

# Wild Juniper Journal

A Publication of the Sierra Club Juniper Group

Winter 2008

## Protecting Irreplaceable Wildlands

by Asante Riverwind

There is a deep spirit-satisfying serenity felt within every pore of one's being found amidst nature's wonderlands. Whether atop a snow sculpted mountain, wandering a sun dappled forest ridge, playing alongside a rippling stream in a flower dappled meadow, watching the awesome power of wild waterfalls, chance meeting the silent gaze of deer, elk, bear, coyote, cougar, bobcat, perchance even wolf. The dream-like drift of clouds and graceful swirls of hawks overhead, the quiet solitude of deep ancient forests, milky-way skies' star-filled majesty, beyond words magic of sunrise, gorgeous songs of birds - Nature's wonders rejuvenate and inspire beyond mere words. Helping protect wondrous nature opens a wellspring within; ensures these gifts continue for all.

Throughout this past year Juniper Group Sierra Club volunteers have been helping on our region's many conservation issues. Members have helped with community outreach; surveys and monitoring of public lands projects ranging from timber sales, to geothermal energy exploration, to OHV abuse, to restoration projects and hikes. Volunteers have written public legal comments for the Juniper Group on National Forest and BLM projects, helping with still ongoing and one successfully concluded lawsuit effort protecting spotted owl old growth forests in the Deschutes. Volunteers have hiked the ground through all seasons, done fly-over surveys taking aerial photos, helped gather scientific research, written letters to editors and featured opinion articles, provided legal declarations, conducted presentations, tabled at public events and venues, helping increase awareness of conservation issues while joining together to effectively protect public wild lands.

The Sierra Club's true strength, and ongoing ability to protect the natural heritage of current and future generations, exists with you, our members. To join in eastside Oregon Sierra Club efforts, please contact us. Below is a brief list of ongoing volunteer opportunities. Volunteers can also help with creating and scheduling community outreach events wherever they live across the eastside. No experience is necessary, just an enthusiasm for wild nature, and an inquisitive mind and spirit.

**Deschutes NF:** We are engaged in a lawsuit to protect old growth forests and spotted owl habitat from harmful logging in the Deschutes National Forest Five Buttes timber sales, with needs for additional photo surveys and community outreach. The as yet ongoing logging has been felling 200 to 400 year old ponderosa pines, which have survived centuries of recurrent fires, under the pretense of "fire risk reduction." Near Bend the Snow Fuels timber sale is being developed by the Deschutes Forest Service, which needs ongoing monitoring and surveys. In the Crescent District the BLT timber sale is being planned as well, near Sisters the GW postfire timber sale and Sisters area "fuels

reduction" timber sale (SAFR - which has some units located in beautiful old growth forest) all have need of volunteer surveys and community outreach. Depending upon final project designs, volunteers can assist legal efforts if these are necessary to protect irreplaceable forests, wildlife, rare native plants, fish, and waterways. There is ongoing involvement in the developing collaborative restoration project at Glaze Meadows, in the Deschutes National Forest near Black Butte west of Sisters. Also efforts are being made to address OHV issues and agency Travel Management Plans. Volunteers can help with TMPs that are being planned by the Deschutes, Ochoco, and Crooked River Grasslands throughout 2008.

**Central Oregon BLM:** Newberry geothermal exploration was recently approved by BLM adjacent to the Newberry Monument, despite the agency's failure to fully disclose and analyze environmental harms or inform affected communities. Volunteer help is needed with outreach, monitoring surveys, and legal work to protect the greater Newberry Caldera forests including the Monument t area. There are also OHV travel issues.

**Ochoco NF:** OHV issues persist in McKay Creek and elsewhere in the Ochoco. The East Maury timber sale will need surveys, and post-project surveys are needed in the West Maury timber sale area, assessing impacts. Both projects are located in the Maury Mountains. Both the Spears and Willow Pine projects, two "fuels reduction" thinning timber sales that were changed to incorporate conservation concerns, will need monitoring surveys as they are implemented. Spears is located across a few thousand acres alongside Hwy 26 (near "Bandit Springs" rest area north of Prineville), and Willow Pine is in the Paulina Ranger District near the Rager Ranger Station.

