



OTTER RELEASE!

Amigos Bravos is delighted to announce that six more otters were successfully released into the Río Pueblo de Taos in the early morning hours of October 23rd, 2009. They were brought from Washington State to join the ten otters that have thrived since three initial releases from the same site in the fall of 2008.

Since the otter release in 2008, Amigos Bravos has received several reports of otter swimming and sunning themselves on the rocks up and down the Río Grande and its tributaries, with one report coming from as far away as White Rock Canyon. Most of the calls are from rafters and hikers. Amigos Bravos was especially fortunate that a professional photographer, Kriston Clark, of Southern Exposure, happened to capture a photo of three adult otters fishing together near Sunset Rapid at the confluence of the Río Pueblo de Taos and the Río Grande.

Everywhere that otters have been released in the United States they have tended to reproduce and thrive. Amigos Bravos has received a number of reports of otter pups, and though we have never gained conclusive proof, it is very likely that pups are indeed playing in the Río Grande and along its banks. Part of the otter's



November 22, 2008 release, Rocky on the Rock, by Jim Stewart, U.S. B.L.M.

ability to thrive is due to a skillful strategic maneuver on nature's part. Female otters experience "delayed implantation." Following conception, a fertilized egg may float free for as long as ten months in the mother's uterus. In deep winter, the egg implants with the

result that pups are always born in spring. Gestation time once implanted is two months. Otter young may be born up to a year after the mother mates.

Out of the ten otters from the original 2008 release, two did not survive. One was accidentally killed when caught in a beaver trap. The beaver traps have since been removed. Another otter was hit by a car near the river-side village of Pilar. Automobiles are the greatest mortality factor known for otters. They are at the top of the food chain in the river ecosystem.

The most recent batch of otters was flown in by the BLM in a serendipitously named Twin-Otter model plane. BLM is also donating pilot time and helping with coordination of the event. Additionally, Amigos Bravos is indebted to Taos Pueblo for their participation and commitment to the project. In each case, the Pueblo has released the otters on Pueblo land and donated personnel and supplies. The Pueblo is working closely on this project with Darren Bruning from the

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Pharmaceutical Success Story

Amigos Bravos achieved an amazing victory this year as a result of our water quality monitoring project in the drains and ditches along the Middle Río Grande.

In September, the Albuquerque Bernalillo County Water Utility Authority (WUA) – the largest water provider in the state – announced that it would work with the US Geological Survey (USGS) to begin quarterly monitoring of the drinking water and waste water for pharmaceuticals.

The WUA has long denied that pharmaceuticals exist in the river and has also claimed that the treatment processes would remove any pharmaceuticals if they did exist. In the September press conference, they changed these statements, admitting that pharmaceuticals exist in the river and that there are no treatment processes that completely remove pharmaceuticals from water.

Water Quality Monitoring Program

Amigos Bravos began our water quality monitoring program in March. We are working with two high schools to sample the water quality of the drains and ditches that run through Albuquerque.

The schools are the School on Wheels and Río Grande High School; both schools serve the largely Hispanic and semi-rural South Valley area.

The program is a result of long-standing community concerns about

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Pharmaceutical Success Story

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the quality of the water in the ditches and drains that run along the river and supply irrigation water to farmers, ranchers, and a number of *acequia* associations. Over the last few years, people in the Albuquerque area have become concerned about possible contaminants in the new Drinking Water Project, which uses river water to offset groundwater pumping.

Water samples are collected at eight sites on both sides of the river, from the Angostura Diversion in Algodones, where Río Grande water is diverted into the irrigation system, to the I-25 Bridge over the river.

We sample each site three times during the irrigation season: in March, June, and October. The list of substances sampled for includes nutrients (nitrate, nitrite, nitrogen, ammonia, phosphate), metals (including arsenic and mercury), gross alpha and beta (natural and man-made radionuclides), *E. coli* (a bacteria found in fecal matter), semi-volatile organic compounds (like solvents and other industrial chemicals), and pharmaceuticals (pain medication, antibiotics, hormones, and other medicines) and personal care products (sunscreen, insect repellent, and caffeine).



