Liquors Removed from the Former Evergreen Pulp Mill

Dave Parson

Constructed in 1965, the Pulp Mill operated for approximately 40 years. During the production of pulp, various chemicals were used and production byproducts were generated. For example, black liquor is the waste product from the kraft process that digests pulpwood into paper pulp removing lignin, hemicelluloses, and extractives from wood to free the cellulose fibers. Black liquor is an aqueous solution of lignin residues, hemicellulose, and inorganic chemicals. The mill closed in 2008.

Aerial Image of the former mill with Humboldt Bay on the right side of the image. Photo credit unknown.

In February 2009, Freshwater Tissue Company (FTC) purchased the site with the hope of converting forest residuals into toilet paper. Funding could not be secured to support the proposed site reuse. Subsequently, demolition activities and the recovery and recycling of various metals began at the site during FTC's ownership.

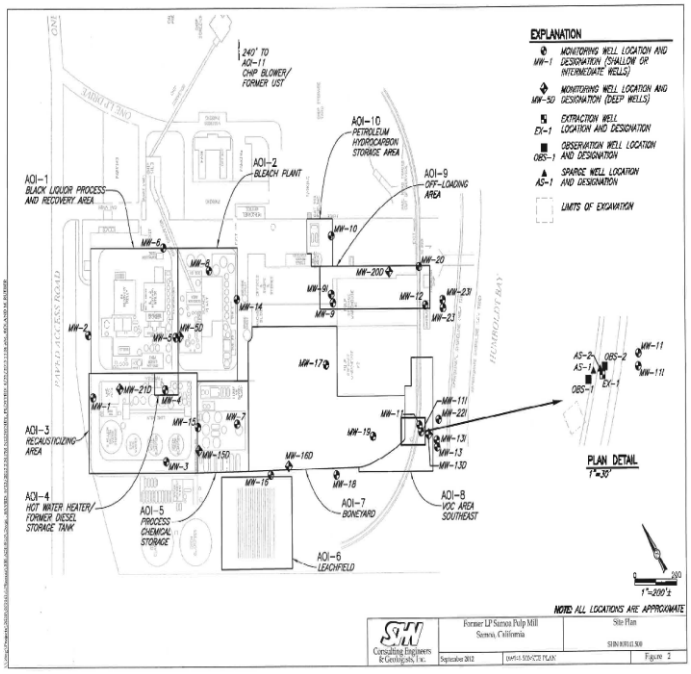
Photograph by Regional Water Board Staff Rebecca Fitzgerald in September 2013.

In August 2013, the Humboldt Bay Harbor, Recreation and Conservation District (Harbor District) purchased the site from FTC. The Harbor District brought the hazardous state of the liquors and their threat to Humboldt Bay to the attention of the United States Environmental Protection Agency (US EPA).

In September 2013, US EPA inspected the site. Shortly thereafter, an emergency response was

initiated by the US EPA, US Coast Guard, and local entities after discovering that the above ground tanks holding the liquors were corroding and their potential failure represented an imminent threat to Humboldt Bay. The storage vessels were in a condition of decay, the metal storage tanks were incompatible with the caustic liquors, and discharge due to failure was inevitable.

Beginning on March 28, 2014, nearly 2.7 million gallons of liquors and other chemicals (e.g., 10,000 gallons of sulfuric acid) were safely transported from the Site by tanker truck and trailers to



This plan view map shows AOIs and site specific features. Map provided by SHN Consulting Engineers & Geologists, Inc.

Longview, Washington for reuse by another pulp mill. This 500-mile one-way-trip required more than 750 truck and trailer loads. The recycling effort occurred without incident and was completed by September 11, 2014.

Today, on-site efforts continue with the solidification and removal of liquor sludges from the above ground storage tanks. As the tanks are emptied of all their contents, they are being disassembled and removed from the site. It is anticipated that this process will continue into the first half of 2015.

While efforts continue with the sludge solidification, the Harbor District, Regional Water Board Cleanups Unit staff, and Louisiana Pacific Corporation continue their cooperative efforts to address residual soil and groundwater contamination at the site in various areas of interest (AOIs) at the site. The AOIs comprising the eastern side of the site are at the remedial action plan stage of investigation and treatment. Public participation and in-situ treatment are scheduled for 2015. AOIs comprising the industrial heart of the site are in the investigation stage of the cleanup process.

