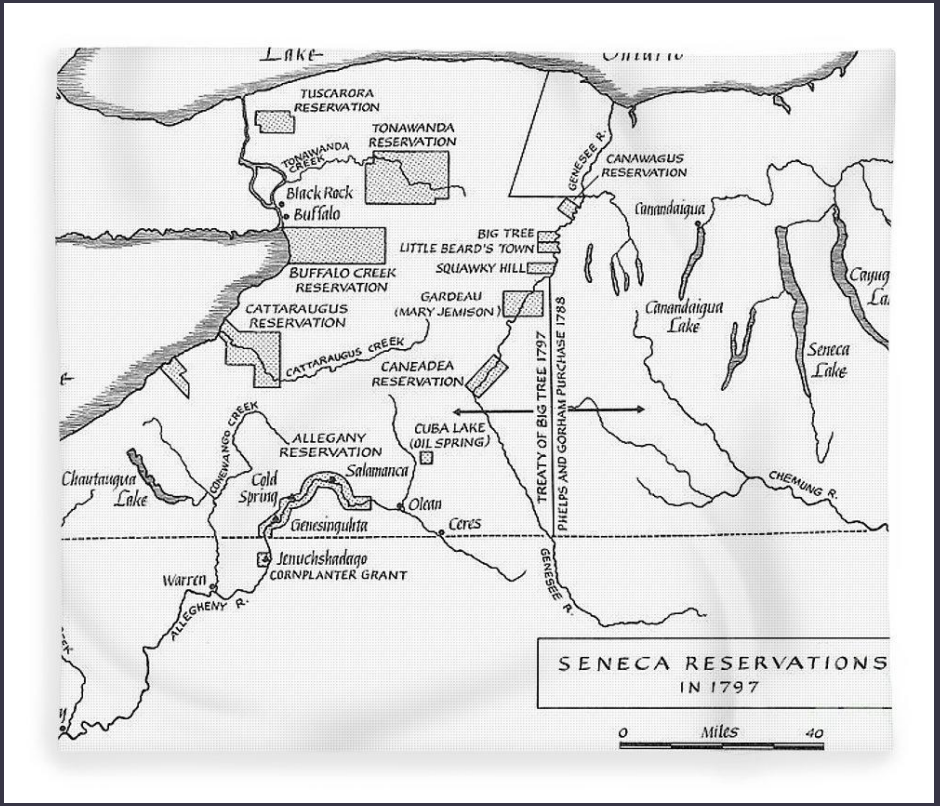
DEFENDING OHI:YO’

Shannon Seneca, PhD, REHS/RS, EIT
(Haudenosaunee, Kanyen'kehà:ka, Wakenyáhten)
Research Assistant Professor
Indigenous Studies Department
University at Buffalo

1794 - Canandaigua Treaty, (Pickering, Calico) after Revolutionary War between Grand Council and President George Washington