Cyndie Abeyta, U.S Fish and Wildlife Service hydrologist, & Anthony Benavidez, the School on Wheels, take water samples from irrigation channel east of the Rio Grande in Albuquerque, APPhoto by Susan Moontoya Bryan

In October, the USGS came along with us to the three sites where we monitor for pharmaceuticals and collected their own samples as well as splitting one of our samples. The USGS will analyze the results at their lab while we use ours, so we can compare the results. The USGS also noted that their current equipment is less sensitive than the equipment and method used by our lab.

The program is funded by the US Fish & Wildlife Service (FWS). Staff at the FWS provide water monitoring training for students and teachers and supervise the water sampling at each site. The Bernalillo County Environmental Health, the Albuquerque Community Foundation, and a small family foundation also provide financial support.

Pharmaceuticals Detected

The first round of sampling in March detected seven different pharmaceuticals and personal care products (PPCPs) from three sites along the East Riverside Drain, at the Angostura Diversion, the national Hispanic Cultural Center, and the I-25 Bridge. The PPCPs included:

- Acetaminophen (*pain reliever and fever reducer; Tylenol & Anacin-3*)
- Caffeine (*stimulant*)
- Carbamazepine (*anti-seizure and mood stabilizer*)
- DEET (*insect repellent*)
- Meprobamate (*tranquilizer; carbamate derivative*)
- Oxybenzone (*sunscreen & cosmetic ingredient*)
- Sulfamethoxazole (*antibiotic; Bactrim & Septrin*)

National & Local Studies

In 2001, the US Geological Survey (USGS) conducted the first national study of PPCPs as wastewater contaminants in streams and found one or more of these chemicals in 80 percent of the streams sampled. About one-third of the streams contained 10 or more of these chemicals. In 2008, the USGS found that 35% of wells and 86% of streams tested showed PPCPs.

In 2008, the Associated Press interviewed water providers and discovered that drugs have been detected in the drinking water supplies of 24 major metropolitan areas serving at least 41 million Americans. The AP study also revealed that 28 of 35 watersheds tested by water authorities had pharmaceuticals.

In a 2002 report, the New Mexico Environment Department (NMED) sampled wastewater facilities, surface water, groundwater, and public drinking water at several sites across the state for PPCPs and found them in many locations. The Albuquerque wastewater discharge showed an antibiotic and the surface water downstream showed an estrogen hormone and caffeine.

The US Fish & Wildlife Service analyzed surface-water samples in 2004 for 29 PPCPs and many other items at 14 sites within the Middle Río Grande. The only PPCP detected was cholesterol, which was found in 3 of the 35 water samples.

Two UNM graduate students conducted research on PPCPs in the Albuquerque area. Kathryn Brown (2004) reported one antibiotic – sulfamethoxazole – detected below the waste water facility. Maceo Martinet (2005) sampled for PPCPs in the Río Grande and the shallow groundwater near the river, both upstream and downstream of the water treatment facility. His study found nine PPCPs in the shallow groundwater above and below the wastewater treatment plant, although generally in higher concentrations below the facility.

Finally, the State Surface water Quality Bureau and the US Geological Survey tested for PPCPs and many other chemicals in a multiyear study done as part of the

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Endangered Species Act project to restore and maintain the silvery minnow. That project detected PPCPs at every wastewater treatment discharge along the Middle Río Grande.

However, taken together, the national and New Mexico studies indicate that pharmaceuticals and personal care products (PPCPs) are present in our water. Here in the Middle Río Grande, they appear to be present in surface water, groundwater, and the drains and ditches.

Emerging Science

PPCPs are typically found in concentrations in the parts per trillion (nanograms) level. This may seem to be extremely insignificant and is often portrayed that way by the pharmaceutical and chemical industries and many water providers.

However, research shows that PPCPs in surface waters – especially Endocrine Disrupting Compounds (hormones and chemical compounds that mimic hormones) but also including caffeine and sunscreen– have an impact on aquatic life. There are cases of amphibians sprouting extra legs, male alligators with stunted genitals, and male smallmouth bass producing eggs. There is also evidence that earthworms, snails, and zooplankton are affected by PPCPs.

The pharmaceutical industry and many water suppliers argue that there is no risk to human health from PPCPs in the environment because the concentrations are so low and research in this area is not definitive. But some in the industry now acknowledge the widespread existence of PPCPs in the environment and the legitimate public concern over impacts to the environment or to human health.