**Malheur NF:** The Thorn postfire timber sale (near Dayville) includes never-logged old growth forests. This burned but still beautiful area is home to numerous wildlife, including bear, cougar, wolverine, pine martin, elk, deer, goshawk, and others. Its unburned portions have some of the best native plants and flowers diversity in the region. This amazing area is part of a large roadless forest long proposed for designated wilderness. Unless logging plans are dropped by the Forest Service, this area will need additional surveys, monitoring, and help with community outreach and legal protection efforts. At present, it is expected that this ecologically harmful timber sale will require a lawsuit to protect area forests, wildlife, and salmonid streams. The Forest Service decision on this sale is expected sometime in mid January. The Dads Creek Project (near Prairie City) is a Blue Mountains Forest Partners collaborative group restoration project. This is first of several potential restoration projects in the area, with others also being



Five Buttes Bass Sale Log Decks

discussed. This diverse collaborative group brings together representatives from all sides on forest issues, in an effort to respectfully discover common ground and accomplish needed restoration. BMFP monthly meetings (usually held in John Day) and project work are ongoing, and are open to regional conservationists and interested community members. The Egley Fire area (northwest of Burns) needs surveys to address potential impacts from a postfire planned timber sale

**Umatilla NF:** The Wildcat timber sale may need additional surveys, community outreach, and public legal comments help. Wildcat is located in the middle of the Heppner Ranger District forests. The Otter Fire and Sugar Bowl are two postfire timber sales needing surveys and volunteer monitoring help. These are located outside Ukiah, in the North Fork John Day Ranger District forests. The Farley timber sale, a large scale logging proposal by the North Fork John Day Ranger District, will need volunteer surveys, comments, outreach and legal help. A cooperative effort with the Forest Service was initiated to survey and inventory wilderness trails.

**Additional:** Most all the above activities also have other ongoing efforts including monitoring and bringing changes where needed to livestock grazing, helping close excessive roads, protecting wildlife habitat, noting areas needing restoration, etc. Also, on the Malheur, Umatilla, and Wallawhitman NF efforts continue covering the Forest Plan Revision process. There are additional allied efforts in the Fremont, Winema, and Wallowa-Whitman eastside forests that need volunteer help too, as well as new projects that will emerge as the year progresses.

Working together, Sierra Club members continue to achieve victories for our natural lands. Thanks to volunteer help throughout 2007, we won a legal settlement protecting old growth spotted owl forests near Black Crater in the Deschutes, and brought needed changes to several timber sales in the Deschutes, Ochoco, Umatilla, and Malheur National Forests and on Central Oregon BLM lands. Please join our effective volunteer conservation efforts in Oregon's beautiful eastside forests!

## An Issue of Place: Geothermal Heats the Caldera

by Asante Riverwind

Spring sunlight glints myriad stars across turquoise-jade waters. With soft sounds of lapping waves, my kayak veers towards bubbling hot springs corralled with logs at shore's edge. An osprey calls, flying a fish on its last earthly journey towards nest-bound young. South, jagged spires of Paulina Peak watch over two lakes below separated by forests and obsidian swirled lava flows. Without intervention the fate of this area is possibly as imperiled as that of the fish flying in osprey's talons.

Newberry National Monument is a world renowned volcanic geologic treasure. The 500 square mile Newberry Caldera is one of the largest shield volcanoes in North America. Similar to Crater Lake,

recreationally popular Paulina and East Lakes are located within caldera. Nearby forests cradle an 80 foot waterfall as wild and scenic Paulina Creek drops into a canyon. The deep lakes and beautiful forests provide habitat for nesting bald eagles, osprey, black bears, pine marten, ducks, geese and tundra swans.

Newberry Caldera, like much of the Cascades, is still geologically young. Hot springs along Paulina Lake's shores are heated from slumbering volcanic depths far below. Heat rising from deep magma baked rocks has brought geothermal speculators; power companies and investors holding leases on public lands.

(Continued on page 2)



Five Buttes Bass Sale Survey

(Article continued from page 1)

Without required public hearings and environmental analysis, geothermal leases were issued over two decades ago on Forest Service lands.

Conservation and community desires to protect the natural beauty of Newberry Caldera and its two popular lakes, led to the creation of the Newberry National Monument in 1994. The Monument was a cooperative effort involving diverse community members, including conservationists, public officials, area residents, and geothermal leaseholders. While the creation of the Monument protects much of the Newberry caldera from geothermal development, it does not prohibit exploration or production outside of Monument's boundaries. Negotiations with lease holding companies during the Monument's creation expressly retained the potential for geothermal energy development along the caldera outside Newberry boundaries. However, the Newberry Volcanic National Monument Act does not mandate geothermal resources be developed.

