***NEPA Comments on Taos Ski Valley 10 Year Master Plan: May 22, 2023***

***Part I***

***CLIMATE CHANGE***

***Phaedra Greenwood, Arroyo Hondo***

The Neanderthals lived in Europe for about 100,00 years and had no more impact on our planet than any other large invertebrate. They built nothing, cleared no land, left behind a few tools and the graceful, animated paintings of animals that they hunted on the walls of the caves in Lascaux, France. Most of those animals went extinct about the same time the humans arrived.

 Like musk thistle, cheat grass and Siberian elm, humans are also a self-aggrandizing invasive alien species. “Because they have no natural enemies to limit their reproduction, they usually spread rampantly. Invasive alien species are recognized as one of the leading threats to biodiversity and impose enormous costs to agriculture, forestry, fisheries, and other human enterprises, as well as to human health,” says defenders.org.

<https://defenders.org/sites/default/files/publications/new_mexico.pdf>

 By the time I was born there were two billion people on the planet. In my lifetime that number has tripled to 7.5 billion. Climate change is the cumulative anthropomorphic consequence of our active presence on this earth. In 1958 when continuous observations began at Mauna Loa Volcanic Observatory, global atmospheric carbon dioxide was already 315 ppm. The concentration of CO2 in the atmosphere today is 419.36 ppm and rising.

 According to the 2017 Climate Change Special Report, global temperatures have increased by 1.8 F over the past 115 years. We are now in the warmest period in the history of modern civilization. The Southwest is among the most rapidly warming regions on the planet, about double the global rate, which will have profound impacts on the region's water resources. By the end of the century, New Mexico could be 4 to 6 degrees F warmer than it is today. The drying trend in the US Southwest is caused by natural climate variability and a “poleward extension of the subtropical dry zones” which are moving north. US Southwest models show a 25 percent decrease in precipitation and less groundwater to rely on.

 How does that affect us here in Taos?

 According to Glorieta Geoscience, Inc., in the *Village of Taos Ski Valley, NM Water Master Plan*, *Executive Summary*, 12/16/2, about the “Cumulative Affects of Climate Change and Development on the Rio Hondo Watershed:

 In the last 20 years there are only 5 years where NM has not been in drought conditions.

At present, NM is in the deepest drought in the last 20 years. In the last 4 decades, temperatures have risen and precipitation has remained about the same Statewide. It will get warmer in NM as CO2 concentrations in the atmosphere increase. There will be decreased snowpack but more winter precipitation in the Northern Mountains. Snowpack and streamflow will decrease. Snow will melt earlier and there will be less runoff.

<https://www.vtsv.org/wp-content/uploads/2022/03/WMP-Report-FINAL-12-16-21.pdf>

 In the spring of 2018 in Valdez, there was no runoff at all. In 2022 all our adjacent states had one of the top five driest years on record. Even good snowpacks didn't help much. Dried out soils soaked up snowmelt that would have supplied rivers and reservoirs. Climatologists say that in parts of Utah it would take an entire year of rain and snowfall every day to saturate the soil and bring it back to the pre-1970s level.

 Trends can suddenly reverse themselves. This spring, 2023, we are seeing a roaring runoff; today the Rio Grande is at 3,720 cfs. But the drought is not over.

 Unstable climate change has accelerated due to natural feedback loops. With rising global temperatures and insect outbreaks over the past twenty years, more than five million acres of the Land of Enchantment have been seared by wildfires, then decimated by ferocious flash floods. In her informed book, *Precipice: New Mexico's Changing Climate*, author Laura Paskus discusses the future of New Mexico's primary watersheds. A 2016 study warns that roughly half the evergreen trees in the northern hemisphere have already died, and by 2100 all pine-juniper forests in the southwestern United States will be gone. Aerial surveys by the U.S. Forest Service reveal that drought, overgrowth and insect outbreaks have weakened over twenty-one million acres of national forest.