Debate about impacts to the environment is giving way to whether there is a threat to human health. One major concern is with “endocrine disrupting compounds”, which are natural or synthetic hormones or chemicals that have a similar affect in the body. There are indications that humans could be harmed by chronic exposure – such as through drinking water – to even very small amounts of these and other PPCPs.

Researchers are beginning to understand how some types of PPCPs can alter immune system function. Acute doses seem to shut down immune system functioning, but chronic low doses can force the immune system into overdrive.

This counter-intuitive result is changing the field of drug impacts research and the way standards are set, shifting the focus to chronic low-dose exposure. PPCPs may be peculiar in this regard, compared to other environmental contaminants, because they are designed to act on the human body at very low concentrations.

Is the water safe?

Typical wastewater treatment systems do not eliminate all PPCPs from the water they discharge; similarly, drinking water treatment systems also do not eliminate all PPCPs. Some methods, such as activated carbon, ultraviolet, and

ozone treatment are more effective than standard treatment processes, but the EPA says there are no wastewater treatment systems specifically engineered to remove pharmaceuticals and is working on better treatments.

If the question is: “Are the levels of PPCPs that we found safe to drink?”, then the answer is: “They are considered safe by the government, but they have only begun to study the problem”.

Federal law requires water providers to meet Safe Drinking Water Act standards, but there are no standards for PPCPs, which means that wastewater treatment facilities, agricultural operations, and drinking water suppliers do not have to address these compounds in order to meet regulatory requirements.

Amigos Bravos Recommendations

In June, we held a press conference announcing our initial findings of PPCPs in the drains and made a number of recommendations for the WUA (and other water providers):

- The Water Utility Authority (WUA) monitor for PPCPs on a regular basis using analytic methods capable of detecting PPCPs at the parts per trillion level
- The WUA should develop public outreach programs, in cooperation with other stakeholders, to educate people and businesses about the safe disposal of PPCPs and to develop pharmaceutical return policies and practices
- The WUA should encourage the NM Environment Department and US Environmental Protection Agency (EPA) to speed up development of standardized analytic methods, standards for PPCPs, and effective treatment processes
- The WUA should adopt treatment methods and best management practices (BMPs) that eliminate the release of PPCPs into the environment, both at the tap and in wastewater discharges

To our surprise – and pleasure – the WUA’s announcement in September represented important first steps towards all of our recommendations. The WUA will monitor for PPCPs, it is educating its customers about proper disposal of PPCPs, it has said it will work with the Legislature about rules for drug take-back programs and other PPCP issues, and it is working with a national trade association to try to come up with better treatment processes.

Focus on Youth

Amigos Bravos is very pleased with the victory in turning around the Water Utility Authority.

However, the focus on students is central to Amigos Bravos’ goals. We – and the environmental movement more generally – need to provide opportunities for the next generation to gain experience in the field and to connect the world beyond themselves with themselves.

Announcements

We've Moved!

This past Summer, Amigos Bravos moved down the hill from our long-time location on Doña Luz, just west of the Plaza.

Our new location is in the historic district just east of the intersection of Hwy 68 (Camino del Pueblo Sur) and 240.

Our new address is: 105-A Quesnel. Our phone, fax, email, and website have not changed.

Please come by and say hello!



Amigos Bravos Is Going Electronic

In an effort to cut down on the use of paper and lower our carbon footprint, Amigos Bravos is switching to electronic distribution of its Bulletin, Annual Report, and other publications.

The move will also allow us to make better use of our resources, since we'll be saving on the cost of paper (we used more expensive recycled paper), printing, and postage.

Please provide us with an email address and we will alert you when new information is posted to our website (www.amigosbravos.org).

For our members who do not have web access, please let us know and we will print out a paper version of our Bulletin and mail it to you.

On behalf of our Board of Directors and Staff, we acknowledge with gratitude the following membership contributions received during the past seven months (3/27/09-10/29/09).