Instead, other federal laws govern, requiring BLM and the USFS assess ecological impacts and appropriateness of geothermal production in this area. Since mid-1980 when many geothermal leases were issued, awareness of geothermal energy's adverse impacts has grown.

Originally touted as a "renewable" "green" energy source, growing experience and scientific research is now divided on whether geothermal energy is truly either. Electrical geothermal production requires large scale pumping of fluids from deep in the earth. Heated amidst volcanic rocks containing diverse arrays of toxic mineral compounds, fluids known as geothermal brines and steams commonly contain a toxic soup of dangerous chemicals, substances, and gases. During production processes, most of the fluids are contained in pipes and reinjected deep into the earth. However, during exploration, testing, construction, maintenance, and expansions toxins are routinely vented unabated into the atmosphere, with often devastating results including environmental pollution, harm to wildlife, waterways and fish, forests and native vegetation, loss of agricultural crops, and harms to workers and communities' health. Long-term production evidences depletion of geothermal fluids, lowered aquifers, increased salinity, and a tapering off of production capacities. Scientists have concluded production plants also have caused increased seismic activity, resulting

in low Richter scale "swarms of quakes". But most research has been funded or conducted by companies with vested financial interests in results. Objective, Independent research is needed to truly assess geothermal production impacts and longevity. (See WJJ Spring 2007.)

In October 2007, BLM approved new exploration on the west side of Newberry. This was done without public hearings or adequate analysis. What passed as "analysis" was largely biased inaccurate information from industry. Among false claims made by BLM in the "analysis" is that eventual electrical production would help meet Oregon's renewable energy goals and needs. Instead, current plans call for selling all electrical energy produced for California consumption. Interestingly, while citing future energy production as a reason to approve exploration, BLM simultaneously claims it doesn't need to evaluate production impacts as the agency considers these separate. Instead BLM myopically addressed only limited exploration issues.

This cart before the horse approach appears headed to the loss of Newberry's irreplaceable treasured qualities, from serene old growth forests and jeweled lakes to unspoiled high caldera ridge views and trails. An industrial-scale production plant would bring noise, toxic emissions and steam plumes, heavy truck traffic, and high voltage power lines within sight and hearing of the Monument. Full scale production could degrade Newberry's recreational and natural qualities, harm wildlife, and increase the likelihood of small quakes.

The recent exploration approval is not the first for this area. Over the past decades there have been several geothermal wells drilled, with limited results and continued speculation. The most recent was approved by the USFS and BLM in 1994. Cal Energy drilled wells at five sites after clearcutting and leveling these five acre sites. Results were inconclusive, with sites now long dormant. Promised reclamation was never done, with the sites put into "suspension" instead. During the decade-plus since, holding ponds for geothermal brines have been left open to wild birds and mammals, as well as unsuspecting humans and pets that may wander into these clearcuts along the Monument's western edge. Now, after failing to responsibly reclaim these sites, BLM and the USFS have approved three additional five acre clear cuts, including ponds for toxins, with up to nine exploration wells,

## JUNIPER GROUP LEADERSHIP DIRECTORY

### EXECUTIVE COMMITTEE

Co-Chair, Political and Membership Chair  
Co-Chair and Newsletter Editor  
Grazing Issues Coordinator  
Water Issues Coordinator  
Naturalist and Treasurer

Gretchen Valido  
Fred Tanis  
Dave Tracy  
John Anderson  
Marilyn Miller

The Juniper Group Sierra Club is one of five regional groups of the Oregon Chapter of the Sierra Club. The Sierra Club, originally formed by John Muir in 1892, now contains 65 Chapters nationwide. Its purpose: To restore the quality of the natural environment and to maintain the integrity of ecosystems; to educate the public to the need to understand and support these objectives; and to study, explore a the wildlands.