---

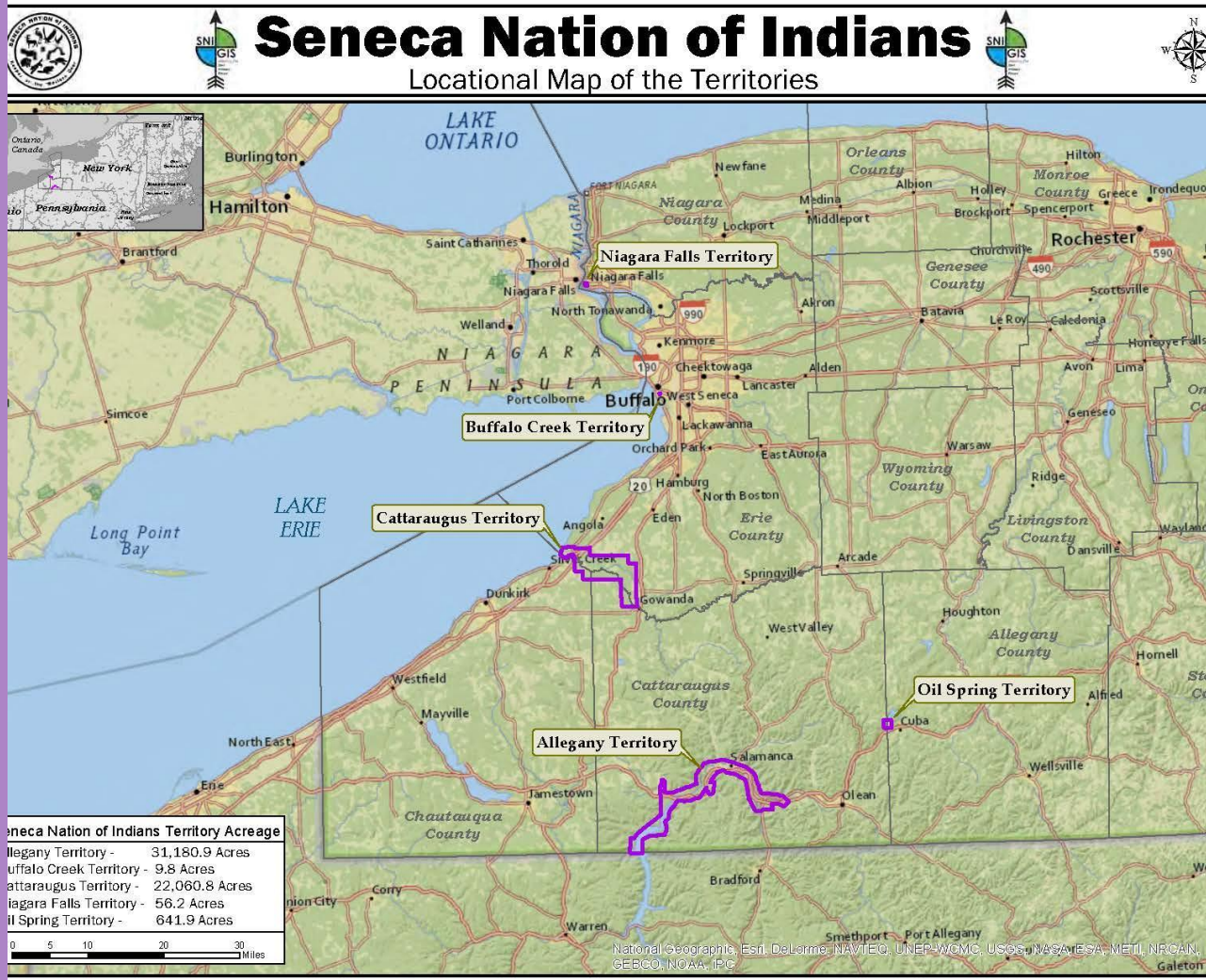
Canandaigua Treaty dated November 11, 1794: “Now, the United States acknowledge all the land within the aforementioned boundaries to be the property of the Seneca Nation; and any of the Six Nations, or of their Indian friends residing thereon and united with them, in the free use and enjoyment thereof: but it shall remain theirs, until they choose to sell the same to the people of the United States, who have the right to purchase.”.



Treaty of Big Tree

1797 – US and Seneca Nation, Treaty of Big Tree meaning tree-prone-big" or "great tree, lying down. The trunk of the tree had been measured as having a circumference of 26 feet and 9 inches, Wadsworth Oak. This treaty relinquished nearly all traditional homelands assigning them to small tracts of land. In comes the Holland Land Company purchases. 3.5Million Acres ceded. Monies not paid to tribe rather it was invested in the Bank of the US, and to be paid out to the Senecas in annual earnings of up to six percent, or $6,000 a year.

Seneca Nation



Seneca Nation
Watershed Resources Working Group

Primary objective of the Watershed Resources Working Group (WRWG) is to tackle large scale environmental problems affecting the nation as a whole and promote the health, safety, and well-being of the Seneca Nation, its people and all residents of the Seneca Nation Territories.

Participant	Seneca Nation Department
Shane Titus	Fish & Wildlife
Lawrence W. Becelia	Fish & Wildlife
Shannon Seneca	SNHS Environmental Health
Lisa Maybee	Environmental Protection Dept
Gerri Jimerson	Planning - GIS Division
Deleen White	Environmental Protection Dept
Clifford Redeye, III	Environmental Protection Dept
Rosalind Ground	SNHS Environmental Health
Jason Corwin	Media & Communications
Mackenzie Hoag	Environmental Protection Dept
Elissa Parker	SNHS Environmental Health