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Bill Anderson and Holly Walker	Judith Lynn Johnson & John Morrice
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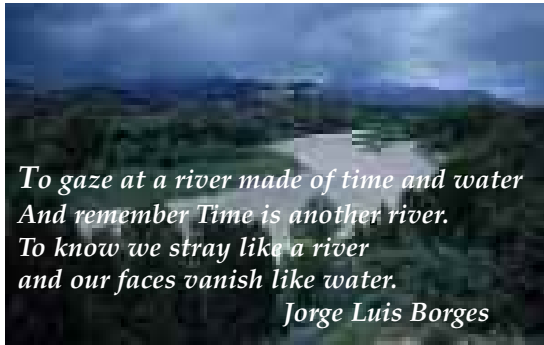
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The DJenne Initiative
 Wes Patterson and Stacy Quinn

If we have inadvertently omitted you or your business from this list, please accept our sincere apologies and let Linda Gomez know by phone at 575-758-3874 or email at lgomez@amigosbravos.org ●

Amigos Bravos' Capital Reserve Fund is our hedge against hard times, ensuring that Amigos Bravos can survive cash flow shortages in the annual operating budget. It can only be accessed for certain purposes, such as meeting payroll or for emergency capital outlay. Any use of money from the Fund requires approval from the Board of Directors. Thanks to the many generous contributions of our members, the interest-bearing account now has a balance of \$110,628. *Please consider making a contribution to the Capital Reserve Fund.* ●

**By including Amigos Bravos in your will...
 ...you could protect a river for years**



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To explore a bequest to Amigos Bravos, please complete this form and return it, marked confidential, to Brian Shields, Executive Director, Amigos Bravos.

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 Join Amigos Bravos!*

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New Dairy Industry Rules

Amigos Bravos is participating in a series of stakeholder meetings that are part of a process to develop new dairy facility permit rules.

The need for new rules is the result of legislation passed in the 2009 Legislature seeking to limit the rulemaking power of the Water Quality Control Commission (WQCC) and the ability of state regulatory agencies to impose conditions on permits.

Led by the dairy and mining industries and their legislative allies in the Senate, the bill – SB206 (Senator Harden) – limits the WQCC and agencies to specific statutory language in the Water Quality Act (WQA) or existing rules, with limited ability to impose conditions the WQCC or the agencies believe are necessary to carry out the intent of the WQA.

Specifically, SB206 said that the New Mexico Environment Department (NMED) and the WQCC had to develop and approve new permit rules for the dairy industry and for copper mines in order to be able to carry out permitting of new or existing facilities. The NMED is working on the dairy rules first.

During the Legislative session, the NMED argued that SB206 would replace the Water Quality Act's current flexibility, which allows permits to be issued according to dynamic science-based "situation-specific" criteria, with a much less specific and essentially static process that would likely impede the ability to issue and enforce permits. There was some fear that the impact of SB206 would be to prohibit permit conditions except for those that deal with monitoring and reporting.

Stakeholders

Earlier this year, the GWQB and dairy interests worked out some draft language for new permit rules. This draft language went to public comment and the drafting of a revised GWQB proposal in August.

The GWQB then sought stakeholders from the dairy and community/environment interests. Eight days of meetings were scheduled in October and November at locations in Albuquerque and Roswell.

The idea was that this approach would determine if it was possible to come to agreement on some of the draft proposal language prior to submitting the Environment Department's proposal to the WQCC for approval and would allow the WQCC to focus its attention on those parts of NMED's proposal lacking agreement.

However, it is clear that the dairy industry will submit its own proposal to the WQCC regardless of the outcome of these stakeholder meetings. In fact, the industry groups have already drafted a completely reformulated draft for use at the stakeholder meetings.

The dairy interests are represented by the Dairy Producers of New Mexico (DPNM), the Dairy Industry Group for a Clean Environment (DIGCE), two dairy industry

consultants, and the Gallagher & Kennedy law firm. In practice, all the dairy industry representatives are working together through Gallagher & Kennedy.

The environment and the public health are represented by Amigos Bravos, the Sierra Club Río Grande Chapter, and Caballo Concerned Citizens. The three groups have worked together before. In Spring 2008, Environment Secretary Ron Curry denied a discharge permit for the proposed ParaSol Dairy in the Truth or Consequences area as a result of community organizing by Caballo Concerned Citizens and assistance provided by the Sierra Club and Amigos Bravos.

Specificity

The major divide between the industry and the Ground Water Quality Bureau is over "specificity". The GWQB has repeatedly said that it is following Legislative intent – and industry requests over the last several years – for greater application process as well as in the operational and monitoring aspects.

Industry has insisted that it wants "flexibility" for individual dairies. Specifically, the industry wants existing dairies (about 170) that are currently in compliance to have no new requirements placed on them under the new rules, unless they are modifying or adding additional infrastructure.