The Harbor District is also in the process of revitalizing the site through redevelopment efforts. Taylor Mariculture is now located at the site and other redevelopment efforts are underway.

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Russian River Watershed Association Environmental Column – January 2015

Think before flushing!

Toilets and sewer systems are designed to transport and dispose of specific materials. The pipes that connect your home to the sewer or a septic system are only wide enough to transport three things: water, toilet paper and human waste. When other materials are flushed down the drain, they can get stuck and cause damage, from clogged drains to sewer backups and overflows; and these materials can create maintenance challenges for pumping out septic tanks. Sewer back-ups are not only smelly; they can damage homes and businesses resulting in expensive repairs. If a spill leaks into the environment, the negative effects can be extensive. All these complications result in damaged systems, which increase the City's sewer maintenance, repair costs, and your sewer bill!

Recently, the prime culprits in clogging sewer systems have been "flushable" products. Contrary to their name, these products should not be flushed, as they do not degrade as fast or as easily as toilet paper. The only truly flushable item is toilet paper, which readily disintegrates in water, making it easy to travel through sewer drains. Currently, there are no State or Federal standards for "flushable" products, so products labeled "flushable" or "septic safe" have no regulated definitions.

Additionally, disposing of chemical products through the toilet leads to dissolved chemicals traveling through the sewer system and into aquatic environments, where they can pollute and disrupt these ecosystems.

Items that should NEVER be flushed:

- "Flushable" items (cleaning wipes, toilet bowl scrub pads, disposable mops, diapers)
- Tampons, tampon applicators, sanitary napkins, condoms
- Medications, vitamins and supplements
- Fats, oils and grease
- Food items (bones, apple cores, coffee grounds, nutshells)
- Paper towels, napkins, facial tissues
- Disposable diapers and baby wipes
- Wash rags, cloth, clothing
- Kitty litter, aquarium gravel, bedding material for small animals such as hamsters
- Pet waste and pet waste bags (even bags labeled "flushable")
- Plastic (of any kind)
- Cotton swabs and balls, bandages
- Dental floss
- Chewing gum
- Cosmetics
- Pets (goldfish, hamsters, gerbils)
- Hair
- Syringes
- Poisons and hazardous waste

What you can do?

Most of these listed materials can be discarded in the trash, though there are some that have more specific disposal methods. Medicines and pharmaceuticals can be disposed of at pharmacies and law enforcement stations that participate in the Safe Medicines Disposal Program (safemedicinedisposal.org). Food waste can be composted or taken to a food recycling program. Fats, oil and grease can be poured into a disposable container, cooled and then put in the garbage. Used cooking oils can sometimes be made into biodiesel.

For more information, see www.rrwatershed.org/node/139. More hazardous chemical products, such as antifreeze, batteries or motor oil, should be taken to local household hazardous waste disposal sites. For information regarding disposal and recycling options of the materials listed, including local disposal centers, visit recyclenow.org for Sonoma County and mendorecycle.org for Mendocino County. If the item cannot be reused, recycled or composed, then it can be disposed of in the garbage. In addition, you can avoid producing waste by cleaning with a sponge or a rag that can be reused instead of purchasing and using "flushable" items. By flushing only appropriate materials (water, toilet paper and human waste), you can help keep wastewater conveyance and treatment costs downs, keep sewer lines clear, and help protect the environment.

This article was authored by Craig Scott and Lauren Salberg of the City of Cloverdale on behalf of RRWA. RRWA (www.rrwatershed.org). Reprinted with permission.

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Russian River Watershed Associations Environmental Column – February 2015

Bacteria as a Water Quality Concern

Bacteria are a natural part of the environment, but some bacteria like those found in human or animal waste can be a hazard when we are exposed to it in the rivers where we work and play. These microscopic single-celled organisms are found virtually everywhere, including water, soil, plants, animals and the human body. Bacteria provide numerous benefits to the environment, including the decomposition of organic matter like breaking down leaves and plants to nourish the soil. Bacteria also serve several functions in the human body, including assisting with digestion, aiding the immune system, and protecting against harmful and disease-causing invaders, known as pathogenic microbes.

Not all bacteria have positive functions. Some bacteria are harmful to humans and other living animals and will cause disease to the host. Common diseases that affect humans, which are caused by bacteria, are strep throat, ear infections and pneumonia. One example of potentially harmful bacteria is pathogenic strains of *Escherichia coli*, or more commonly referred to as pathogenic *E. coli*.