## JUNIPER GROUP CONTACT INFORMATION

PO Box 6376 - Bend, OR 97708

Group Co-Chair, Gretchen Valido - 541-389-0785, gvalido@yahoo.com

Group Co-Chair, Fred Tanis - 541-385-3144, tanisfred@hotmail.com

<http://oregon.sierraclub.org/groups/index.asp>

## UPCOMING EVENTS AND PROGRAM NIGHTS

*Juniper Group Program Nights take place on the Second Tuesday of the months February, March, April, October, November, and December at the Central Oregon Environmental Center, starting with food, beverages and social time at 6:30; programs starting at 7:00. Program Nights are free and open to the public, you do not need to be a Sierra Club member to attend. Our next program night is planned for October 9th. For more information please contact Gretchen Valido at 541-389-0785, gvalido@yahoo.com.*

### Tuesday, February 12 Recreational Needs and Threats to Public Lands.

Central Oregon Environmental Center 16NW Kansas (at Lava St.) Bend

Speaker and topic details to be announced in the monthly email newsletter and elsewhere in public media.

### Tuesday, March 11 ExCom Candidates Night

Central Oregon Environmental Center, 16 NW Kansas (at Lava St.) Bend

Come meet the Juniper group ExCom candidates. Candidates will talk about their environmental persuasions and members can ask them questions. Additionally we will have a speaker on a topic to be announced in the monthly email newsletter and elsewhere.

## JUNIPER GROUP OUTINGS

There are no official Juniper Group Outings through February 2008. If you are a cross country skier you can ski with the Central Oregon Nordic Club in Bend that skis and maintains trails in the Deschutes National Forest. The ski tours are open to all comers from beginner to expert skiers. For more information contact Fred Tanis 541-385-3144.

### Sunday, March 2nd Winter Skiing at the Sno-Park

This outing is an easy 5-7 mile X/C back country tour of a sno-park area near the Three Sisters Wilderness. Intermediate, track and trackless skiing. Call leaders Fred Tanis at 385-3144 or Steve Moore at 318-8784 for details and time.

### Sunday, March 9th Spring Skiing to the Wilderness

This outing is a fantastic 9-10 mile X/C back country tour of a corner of the Three Sisters Wilderness near Broken Top. Intermediate, trackless skiing. Call leaders Steve Moore at 318-8784 or Fred Tanis at 385-3144 for details and time.

continuing the industrial degradation of the area's forests.

The Klamath Tribes, whose treaty-right ancestral lands include Newberry, are adamantly opposed to the exploration. They appealed BLM's decision stating their "opinion was not taken into account where it came to our spiritual beliefs... Our people cannot allow another project to destroy one of our sacred and holy areas to gather obsidian known as a Mbosaksawaas (Flint Place). The Cultural and Heritage Committee has opposed this project after a field trip revealed areas have been left destroyed for nine years with no attempt to rectify the situation. It would be negligent to allow another project to proceed based on an uncertainty as to whether or not a geothermal resource exists at the expense of our native practitioners and the general public that share our connection to the earth."

Many Sierra Club member share a deep love and concern for earth's natural lands with the Klamath Tribes. Geothermal energy's claims to be "green" and "renewable" remain scientifically controversial as more evidence accumulates of its harms. Neither the conservation nor scientific communities have united on this still undecided issue.

Yet, federal laws are clear; before steps are taken that forever change the natural character of an area as treasured as Newberry, affected communities must be informed and meaningfully consulted. An environmental analysis of the full impacts of geothermal exploration and related production must be assessed and fully disclosed.

Summer surveys among Newberry Resort workers, residents, and visitors revealed no one knew about the current exploration. Instead, this decision is an ethically and legally unacceptable end-run circumventing public involvement and requisite analysis. The Oregon Chapter Sierra Club has voted to oppose the implementation of the Newberry Project, at least until unanswered questions and missing analysis have been addressed. Before geothermal exploration can begin at Newberry, we as a community must first decide if this treasured location is compatible with the known risks and harms inherent in geothermal energy production. If not, as many in the area believe, Newberry Caldera should be withdrawn from geothermal speculation, leases rescinded, and companies sent where production has less risk of harm. To join in efforts to protect the Newberry Caldera, please contact us.