One key example is monitoring wells. Industry appears to want to eliminate requirements for new wells for all existing dairies unless there is evidence that there are serious issues with leakage or with contamination.

Amigos Bravos, our allies, and the GWQB counter that other sorts of information, such as from soil and vadose zone monitoring offer very useful additional information, but that wells offer the best opportunity to document amounts and types of contamination that are the only way the agency can hold a dairy accountable.

Industry also wants the new regulations to be written for "low risk" dairy facilities. They consider the vast majority of New Mexico dairies to be in this category.

On the other hand, the GWQB uses a standard figure of 35% of dairies as not having any violations for groundwater contamination. In fact, the Bureau has gone even further and stated that many of the non-violators are dairies without current monitoring taking place and that when the agency mandates that monitoring wells be installed because they think there might be a problem, they frequently find contamination.

Based on that experience, the Bureau has said that the number of non-violating dairies – the industry's "low risk" category – might be as low as 10%. In other words, there are few "low risk" dairy operations. Amigos Bravos and our allies want permit rules in place that are as specific and stringent as possible.

Learning From Mining Regulation

We have brought two issues to the discussion that were not

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US APHIS Wildlife Services, the branch of Agriculture that is charged with killing what are termed “nuisance animals.” Otters are considered nuisance animals if they are, for example, stealing from a commercial fish pond. Understood in this light, New Mexico’s otters are essentially being rescued.

Bruning worked hard to get the otters from the wet northwest to the high mesa desert of the Río Grande watershed, under the best possible conditions. It was a short trip for the otters because the Twin-Otter is a relatively large plane. When the otters arrived they were put in pods – shed-like pens – that contain a water tank and hay. The otters were fed fish for three days. On the third day, the doors were unlatched and the otters emerged at their leisure. After a quick (or, for the leery, *slow*) scan of the surrounds, the otters headed straight for the river a few feet away and dove gracefully into its reflection. This procedure, involving the adjustment period in the pod, is termed a “soft release,” (as compared to a “hard release” in which otters are released immediately on landing). Especially exciting was that among the six otters were a mother and her pup, who were kept together in the same pod.

The joint collaboration of New Mexico Department of Game and Fish, US APHIS Wildlife Services, Taos Pueblo, BLM and New Mexico Friends of River Otters (for which Amigos Bravos is fiscal sponsor and coordinator) is planning another release of Washington State otters to the Río Pueblo de Taos this fall.

In fall 2010, Amigos Bravos is looking forward to a release of otters into the Gila River. We are moving cautiously toward this release because the Gila contains endangered fish. A long assessment process is necessary in order to ensure we are returning the otters in a way that will best serve endangered native fish. The Río Grande and Gila watersheds harbor non-native fish and non-native crayfish, both of which are destructive to the native river ecosystem. Otters love to eat the slower moving non-native fish, so the return of their presence will improve conditions for native fish. Melissa Savage, Four Corners Institute ecologist and member of *New Mexico Friends of River Otters* says, “The river otter is going to improve the aquatic habitat wherever we restore them. They are part of our natural heritage, and we are delighted to be able to bring them back.”

The cost of trapping, medical check-up, holding, transporting and releasing otters comes to approximately \$1,000 per otter. Donations to help with further river otter reintroduction can be sent to: **New Mexico Friends of River Otters**, Amigos Bravos, P.O. Box 238, Taos, NM 87571

Special thanks to Amigos Bravos board member, Jon Klingel, for his work on the otter project. ●



November 22, 2008 release, Beauty in the Cave, by Jim Stewart, U.S. B.L.M.

Dairy Rules —continued from page 6

under consideration earlier. Both of these issues come from our long experience dealing with mining operations.

One is a request that dairy closeout plans be drafted and approved as part of any new or renewal permit, rather than waiting for the dairy to cease operations before a plan is developed. The second is a request that the Bureau require a financial assurance bond from the dairy in order to ensure that sufficient funds will be in place to carry out the closeout plan and mitigate any impacts.

The Bureau has actually incorporated the financial assurance component in some “conceptual” language that isn’t part of any current draft proposal, but which the Bureau would like to discuss. We do not expect that the industry will accept either idea, but we will continue to encourage the Bureau and the Environment Department to incorporate these into a final draft submitted to the WQCC.