 Silvicultural experts agree that the mixed conifer forest we once knew will not grow back. These millions of trees will not be around to absorb CO2. There is no way of returning the forest to what it once was, but it can still be managed in a way that promotes biodiversity. Local landscapers, ecologists and others involved in forest restoration recommend planting starters of Gamble oak, New Mexico locust and other kinds of warmer climate vegetation in greenhouses, that will thrive in the mountains and mesas of tomorrow. Beyond thinning, which needs to be done, a plan for forest restoration in the Rio Hondo watershed is weak in the Draft EA.

 We need a full EIS for social and environmental justice in accord with the President Biden's Executive Order to address the cumulative impacts of pollution on minorities. “Communities with environmental justice concerns experience disproportionate and adverse human health or environmental burdens. These burdens arise from a number of causes, including inequitable access to clean water, clean air, natural places, and resources for other basic human health and environmental needs; the concentration of pollution, hazardous waste, and toxic exposures; and underinvestment in affordable housing that is safe and healthy and in basic infrastructure and services to support such housing, including safe drinking water and effective sewage management.”

 The Draft EA does not address the impact on the watershed of the Dec. 15, 2021 catastrophic blowdown and the loss of over 3000 evergreens, nor a response to future blowdowns caused by extreme weather events that will become more common with climate change. We, the downstream community, are concerned about the steep, almost bare slopes below Kachina Peak, early snowmelt, the inevitable soil erosion, high winds that blow away the snow, and a runoff load that clogs the bottom of the Rio Hondo.

 The Drat EA offers no information on the impact of that 2021 blowdown of 300 acres on wildlife, especially the endangered marten, the boreal owl, the Goshawk and other species that once lived there. Except the dismissive idea that they can just go live over there, out of our way—there's plenty of room—like asking us to go live in the sagebrush—there's plenty of room.

 An EIS should address the catastrophic impact of the blowdown, the loss of shade, natural habitat and damage to the watershed that was caused, in part, by the same heavy machinery that cut, peeled and removed the shattered trees from the roads and hillsides. *The Soil and Water Specialist Report* only addresses water issues and private land in the Canyon, not the impact that catastrophic clean-up and new development is likely to have on the Rio Hondo from Valdez to the confluence at the Rio Grande.

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***Part II***

***Phaedra Greenwood, Arroyo Hondo***

**CONSTRUCTION, WASTE TREATMENT AND DAMAGE TO THE WATERSHED**

Continued construction in a high, steep and damaged watershed where, according to VTSV statements, they are already hosting 300,000 visitors in the winter ski season, deserves an Environmental Impact Statement. A skier limitation of 4,800/day would still admit 72,000 visitors during ski season for about 155 days. All these visitors will be drinking water and flushing toilets. How is the wastewater treatment plant handling a load that is one day under a hundred and then suddenly up to 5,000? In December 2022, during an overload of eager visitors, a two million gallon storage tank drained through a broken pipe and the whole valley lost water pressure. For weeks. Did all that water wash down the Rio Hondo? And what toxic contaminants went with it? What affect did this have on the wastewater treatment plant? Where are the reports?

 The Rio Hondo, in the lower stretches through Valdez and Arroyo Hondo, is already compromised, especially in summer. I include current photos of what they “snot rock” algae and filamentous algae taken in the Rio Hondo.

 What if the Phoenix Spring is low due to climate change and unable to provide five million gallons of water for the tank? Does the VTSV have the right to capture groundwater from the Gunsite Spring? From Bull O' the Woods Spring? How is the installation of a huge cement-lined tank at high altitude not going to disturb the soil and damage the river with heavy trucks driving up and down transporting construction crews and materials day after day; trenching pipes and digging up the ground?

 **Village of Taos Ski Valley Region Source Water Protection Plan, Feb. 27, 2020**, recognizes that the greatest source of non-point pollution of the Rio Hondo is new construction. According to the Plan, most of the toxic pollution at TSV and TSV, Inc. comes from vehicular traffic and machines (VTSV\_Region\_SWPPlan\_2020-Final-5.14.20-Village-edition(1).pdf pg. 27-28). The report supplies a list of potential sources of contamination, many of which are from snowmaking, ski facilities, over-snow vehicles, petroleum storage tanks, and road and storm runoff which includes pesticides and herbicides, fertilizers and nitrates, Ammonia, Chloride and chlorine, phosphates, pathogens, gasoline, diesel fuel, automotive wastes, PCBs, sewage, metals and oil.