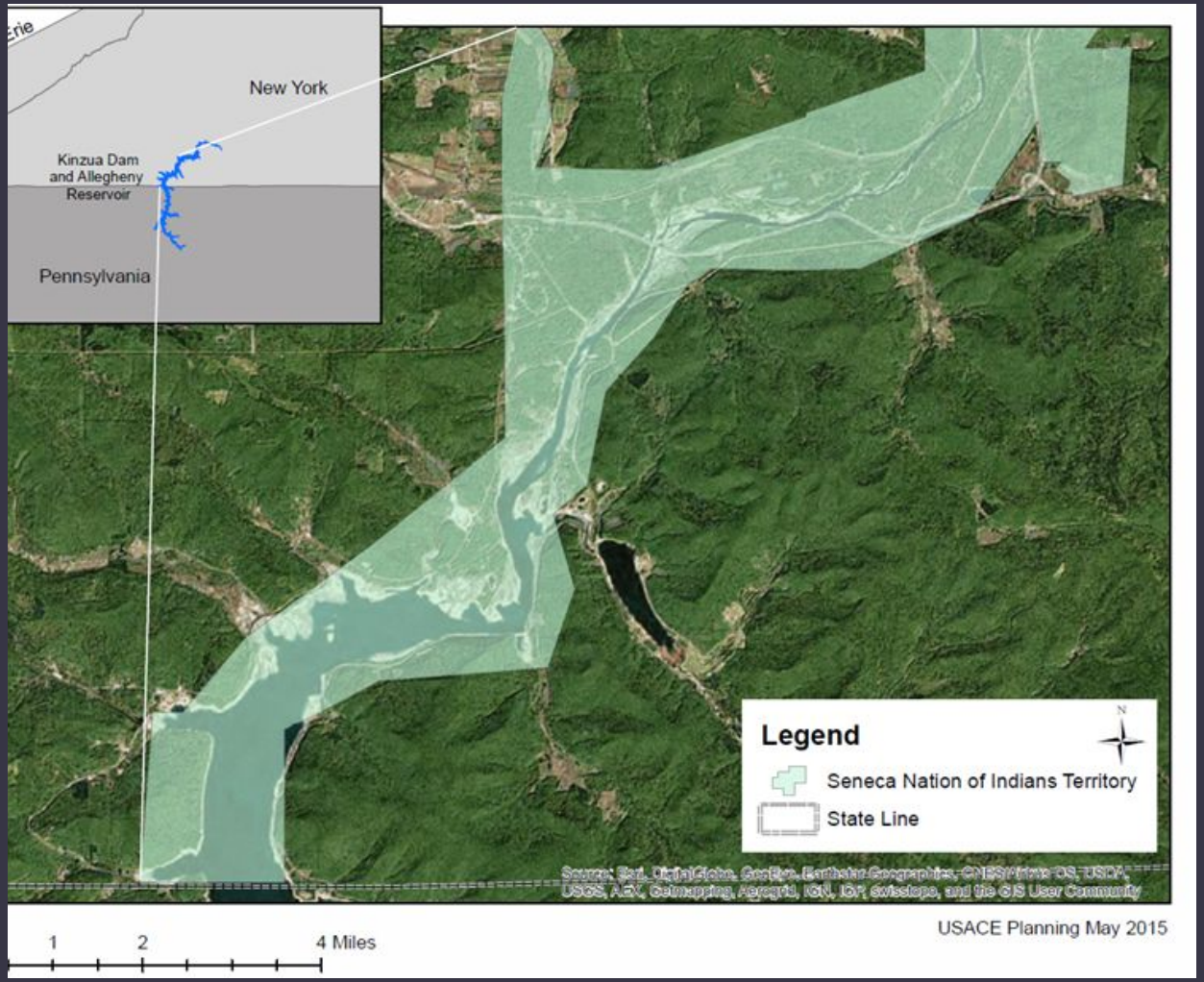
USACE Section 1135 Ecosystem Restoration Continuing Authorities Program

Sect 1135 Feasibility Study

Scope out implementable, cost-effective alternatives to address:

- harmful algal blooms (HABs)
- invasive species
- shoreline erosion
- degraded fish habitat

Further document the problems, causes, effects, and costs to treat the causes.



US Army Corp of Engineers - Kinzua Dam

Prior to the construction of the Kinzua Dam, Ohi:yo' was a free-flowing river.

In 1966, the Kinzua Dam became operational and is utilized for downstream flood protection while reducing pollution and improving the quality and quantity of water for domestic, industrial and recreation downstream use. USACE took 1/3 of Seneca Allegany Territory!

The construction and operation of the Kinzua Dam has greatly contributed to the degradation of the quality of the environment upstream.