We recognize that there are sometimes site-specific considerations that need to be addressed and that rules and regulations impose costs on both dairy operators and the regulatory agency.

However, there is a long history in New Mexico, across the United States, and across the globe of significant ground and surface water contamination and public health impacts from dairy and other confined animal feeding operations (CAFOs). We are determined to make sure that the Environment Department have the greatest possible authority to regulate this industry to protect the environment and the public health.

The Ground Water Quality Bureau will submit its final proposal to the Water Quality Control Commission in December. Public Notice on the WQCC hearing will be published on February 1st. The WQCC hearing is scheduled to begin on March 9th, 2010.

For more information on this issue and to find out how to participate in the hearing, contact Rachel Conn at Amigos Bravos at (575) 758.3874. or rconn@amigosbravos.org ●

Triennial Review of Water Quality Standards

Under the Clean Water Act, states are required to review their surface water quality standards every three years. Starting December 8th, 2009, the Water Quality Control Commission (WQCC) will begin public hearings on the Triennial Review of Surface Water Quality Standards.

The WQCC is the final decision making body in the Triennial Review process. The Surface Water Quality Bureau (SWQB) of the New Mexico Environment Department is the state agency that implements the water quality standards and thus they are very involved in the Triennial Review as well.

Because the SWQB is the implementing agency, they are given a lot of deference by the WQCC and their proposed changes are usually given more weight than other parties' proposals (like Amigos Bravos').

Citizen Participation

The Triennial Review is the best opportunity for citizens to have an impact on water quality in the state. Anyone can suggest changes to standards or related issues affecting water quality. The SWQB submits a draft set of its proposals for public comment. The members of the public can tell the SWQB which proposals they support, which they want eliminated, and which they want modified. The SWQB responds to all comments and then submits a final list of changes to the WQCC for its hearing.

There are several ways to influence and participate in the Triennial Review. First you can comment on NMED's proposal (the comment period ran until September 30, 2009) and try to get them to take on your concerns and issues. Second, you can propose changes directly to the WQCC.

Amigos Bravos does both. We always want to show support for good NMED proposals in front of the WQCC, while at the same time having the ability to argue for our own issues that the NMED has chosen not to include in their proposal.

A Short Primer

Surface water quality standards are associated with what are called "Designated Uses" (DU). Uses can be for such things as "Wildlife Habitat", "Livestock Watering", various types of "Aquatic Life" (such as warm water or cold water fisheries), "Public Water Supply", "Recreation Contact" (either "Secondary" – such as boating with minimal water contact – or "Primary" – such as swimming), or other uses.

All rivers and streams are broken up into "Assessment Units" (AUs), sections of a river or stream with similar characteristics or occurring between two tributaries, for example. Each AU has uses associated with it.

Designated Uses have criteria and standards that are meant to protect that particular use and, for example, allow limits to be set in discharge permits or establish a baseline for anti-degradation purposes. Criteria are the types of potential contaminant relevant for a Designated Use – for

example, looking at dissolved oxygen for aquatic life or bacteria for primary contact. Standards can be numeric or narrative.

Complicating matters is that standards also vary depending on whether the stream is listed as "Perennial" (flowing year-round), "Intermittent" (flowing during part or parts of the year, such as during the monsoon season or the annual snow runoff), or "Ephemeral" (flowing only in response to specific events, such as a rainstorm).

Using all the above, the SWQB samples each assessment unit and decides whether the results indicate a unit's standards – related to the Designated Units – are being met.

Hydrology Protocol

One very confusing part of the current Triennial Review is a proposed "Hydrology Protocol". This was introduced adequately. However, with tremendous help from Jon Klingel, one of our Board members and a wildlife biologist, Amigos Bravos submitted extensive comments on this as well.

Basically, the proposed "Hydrology Protocol" is a set of guidelines on how to conduct field research to determine if a particular stream segment, or arroyo, or other surface water is ephemeral or not. Surface waters determined to be ephemeral have fewer and less stringent standards applied to them than intermittent or perennial streams.

We are quite concerned by language in the Hydrology Protocol. First, it would allow private contractors to conduct the assessments, which we feel is an open invitation for conflicts of interest when a potential discharger pays for a private report that concludes the relevant stream segment is ephemeral and thus less open to stringent regulation.

In addition, we believe that the Hydrology Protocol does not provide enough guidance or in some cases the correct guidance to make an effective determination. We argue very strongly for the important role that ephemeral streams play in the life cycles of many species, some of which are aquatic for only part of their lives.