 “Nitrogen generally reaches the Rio Hondo from land uses that are in close proximity to the stream because the hydrological pathways are shorter and have fewer obstacles than land uses located away from the riparian corridor. However, during spring snowmelt and in storm water runoff, those distant land uses can become hydrologically connected to the stream, transporting nutrients [and contaminants] from the hill slopes to the stream during these time periods,” says the Final Approved Total Maximum Daily Load (TMDL) for the Rio Hondo (South Fork of Rio Hondo to Lake Fork Creek, June 14, 2005 report. See:

<https://www.env.nm.gov/surface-water-quality/wp> content/uploads/sites/25/2019/04/RioHondoTMDL.pdf

**Taos Ski Valley Wastewater Treatment Plant** capacity was designed to serve a population of 1,025 people, which “fluctuates from 500 to 5,000 depending on the season of the year” according to the NMED Surface Water Quality Bureau.

 TWSV, Inc. exceeded their permit for Ammonia Nitrogen: February 3, 2019; Feb. 24, 2019; Nov. 20, 2019; Nov. 25, 2019; Dec. 4, 2019; Dec. 20, 2019; Dec. 23, 2019; Dec. 30, 2019. Total Nitrogen: Nov. 20, 2019 and Nov. 25, 2019, Dec. 4, 2019; Dec. 11, 2019; and Dec. 20, 2019 (Water Enforcement Branch (6EN-WC), EPA, Region 6). Total Phosphorous exceedences: Nov. 17, 2020.

 In a letter to the EPA, VTSV explains that to achieve optimum nitrogen removal, they have to run the risk of overloading the clarifiers and discharging solids over the weirs, “and this is not acceptable.” They have to maintain enough solids to get maximum nitrogen removal without “discharging total suspended solids into the effluent outfall.” During Covid times [2019] the process was hindered by a low ski numbers, and village use of disinfectants and antimicrobial soap that killed off the plant nutrients. Thus, they failed to submit a viable sample Total Nitrogen for the week of December 20, 2018.

VTSV hired Plummers to build them an additional temporary wastewater treatment plant (WWTP) as auxiliary unit to bypass the main plant while they made improvements. On December 21, 2018 the 24-hour flow into the plant was 45,000 gallons and during the sample week; the average flowing into the facility was 85,000 gallons with peak lows well over 125,000 gallons.

The Village of Taos Ski Valley states that the proliferation of septic tanks and domestic wells poses a threat to water and human health. That includes the downstream community of Amizette, which they would like to connect to the main plant to “minimize the potential environmental impacts of domestic wells and septic tanks.” But does the WWTP plant have the capacity to also handle Amizette?

In July, 2022, with a Village election coming up, Michael Fitzpatrick sued the village for failing to respond to his request for WWTP performance records. He told the *Taos News* that, “Cost overruns, faulty performance of waste water treatment facility took place under the direction and control of three of the candidates [that were running for office]. "I hope going forward that all of the [village's] activities are totally transparent and [provide] public access to any and all documents. Democracy cannot survive darkness."

 As for the wastewater treatment plant itself, the village is trying to hold accountable the company that installed it. Journalist Geoffrey Plant wrote:

 “In his monthly briefing, delivered to the council at its June 28 regular meeting, Village Administrator John Avila gave an update on the new sewage treatment plant, a temporary treatment plant that was brought online while the permanent plant is brought up to snuff; and an update on the village's interactions with Ovivo, the company that installed the new system.

"The ongoing work for the waste water treatment plant included corrections for optimized efficiency of the Ovivo system," Avila wrote in his report. The Integrated Water Systems engineers and technicians are in contact to address system operations issues including monitoring programs, ceramic plate performance, improving the ultraviolet treatment and injector corrections."