E. coli occurs naturally in the gut of humans and other warm blooded animals. The main function of *E. coli* is to aid in digestion and fight off pathogenic microbes. But there are other strains of *E. coli* that can cause disease in humans—often due to the transfer from livestock (for whom these strains are harmless) to humans. "Food poisoning" is sometimes caused by pathogenic *E. coli* entering the body through undercooked, contaminated foods. Pathogenic *E. coli* can also be transferred to humans through contaminated water, causing similar symptoms to that of food poisoning. *E. coli* is found in human and animal waste (also known as fecal matter or poop), as can other microbes that could potentially cause illness. This becomes problematic when waste products come in contact with rivers, lakes, or even rain water. Rain water can potentially transport bacteria to creeks, rivers, and lakes.

Close to Home

Contact with water contaminated with pathogenic *E. coli* can occur when swimming in or ingesting untreated water, like a lake or river. Water from a municipal supply or a chlorinated swimming pool is treated in a manner to kill off these unwanted and harmful bacteria. Natural water, like that found in a river is not treated, so these natural bacteria can enter and live in this environment. The Russian River and its tributary creeks are no exception. Water quality monitoring has confirmed the presence of bacterial contamination due in part to human and domestic animal waste. Human contact with contaminated water can result in an infection and illness. As a result, the North Coast Regional Water Quality Control Board is working on a plan to ensure recreational waters do not contain pathogens above the expected natural level.

What Can You Do?

It is important for every member of the community to do their part to reduce the amount of bacteria entering the creeks, rivers, and lakes. If you spend time outdoors and don't have access to a restroom, it is important to abide by the "pack it in, pack it out" rule for your own human waste and disposing of it in the trash. Picking up pet waste is one of the best ways to cut down on the amount of bacteria entering creeks. If you own a pet, pick up animal waste in your yard on a regular basis. Also, carry a bag with you when walking your pet to pick up waste along the way, and dispose it in the garbage. Bagging your pet's poop on every occasion is an easy way to keep millions of potentially harmful bacteria from entering our waterways.

This article was authored by Colleen Hunt of the North Coast Regional Water Quality Control Board and Erin Mackey of West Yost Associates, on behalf of RRWA (www.rrwatershed.org). Reprinted with permission.

Enforcement Report for March 2015 Executive Officer's Report

Diana Henrioulle

Date Issued	Discharger	Action Type	Violation Type	Status as of February 13, 2015
12/15/14	Mendocino Redwood Company	NOV	Timber General WDRs: failure to treat controllable sediment discharge source	Ongoing

Comments: On December 15, 2014, the Chief of the Nonpoint Source and Timber Harvest Division issued a Notice of Violation to Mendocino Redwood Company, LLC for failure to identify/treat controllable sediment discharge sources on a timber harvest plan (THP) enrolled for coverage under the General Waste Discharge Requirements. The NOV directs the Discharger to complete corrective action work at each site by October 15, 2015.

Date Issued	Discharger	Action Type	Violation Type	Status as of February 13, 2015
12/23/14	James Reifeiss and Hank Brown	CAO	Improper waste management associated with illegal auto crushing and miscellaneous onsite waste storage	Ongoing

Comments: On December 23, 2014, the Executive Officer issued a Cleanup and Abatement and 13267 Order No. R1-2014-0062 to James Reifeiss and Hank Brown for waste discharges associated with unpermitted car crushing activities and storage of miscellaneous scrap metal, refuse, derelict vehicles and car parts, and vehicle fluids stored in 55-gallon barrels. The order requires the Dischargers to submit and implement workplans and monitoring plans to assess and clean up discharged wastes and to document and report on correction effort.

Date Issued	Discharger	Action Type	Violation Type	Status as of February 13, 2015
01/09/15	Carl's Ready Mix	NOV	Industrial Storm Water: discharges of concrete washwater and concrete wastes to surface waters	Ongoing

Comments: On January 9, 2015, the Division Chief of the Planning, Stewardship & Compliance Assurance Division issued a Notice of Violation to Carl's Ready Mix for violation of the Industrial Storm Water Permit associated with improper disposal of concrete washout and concrete wastes, resulting in commingling with stormwater and discharges to surface waters. The NOV directs the Discharger to confirm that it has ceased discharges to surface waters by February 8, 2015 and to develop and submit, by March 8, 2015, a plan describing proposed BMPs to prevent future discharges of concrete wastewater to surface waters. Compliance efforts underway.