# Apollo's New Hope

by Fred Tanis

Our newsstands are filled with front covers depicting polar bears clambering on to thinning ice and titles announcing the threatening impacts of global warming. It is clear that the scientific evidence points to CO<sub>2</sub> buildup in the Earth's atmosphere and the driver is excessive fossil fuel carbon emissions. We are on the eve of starting the first stage of the Kyoto protocol that targets an eight percent reduction in carbon emissions by 2012. European countries and several other signers are expected to easily achieve this modest goal. Pathetically we never signed this agreement and now could not possibly come close to achieving this goal. The Bush administration seems to have but a single focus and that on an ineffective war that is mostly all about the thing we need to get free of, oil. I doubt we would make the same commitments to a country with the same geopolitical bent as Iraq but without the abundance of natural resources. We have the world's worst record for fossil fuel consumption and will need strong leadership and dramatic improvements in education to get our country on a responsible emissions reduction track.

President Kennedy launched the Apollo Project with his spirited announcement, "We choose in this decade to go to the Moon." This commitment brought Americans together to accelerate science education and to establish a leadership in space technology that has brought us decades of benefits. Now a new Apollo Alliance has emerged in the same Kennedy spirit that is helping to layout programs for gaining a clean energy economy. This alliance has fostered a groundswell of enthusiasm from state governors, institutions, and corporations for a plan to rebuild our economy using alternative sources of energy and freeing us from an over dependence on oil.

Two key proponents of the new Apollo Project, Jay Inslee (HR) and Bracken

Hendricks (Director for the Apollo Alliance) have written an excellent book, *Apollo's Fire* (Island Press 2008), addressing the Alliance's underlying motivations and goals. This book explores advances we are making in renewable energy and the maturity of wind, solar, and other technologies that can help us get there. The Apollo Project plan calls for spending \$313 billion in the productive base of our economy over a period of ten years creating \$1.3 trillion in GDP with 3.3 million new jobs and \$1 trillion in personal income. These monies would go towards infrastructure to improve energy efficiency, distribute renewable energy, low-carbon and renewable energy sources, building energy efficient appliances and factories, and a market for green and high performance buildings.

Inslee and others have introduced the New Apollo Energy Act HR 2809 that is now pending in the House of Representatives. This bill calls for a similar suite of investments and more leveraging of private investments. It addresses important national policy priorities for confronting the challenges to climate change and energy security while creating sustainable jobs and reducing the threat of global warming. Key policy priorities include (1) meeting energy demand via energy efficiency, (2) getting off oil, (3) rewarding renewable and carbon-free electricity, (4) building as if energy matters, and (5) adopting a cap-and-trade system for industrial carbon emissions. Inslee told me he does not expect much support from his fellow congressmen until a new administration comes to the White House but says his bill will help start the debate and further educate those who will need to promote legislation for this challenge.

The proposed above expenditures are quite feasible especially if real GDP and new employment predictions are realistic. Will this effort be enough? Today wind is generating just 1% of our power and

saving annually 23 million tons of CO<sub>2</sub> emissions. The DOE predicts we will eventually, and perhaps as early as 2020, get 10% of our energy needs from wind and thus save 230 million tons of emissions. While this latter number sound impressive it is only 4% of our present total annual CO<sub>2</sub> emissions. To save a billion tons we would need to get 50% of our power from wind. That is a big stretch says Inslee. To get a billion tons of emission savings from solar would require a 700 times ramp up of our present commitments and a land area the size of New Jersey. From mining poor energy efficiency in our homes we can expect to save one-third billion tons. Increasing automobile fuel economy to 60 miles per gallon would get us another billion tons of savings. Extensive use of biofuels could yield yet provide another savings of a billion tons. This latter savings would require an increase the global ethanol production 50 times to 34 million barrels per day. These goals are far beyond the energy bill in Congress today that calls for a 35mpg standard by 2020, 15% of our power from wind turbines, and increased use of biofuels.

Lets assume we could do all of the above and exploit nuclear power and other emissions saving approaches. Let's say we cap US emissions at 3.5 billion tons of CO<sub>2</sub> emissions by 2050. That would represent about a 50% reduction over predicted emissions if we made no further reductions. Most scientists now predict that a 50% reduction by 2050 is the minimum we must do to stabilize the atmosphere. Substantially greater reductions would likely be required to fully mitigate climate change. To achieve the stabilization goal we will need an average 50% reduction from all countries. Emissions from U.S., China, European Union, Russia, Japan, and India together represent over 67% of the total global emissions. Getting every little country to cut its carbon emissions in half is not likely to be feasible and perhaps not fairly allocated since many countries, like Brazil, are already doing well by emissions to GDP ratios. The higher the economic activity as measured by the GDP the