A letter addressing those issues was delivered to Ovivo, and Avila noted in his report that, "The village has not accepted the plant as complete considering the continued required corrections to the system by Ovivo. "The temporary treatment plan is still in place while testing is being completed, with estimated removal in mid July," Avila said. "Testing of membrane solutions are done [and] the remaining test to find the failure point of the current membranes remains. These test results will be provided as evidence to Ovivo and the bond company as well as Plummer engineering for proof of product performance."

Meanwhile, independent water quality monitoring was provided from 2007-2019 by the Water Sentinels Rios de Taos, with grant money from Sierra Club, using trained local volunteers. Amigos Bravos and Rivers and Birds were involved as well as Taos Pueblo. The Sentinels say:

This sampling project was initiated by the Sierra Club group Sentinels – Rios de Taos due to a concern that inadequate data were available to accurately assess the health of the Rio Hondo, Rio Fernando, and Rio Pueblo de Taos watersheds. Sentinels – Rios de Taos contacted Amigos Bravos in 2005 with concerns about water quality in local watersheds. Specifically, there was some concern about nutrient loading in the upper Rio Hondo.

Their final report in 2020 says:

**Conclusion/Recommendations:**

• Sampling done in the Rio Hondo for the past nine years has not shown major or recurring water quality exceedences. Nitrate levels were elevated at some sites in 2018 and 2019, and were again elevated at Lake Fork creek at the Bavarian Inn, on the Hondo near the Children’s center, and below the Taos Ski Valley Waste Water Treatment plant. Electrical conductivity was approximately 3-4.5 times over the standard at those sites in 2019 and 2020. These findings indicate that the area is being impacted by ski valley construction, which continued to be prevalent in 2020. Amigos Bravos suggests increased monitoring of Ski Valley construction activities to ensure proper construction mitigation.

Amigos Bravosdid the monitoring for a. But they, too, were having difficulties verifying exceedance information:

**Amigos Bravos Comment No. 2:**

Amigos Bravos is concerned about the non-compliance status of the facility as reported on EPA's Enforcement and Compliance History Online (ECHO) site. At the detailed facility report page for the Taos Ski Valley (<https://echo.epa.gov/detailed-facilityreport?fid=11000204197>) it lists the facility as having a “significant violation” for 5 out of the last 8 quarters. In addition, when digging deeper into the ECHO, we found a spreadsheet ([https://echo.epa.gov/effluent-chars#NM0022101-](https://echo.epa.gov/effluent-chars%22%20%5Cl%20%22NM0022101-) click “download summary data”) that lists almost all parameters from BOD to E. coli as having a max violation status of “in violation” during the period between 1/1/14 and 6/2/17. While it is our understanding from conversations with NMED staff and from our conversation with Village of Taos Ski Valley staff at public meetings that there haven't been any significant effluent concentration violations at the facility in recent years, we have not been able to find Discharge Monitoring Reports (DMRs) for the facility online to review to confirm this. We also understand that a facility can show up on ECHO as being out of compliance for administrative reasons that are not necessarily related to the exceedances of effluent concentrations. Amigos Bravos requests further clarification on the recurring “significant violation” and “in violation” status of the facility as reported on ECHO. If the violations are not administratively related and are indeed related to substantial violations of effluent quality, or to related monitoring, we request that appropriate changes to the permit be made or that enforcement actions be taken to ensure that these violations do not occur again.

NMED Permit responses to Amigos Bravos comments it says:

**Response No. 2:**

We have visited the address at <https://echo.epa.gov/dtailed-facilityreport?fid=110002047197> referenced in your comment. Unfortunately, this page cannot be found. For your information, attached is an Excel report consisting of Discharge Monitoring Reports (DMRs0 dat from 10/1/2012 o 6/30/2017). This report shows there has been one exceedance each of 7-day average in 2011 and 2012, and one exceedance of 30-day average Ammonia-Nitrogen limitations of the permit in 2013.

(No wonder the down-streamer are concerned about the plant.)