In addition, we make a strong case for protecting all surface waters, regardless of classification, because of the potential impacts of climate change in causing reduced and warmer flows, impaired habitat, and higher concentrations of contaminants from discharges that are going into lowered water volumes.

Amigos Bravos Proposals

In August, we submitted our notice to present testimony, which included our set of proposals for the Water Quality Control Commission. Among the dozen or so proposals are the following:

Flow Criteria – In many stretches of river in New Mexico, the applicable criteria are not adequately protecting the designated uses because of lack of flow. We are recommending that the state consider including a general criterion

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for flow in the standards to meet designated uses. For example, to meet the designated use of irrigation, water only needs to flow during irrigation season and to meet the wildlife habitat use, flow may not be necessary year round as long as there are pools remaining to provide drinking water to wildlife. Other states have implemented flow criteria to protect the designated uses of their waters.

Primary Contact – The State has a policy of listing stream segments for secondary contact as a designated use, but then have site-specific primary contact standards. This policy causes confusion and makes it especially difficult to know what is meant when a segment is declared to be “fully supporting” secondary contact, but has primary contact criteria. However, care must be taken to ensure that if there are segment-specific criteria that are more protective than the criteria associated with primary contact, those more protective criteria should continue to apply.

Klauer Spring – This spring, located about 20 yards from the banks of the Rio Grande near the Taos Junction Bridge, is used by many Taos County residents as their drinking and domestic water supply. Therefore, Domestic Water Supply should be included as a designated use.

Limited Aquatic Life – The designated use of “Limited Aquatic Life,” is ambiguous and confusing and could be abused to lower water quality standards. The standards would be clearer and more in line with the goals of the Clean Water Act if there was a return to the pre-2005 policy of setting segment specific uses in the rare case where the other aquatic life uses are not attainable. It is more appropriate to make segment specific changes in cases where the natural conditions have resulted in an impairment associated with either the chronic or acute aquatic life criteria. This method would allow for more fine tuned standards. The EPA has already disapproved the use of the Limited Aquatic Life use for ephemeral waters because it doesn’t serve the purposes of the Clean Water Act.

Los Alamos Intermittent and Ephemeral Waters – All intermittent waters on LANL property are given weaker protections (“Limited Aquatic Life”) than all other



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intermittent waters in the state (which receive the Aquatic Life use). The standards should be consistently. If a Use Attainability Analysis is conducted that shows that the Aquatic Life use is not attainable, then a separate segment should be created for those waters. The US Fish and Wildlife provided testimony in the 2004 Triennial Review that showed many species of aquatic life thrived in both intermittent and ephemeral streams on LANL property. The four intermittent streams on LANL property that were studied were Los Alamos Canyon, Sandia Canyon, Pajarito Canyon, and Valle Canyon.

Coolwater Criteria – The current water quality standards allow for five categories of temperature criteria: high quality coldwater, coldwater, marginal coldwater, warmwater, and marginal warmwater. Adding “Coolwater” implies that the State will place waters into whatever category it presently fits rather than classifying for an historical or appropriate use and then working toward achieving that condition. In particular, as climate change causes New Mexico’s waters to become more limited, and thus more susceptible to temperature change, there is a risk that the addition of categories will lead to constant downgrading of water quality standards at the very time we most need to protect quality.

Domestic Water Supply Criteria – The proposed changes to the Domestic Water Supply use in most cases weaken the associated criteria because the proposed changes disregard the potential health effects to people who both drink the water and eat fish from the same water source. The EPA recommends criteria for consumption of water plus organism; the WQCC currently applies this approach. All waters in the State have a domestic water supply use and an aquatic life use and it is likely that some people who fish also hike and camp and consume the water. Furthermore, the State cannot downgrade standards without first conducting a Use Attainability Analysis for each segment affected by the rule change and this has not been done.

Definition of Perennial – Water quality standards for the Río Fernando have been weakened from perennial to intermittent (apparently based on a single observation during a dry Summer a couple of years ago). This change in stream categorization has a big impact because the water quality standards associated with intermittent streams are a lot weaker than those associated with perennial streams. We believe that a stream like the Río Fernando that runs right through a town and upon which so many people depend for recreation, groundwater recharge, and irrigation should deserve better protection. NMED is proposing to change the definition of perennial: “Perennial when used to describe a surface water of the state means the water body typically contains water throughout the year”. The word “typically” allows for periodic fluctuations in flow in sections of a river that historically has flowed year-round.