higher should be the total CO<sub>2</sub> emissions. More developed countries should have less heavy industry, larger economic activities in the service sector, and lower emissions. While I am sure Brazil could find ways to cut emissions their annual total emissions represents just 0.20% of the total global amount per trillion dollars of GDP not including the burning of the Amazon rainforest. The U.S., on the other hand, has the largest amount of CO<sub>2</sub> emissions (6 billion tons/year) that represents 1.69% of global emissions per trillion dollars of GDP. Only China and Russia that are still emerging economies have higher ratios. Russia is currently at 3.22%/\$1tr. and China at 1.81%/\$1tr. Other examples include the European Union (0.87%/\$1tr.), Japan (1.09%/\$1tr.), India (1.17%/\$1tr.), and Great Britain (0.30%/\$1tr.). Thus on a relative basis Russia, China and the U.S need to make the largest contributions and recognize that emission reductions will burden the economy of each country. A cap-and-trade system is likely to be introduced in countries with the largest emissions. A cap is essential a tax and companies will experience cost increases making them globally less competitive. Jobs will be lost and real incomes of workers constrained. To be fair the U.S. needs to make additional emission reductions beyond 50% to be on an equitable basis with other countries of the world. Such globally fair reductions are daunting and potentially represent a loss in our standard of living. They could reach 75% or more.

Realistically the U.S. is not going to buy into a fixed cap anytime soon. The best we can hope for is a pay-as-you-go system of reductions with heavy spending on wind turbines, solar arrays, biofuels, and electric cars. What will our children and grandchildren be doing? They will all be fully engaged in a huge collective and coordinated global push to gain needed emission reductions. These Herculean efforts must be endowed with massive amounts of research monies to find and develop new emission saving technologies. This is our new economy. This is our hope.

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## Upcoming Election—Become a Candidate to Join the Executive Committee

by Fred Tanis

The Juniper Group ExCom has voted unanimously to hold a special election next spring with voting to be completed by June 1, 2008. This announcement is the Juniper Group official call for ExCom candidates. To qualify as a candidate for ExCom you must be an active member of the Sierra Club. The Juniper Group Sierra Club has been working with the Forest Service and the Bureau of Land Management to protect Eastside Old Growth Forests and habitats for endangered wildlife. The Juniper Group's efforts in eastside forests this past year brought significant changes to Forest Service timber sales, helping to protect wildlife, fisheries and the ecological integrity of these areas. We support candidates and ballot measures that are pro-environment, sponsor tree-planting events and educate members and the public about current issues such as renewable energy, river health, global warming and the impact of off-road vehicles.

If you have interest in serving on the Juniper Group ExCom and have questions, please contact Gretchen Valido (541-389-0785) or Fred Tanis (541-385-3144). To register yourself as a candidate you must contact the Nominating Committee (see below). The Nominating Committee will need your contact information. Current ExCom members include Gretchen Valido, Fred Tanis, Marilyn Miller, Dave Tracy and John Anderson, all of whom have expired terms and must either become a candidate in the upcoming election or retire.

John Anderson, who has been a member of ExCom for more than decade, will retire from the Juniper ExCom effective December 31, 2007. We thank him for all of his valuable service to the Juniper Group. We wish him well and will miss having his sound voice of wisdom at our meetings.

As specified in the Bylaws a total of 7 Juniper Group members may serve on the ExCom and thus this election will include up to 7 members. A maximum of 4 members can be elected for terms of 2 years and others for a one-year term. Longer terms are usually awarded to candidates who win the higher number of votes. Once the members of ExCom have been elected they will select a chair, vice-chair, secretary and treasurer. Other chairs such as membership chair may also be appointed. All such officers will be elected members of ExCom.

All candidates for Juniper Group ExCom will be officially nominated by the Nominating Committee. The open period for nominations will be from January 1, 2008 through March 1, 2008. Once this period is closed the Nominating Committee will provide the official list of candidates to members of the Juniper Group ExCom. Members of the

Nominating Committee include Alison Hamway (541-382-2035), Mark Hanschke (541-593-9407), and Lyn Mattei (541-317-9160).