**NMED Comment No. 3:**

The state suggests in Part I.C. Monitoring and Reporting – page 4, that the downstream Acequia representatives be contacted in the event of a spill or significant exceedance of effluent limits as noted in the public comment period by Amigos Bravos.

According to the *Taos News*, by Geoffrey Plant, “Water Restored”, on April 1, 20023, during the Spring Break at Taos Ski Valley, due to a line break on the Phoenix Switchback Road, the water system was interrupted and Taos Ski Valley had to shut down “all aspects of the resort mountain operation”.

 The resort was unable to open again until April 5th. Mayor Pro-tem Tom Wittman said about 1,000 feet of pipe on Cliffhanger Road off of Twining Road was leaking badly. Most of Taos Ski Valley was out of water for six days. There were also a number of other problems with the aging water system during peak usage. Unaccounted-for water decreases of up to 74 percent have been a perennial problem over the years. Mayor Pro-tem, Tom Witten said, “The total unaccounted-for water from February 2014 to December 2020 is approximately 342 million gallons (1,050 acre-feet) or 135,000 gallons per day,”

 TSV, Inc. had helped the village to procure $2.5 million in state and county funding to upgrade the village water distribution. They are planning to install six sensors in the ground throughout the system and install more water meters.

 A February 9, 2023 article in the *Taos News* by Geoffrey Plant said that in spite of all these water concerns, the Village of Taos Ski Valley Planning and Zoning Commission has approved a conditional use permit to move forward with an expansive revamp of the Hotel St. Bernard. The iconic St. Bernard Hotel, formerly owned by Jean Mayer, was demolished and the revamped hotel will be, according to Planning and Community Development Director Patrick Nicholson, “a high-end, multiple structure luxury resort.” Commissioner Henry Cauldwell expressed a concern about the villages ability to supply water to the new development, an uncertainty that was reinforced by “an ongoing and, at times, catastrophic municipal water distribution system failure that began on Dec. 28.”

 A major leak at a single home on Dec. 28, 2022, caused the whole water system to lose pressure, according to officials, and launched a weeks-long crisis during one of the ski valley's busiest times of the year. (*Taos News*, 5/22/23). "When sudden water pressure goes down from an undetected leak, tanks empty, pumps fail, air pockets form in pipes, and lines at multiple sites throughout the village need to be dug up and flushed — and as we have just witnessed many times this has to be done in blizzard conditions, putting out public works employees at increased risk," DiLeo said. "It can take many days or weeks, lots of manpower and substantial expense with tanks to fill again in the system to get back functioning properly before everyone has the normal waterslide supply restored. "Major water losses affect the entire community, in some households, catastrophically; many of our neighbors have not had water since December 28," DiLeo continued. "Others didn't have water for two or three weeks. Additionally, if there had been a building fire during this outage, there would have been a delay in fighting it waiting to fill tanker trucks and for fire crews to come from neighboring towns."

 "We have a $750,000 grant to start digging up water lines this summer, if we can get around that," Wittman said. "And capital outlay requests we made both to [District 6 N.M. Sen.] Bobby Gonzales and our [District 42 N.M.] Representative Ortez, we were asking for $1.25 million; after recent conversations with the governor, we've increased that amount to ask for $5 million.”

 In his report, Village Administrator John Avila said that Taos Ski Valley, Inc. is "already started" on a project, for which it is banking on largely being repaid through the village's Tax Increment Development District, to purchase and install seven main water meters. The meters are intended to help the village determine where the most problematic lines are with regard to leaks.

 Avila also said the New Mexico Environment Department informed him that the village, having "paid off a $500,000 loan-grant with them," can once again access the low-interest loans available through the Clean Water State Revolving Fund.

 Businesses within the central ski valley business district should be prepared to conserve water in case of future emergencies, if only to help maintain water pressure in fire hydrants in other parts of the valley, and also suggested that the village must raise water and sewer rates in order to maintain its systems.

**The Village of Taos Ski Valley states as an Objective:** “No new public or private development (residential, commercial, retail or community facility) will be approved by the village unless there is adequate water and sanitation service to assure maintenance of downstream water quality.”

We, the downstream residents, couldn't agree with them more!