Water Quality Standards for Intermittent Streams – As explained above, if NMED’s proposed change to the definition of perennial is not adopted, then we may be stuck with intermittent standards on the Río Fernando and other stream segments. Fortunately, NMED is also proposing to strengthen standards for intermittent streams for *E. coli* (a bacteria that is one of the biggest water quality problems in the State) by raising the standard from 2507 cfu/100ml to 940 cfu/100ml (cfu is “colony forming units”).

Pharmaceuticals – Amigos Bravos will present testimony on the presence of pharmaceuticals in the Middle Río agencies, local water providers, and other stakeholders to begin more frequent and widespread monitoring in order to identify the scope of the problem, develop better drinking and waste water treatment processes, implement pharmaceutical take-back programs to keep medicines out of the waste stream, and develop standards for those pharmaceuticals identified as most likely presenting a risk to the environment and human health.

Radionuclide Standards – NMED is recommending that the WQCC adopt water quality standards for Plutonium, Tritium and Americium in the mainstem of the Río Grande from the Rio Pueblo de Taos all the way to Elephant Butte Reservoir. This change is primarily aimed at protecting drinking water supplies downstream of Los Alamos – the source of these radionuclides – by allowing the State to monitor and report on these radionuclides using an established standard. The reason the protections go all the way to Taos Junction Bridge is because the Río Grande “from Cochiti Reservoir to the Rio Pueblo de Taos” is listed as one segment with the same water quality standards.

Los Alamos National Laboratory Objections

There are several proposed changes to the water quality standards discussed above that deal either directly or indirectly with contaminants associated with Los Alamos National Laboratory (LANL). Not surprisingly, LANL is opposed to those changes. However, LANL’s most strenuous objection has to do with the proposal to set standards for certain radionuclides for water monitoring purposes.

The Department of Energy and Los Alamos National Security (LANS – the consortium that has the contract to manage LANL), have filed a strongly worded “Motion to Strike” NMED’s proposed radionuclide standards. They are arguing that the State does not have the authority to set standards for radionuclides – officially referred to as “Source, Special Nuclear and Byproduct Material” – because these materials are excluded from Environmental Protection Agency and Clean Water Act regulation. The DOE and LANS also argue that the proposed standards have no scientific basis.

This restriction on regulating environmental and public health impacts of nuclear weapon production is a legacy of regulations from hindering production of nuclear weapons.

Amigos Bravos and its allies disagree quite strongly. We have very credible scientific support for the proposed standards, including the EPA. Our case will be defended by our expert witness, Dr Arjun Makhijani, President of the Institute for Energy and Environmental Research, located just outside Washington, DC.

We also have statutory support for the ability of the State, through the WQCC, to establish standards that protect the environment and public welfare. Colorado has enacted similar standards for reporting purposes and these were not challenged.

We know that the State is prohibited from “regulating” these radionuclides, but there is no reason these dangerous materials shouldn’t be monitored. In addition, we and other organizations across the country are seeking to have legislation passed that would allow the EPA to regulate radionuclides.

The reason the DOE and LANS don’t want the proposed standards is because they don’t want monitoring and reporting done in terms of a specific science-based limit that would allow the public to put radionuclide findings into perspective. They also don’t want monitoring results that could lead for calls to allow federal and state environmental agencies to regulate radionuclides.

For more information on the Triennial Review and how you can participate, contact Rachel Conn at (575) 758-3874. ●



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wetland adjacent to ephemeral stream, Cedro Creek, Tiejeras, NM



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Pharmaceutical Success

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We are already seeing some profound impacts.

Río Grande HS is using this project as a component of its new restructured curriculum. Ninth-grade students and teachers from math, biology, social sciences, and literature classes are incorporating water and *acequia* research and their program.

A number of students have told us that they had no idea people actually had jobs that dealt with water or that they had never thought about the ditches that run through their community. Everyone involved in this project has come to realize how incredibly important it is that students have experiential education opportunities that can connect their classroom learning with the rest of their lives.

For more information, contact Michael Jensen at mjensen@amigosbravos.org or (575) 758-3874. ●