Each candidate will be contacted and asked to write a brief summary (maximum of 300 words) of his or her environmental activities, special interests, and objectives if elected to ExCom. Candidates will be announced in the Spring 2008 issue of the Wild Juniper Journal to appear by mid-March. The summary statement for each candidate will also be included in the Journal. Candidates attending the March Program Night (Tuesday, March 11, 2008) will be given the opportunity to speak before the Group about their candidacy and answer questions that may be asked by Juniper Group members. Only members are eligible to vote in the election.

# The Quiet Danger of Chemicals in our Water Systems

by Gretchen Valido

You may have seen recent news stories concerning surprisingly high levels of chemicals found in humans, even people with healthy diets. CNN's Anderson Cooper was shocked to learn that his body contains a high level of phthalates, traced to on-air facial make-up. NPR reported on a bio-monitoring study of our "body burden," the term being used to describe the levels of chemicals Americans carry in their bodies. They found that Americans have highest rates in the world.

Pesticides, endocrine disrupting compounds (EDCs) and other contaminants have found their way into our bodies in surprisingly high amounts. They are entering our waterways through effluents from sewage treatment plants, factory pollution, runoff and leaks in sewage systems. We know that even tiny concentrations of EDCs and chemical contaminants can be harmful to humans, aquatic life and wildlife during early development.

Like canaries in a coal mine, the impacts have been showing up in study after study: fish with both male and female characteristics, gonadal abnormalities in male frogs, declining alligator populations in Florida due to pesticides in agricultural runoff, significant decreases in sperm counts and motility in carp and bass in Nevada, sexual development disruption and lower survival rate of oysters from just a single exposure to nonylphenol during larval development, Prozac found in the brains of fish. Higher levels of organofluorines downstream of pulp mills in Florida are causing female mosquito fish to take on androgen-like characteristics. Research suggests that many chemicals causing intersex characteristics in fish may also decrease their immune response.

Sometimes chemical exposure in aquatic species before birth results in changes that don't show up until adulthood. BPA (Bisphenol A), a plasticizer, is linked to chromosomal damage. The insect repellent DEET is extremely toxic to some organisms. Antibiotics and antibacterials like triclosan can increase antibiotic-resistant bacteria in surface waters.

Hormones secreted by endocrine glands regulate virtually all biological processes and development, from embryo to adulthood. But synthetic or naturally occurring endocrine disruptors interfere with these hormonal processes. Many of the chemicals recently measured in our rivers, streams and lakes have been linked to developmental, reproductive, birth defect, neural, immunological and other major problems. Evidence suggests that endocrine disruptors may alter fats in humans, contributing to obesity.

## What Products Are Causing This?

So where do these chemicals in our water supply come from? Many consumer products are the source of these chemicals including pharmaceuticals, personal care products and household products. Antidepressants, psychiatric drugs, replacement hormones, birth control pills and steroids contain endocrine disruptors. Shampoos, toothpastes, soaps, lotions, cosmetics and sunscreens may contain EDCs as active or inert ingredients. Known endocrine disruptors are phthalates used in many cosmetics, synthetic musks as fragrances, parabens (chemical preservatives), nonylphenol ethoxylates (NPE), antibacterial soaps, insect repellants and chemicals used to block ultraviolet in sunscreens.

Home products may contain EDCs—laundry detergent and cleaners with NPE, synthetic musk fragrance, antibacterial hand cleaners and dishwashing soap, and fire retardant fabrics on furniture. There are also phthalates in plastic packaging, shower curtains and baby toys. BPA is found in polycarbonate products such as hard clear plastic sports bottles, baby bottles and those 5-gallon refillable water cooler bottles. More than 95% of people in a study by the Centers for Disease Control were found to have BPA in their urine samples. These contaminants enter our septic and sewage treatment systems when we shower, pour liquids down the drain, and flush the toilet every day. But septic systems and sewage treatment plants haven't been designed to remove such substances. Another source is agricultural runoff, which often contains antibiotics, hormones and other medications fed to animals. Reuse of treated sewage effluent on landscaping, golf courses and agricultural fields can add to the problem if it ends up in the water table and streams. A U.S. Geological Survey study of organic wastewater contaminants in streams found low concentrations of a broad range of chemicals downstream of cities and agricultural areas in 80% of the streams sampled nationwide.

