believes that this definition represents the right balance between overstating and trivializing the need to monitor the presence of such substances in the water environment.

Is this a new or emerging subject?

This is not a new subject. What is new though is that we now have analytical test procedures that can measure these compounds in minute concentrations (less than parts per billion, ppb; or parts per trillion, ppt). In addition, microconstituents are increasingly being introduced into the environment in minute concentrations.

WEF has placed emphasis on public education to ensure that there are facts and forums to understand wastewater treatment and the issue of microconstituents. Public education will be needed to enable us to talk about what we do in a world where scientists can detect compounds at such small concentrations.

This data will add to existing information regarding the range of considerations appropriate when regulatory bodies are considering regulations for new products or compounds for public consumption or use.

Do wastewater treatment plants remove these microconstituents?

Organic compounds are the stuff of life. We are made of them and so is our food. Synthetic organic compounds have been developed because they exhibit some property that is useful to us. They include pharmaceuticals, paints, adhesives, antimicrobials, polymers, herbicides, pesticides, food colorings and plastics.

All wastewater treatment plants are designed to reduce/eliminate sufficiently certain classes of compounds in the receiving water before discharge in to the aquatic environment to protect aquatic and human health. To do so they reduce concentrations of what are referred to as "conventional" pollutants such as inorganic solids, biodegradable organic compounds, and certain nutrients (such as nitrogen and phosphorus) to safe levels as established by state and federal regulatory agencies. If a substance will not receive sufficient treatment at the public wastewater treatment facility, controls are placed upon the source of the material through a "Source Control Program" or "Pretreatment Program" operated by local utilities under federal oversight. Wastewater treatment plants vary in size and they vary in treatment complexity and capability and so does the quality of the water that they return to the environment.

The concentration of these compounds that remain in wastewater treatment plant effluent depends on the type of treatment, the specific compounds and the concentration in the influent entering the plant.

There are some wastewater treatment plants that utilize membranes and reverse osmosis to create water qualities that are as pure as or purer than drinking water or the most pristine of rainwater.

In most plants, acceptable levels of pollutants and trace compounds that are found in the influent are also detectable in much smaller amounts in the effluent – including microconstituents. It is important to know the quality of the product water that is produced by the treatment plant because all treatment plants are not the same.

Wetland treatment and bank filtration can also reduce microconstituents.

What do drinking water treatment plants do to remove these compounds?

Drinking water treatment plants are the principal safeguard against human consumption of unsafe levels of a broad range of natural and manmade substances in the water environment. Normal carbon filtration dramatically reduces the concentration of such substances.

Shouldn't we try to prevent microconstituents from entering the water environment?

Yes, removing the very small concentrations of microconstituents from receiving water is much more difficult and more expensive than preventing introduction into the water environment in the first place. Industry, agriculture, and consumers should be active proponents of controlling these compounds at their point of generation. More importantly, regulatory agencies such as the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA) are charged with the responsibility of evaluating these compounds before they are approved for manufacturing and distribution. These agencies, as gatekeepers to our public health, evaluate these compounds to determine if their trace presence in environmental media is creating either a negative human health or environmental impact.

Is regular soap safer than antibacterial soap?

Antibacterial soaps and products are growing in number and you may already be using them to wash your dishes, clean your hands, moisturize your skin, and even brush your teeth.

There's no evidence that antibacterial soaps prevent disease in the home. According to the American Medical Association and a US Federal Advisory Committee on nonprescription drugs, antibacterial soaps and washes are no more effective than regular soap and water in fighting infection in everyday use.

What is WEF doing about microconstituents in the Environment?

WEF has established a community of practice in the wastewater industry to focus on the issue because WEF believes that we should all be sharing information across the various sectors of the industry. We also believe that research should proceed on Microconstituents in all environmental media. Such research should be led and primarily funded by EPA and FDA as well as State regulatory authorities. Should the regulatory authorities declare that additional controls on these microconstituents are warranted in the future due to demonstrated risk to public health or the environment, the wastewater treatment and biosolids professions will be proactive and implement additional treatment and controls.

WEF is encouraging those professionals and the environmental management field to promote the acquisition of needed data upon which regulatory bodies and the public can rely upon to maintain and if necessary amend appropriate policy and regulation. Currently a very great amount of monitoring is done on a wide range of materials in the environment. These and other compounds are the subject of continued research regarding their prevalence and effects in the water environment. Obviously considered and weighed judgments are made by regulatory bodies with relevant expertise as to the predicted and actual benefits and risks associated with the substance or product.

WEF needs to be at the forefront of enhancing understanding about compounds in the water environment to ensure that the public has the most up to date and understandable information. Communicating on such highly technical topics can pose a real challenge since the water environment is not well understood by the lay public. WEF has a responsibility to this public it serves to help translate often mind numbing data and analysis into understandable yet accurate terms.

What can consumers do to minimize microconstituents from entering the environment?

Controlling compounds at their source is the easiest and least expensive way to protect the environment in all instances. Both our public environmental officials and consumers need to determine if the fact that these compounds have been detected, even in small amounts, outweighs their benefits. This is a difficult question. Consumers can help to minimize compounds from entering the water environment by using only what is necessary and by following product disposal recommendations. Unused pharmaceuticals should never be flushed down the toilet or poured down the drain.

We can all help by learning more about the products we use and know how they impact the environment. Just like mercury thermometer exchanges and cooking oil drop off locations, drug take back programs are becoming more common.

What can consumers do with unused pharmaceuticals and household hazardous materials?

When you need to dispose of unused mediations, check whether your pharmacy accepts unused or expired medications for disposal, or contact your local health department for information about proper disposal of medications and other materials that could potentially harm the environment (such as cleaning products, pesticides, and automotive products). If your community does not have such a program, contact USEPA Office of Pollution Prevention and Toxic Substances at http://www.epa.gov/oppt/. Many communities now sponsor Community Household Hazardous Waste Collection Programs or a pharmaceutical "take-back" program may also be available.

Some pharmaceuticals are controlled substances (codeine, ritialin, percocet, oxycodone) are therefore under the control of the United States Drug Enforcement Agency (USDEA) for disposal purposes. Some drugs such as nitroglycerin, nicotine, and ephenephren can be hazardous. Your county or city law enforcement personnel are a good resource to provide guidance regarding disposal of these substances. Some states and cities are involved in drug take back programs as a focus of prevention for substance abuse – particularly among youth who may find and experiment with unused pain relievers, tranquilizers, stimulants, sedatives and other drugs.

If "drug take-back programs" are not available, how should unused medication be disposed?

Check with your state and local agencies for guidance on safe and environmentally- responsible disposal of unused medications and/or personal care products. Again, it is important to consult your local public health organization or environmental agency for guidance. The WEF Public Education Committee will be exploring drug take back programs to provide model guidance for member organizations as one of their priority activities for 2007.

For information on proper disposal of household hazardous wastes

http://www.wef.org/LearnAboutWater/ForThePublic/FactSheets/FactSheetDocuments/HouseholdHazardousWaste.htm

For information on pharmaceuticals and personal care products

www.epa.gov/ppcp/