Not much is known yet about the effects of chemicals other than EDCs on aquatic life, but concern is growing as people become informed about potential harm. The European government has proposed ecotoxicity screening before new drugs are approved, and research is ongoing to identify emerging contaminants and to analyze the long and short-term effects on wildlife and humans.

The National Institute of Environmental Health Sciences (NIEHS) funds studies to determine if exposure to endocrine disruptors in humans may result in lowered fertility, an increased incidence of endometriosis,

menstrual disruption and some cancers. Research shows that endocrine disruptors pose the greatest risk during prenatal and early postnatal development when organ and neural systems are forming.

## Minimize Your Impact

Become a dedicated label reader! Avoid products containing these contaminants by reading labels on products. Take a list of EDCs and other chemicals with you when shopping until the terms become familiar to you. Choose fragrance-free and dye-free products. Don't buy antibacterial soaps. Minimize your need to dispose of unused or outdated products by purchasing only the amount you need. Never put unused personal care products or medicines into sinks or toilets.

Try to find "manufacturer take-back" programs for unwanted medications or law enforcement facilities that will accept unwanted medications and controlled substances. If no program exists, try to get one started. Make use of hazardous waste disposal programs offered by your garbage pick-up company.


Maintain your home's landscaping organically with safe pest controls and fertilizers. Grow your fruits and vegetables without pesticides; root crops like beets and carrots, greens and brassicas like broccoli and chard do well in our climate. Buy organic food and consumer products when you can, or alternatives with smaller chemical footprints. It's especially important for pregnant women, infants, children and developing teenagers to decrease their exposure to endocrine disruptors, so organic milk, shampoo and other absorbable products are worth seeking out. Use less detergent per load in the washing machine. Microwave with use china or glass containers, not plastic. Replace vinyl shower curtains with cloth ones.

With a chemical policy that hasn't been updated in 30 years, our national regulations on labeling leave consumers to purchase at their own risk. It's time to ask state and national representatives for more research on short and long-term effects of chemicals, and to toughen up labeling requirements. To their credit, Maine and Washington state have banned PBDE's, the flame retardant. We can do the same in Oregon with grassroots action.

With a changeover to a Democratic majority in '07 and with a strong push from the environmental community, the Oregon Legislature passed SB 737 requiring identification of the worst toxics being dumped into our rivers by factories and municipal sewage facilities. It requires the Department of Environmental Quality (DEQ) to develop a strategy for pollution prevention and reduction by these major dischargers. This was the first major toxics reduction legislation passed in Oregon in decades. Now let's tell our state representatives we strongly favor toxic mixing zones phase-out and more extensive pesticide reporting legislation in the '09 session.

Reducing our body burden of chemicals means raising our awareness level when we make purchases, or in other words, taking responsibility for the choices we make. Let's educate ourselves and our children about these chemical compounds, because we care about protecting our family's health and the health of our planet. What's the saying? You can run but you can't hide. It's a closed system. Good-bye bottled water and sports bottles, hello Sigg water bottles! Good-bye Teflon pans, hello stainless steel. When in doubt, use precaution.


[Note: Much of the information contained in this article came from the Sierra Club's pamphlet, "Consumer Products Threaten Aquatic Life: What Citizens Can Do." Contact me at [junipergrp@yahoo.com](mailto:junipergrp@yahoo.com) for information on Sierra Club Sigg bottles. Links: Impacts on wildlife: [www.ourstolenfuture.org/news/science/wildlife/wildlife.htm](http://www.ourstolenfuture.org/news/science/wildlife/wildlife.htm); Sierra Club SHC website: [www.sierraclub.org/healthycommunities/toxics/](http://www.sierraclub.org/healthycommunities/toxics/); Nat'l Institute of Environmental Health Sciences, Endocrine Disruptors: [www.niehs.nih.gov/oc/factsheets/pdf/endocrine.pdf](http://www.niehs.nih.gov/oc/factsheets/pdf/endocrine.pdf); Toxic Free Legacy Coalition, Safe Cosmetics Campaign in Washington State: [www.toxicfreelegacy.org/safecosmetics.html](http://www.toxicfreelegacy.org/safecosmetics.html); Product Stewardship Institute, [www.productstewardship.us/](http://www.productstewardship.us/) under Pharmaceuticals.



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Engagement Calendar

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Wilderness	\$11.00			
			Subtotal	
			Shipping (\$3 per calendar)	
			Sales tax	
			Grand Total	