REAL REASON FOR KINZUA

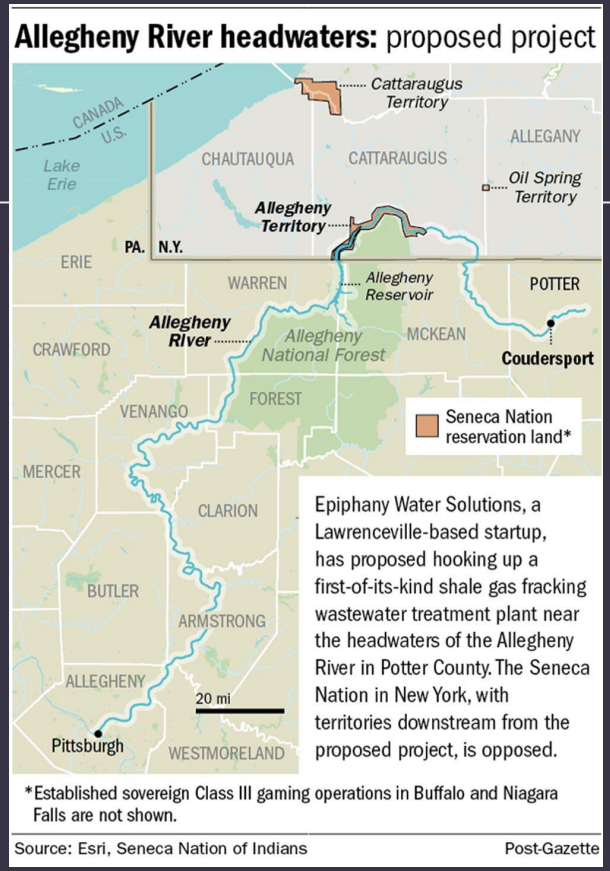
The power plant, rated at 451 MW, was built by the Pennsylvania Electric Company and Cleveland Electric Illuminating Company. It began commercial operation in 1970. Through business mergers and acquisitions, the plant became owned by FirstEnergy, an operator of several base load (nuclear and coal-fired) power plants. Seneca was among 11 hydroelectric power stations that FirstEnergy agreed in 2013 to sell to LS Power of New York City

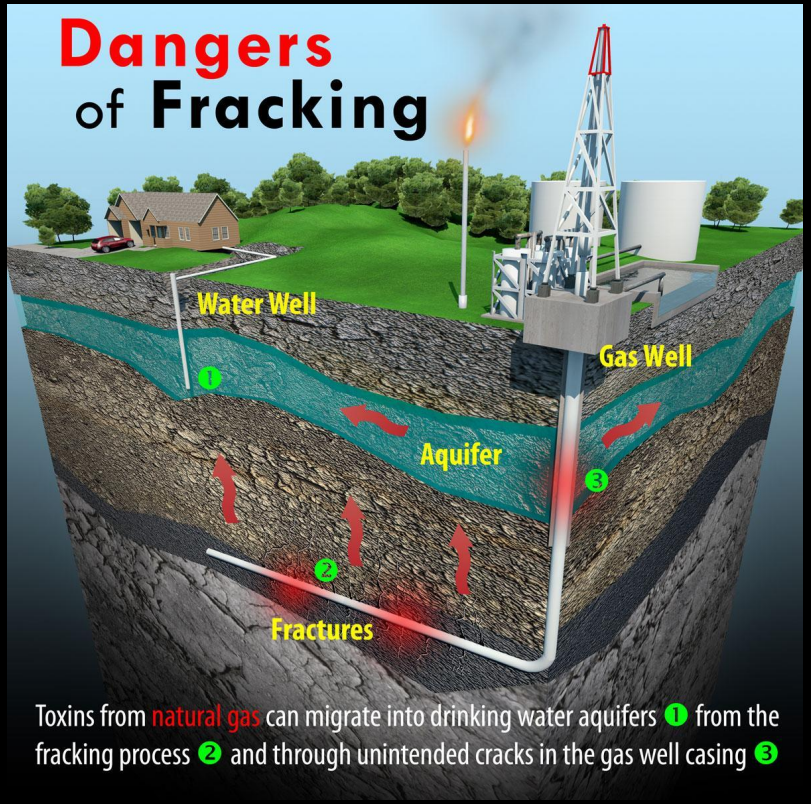
Free-flowing river and a lake

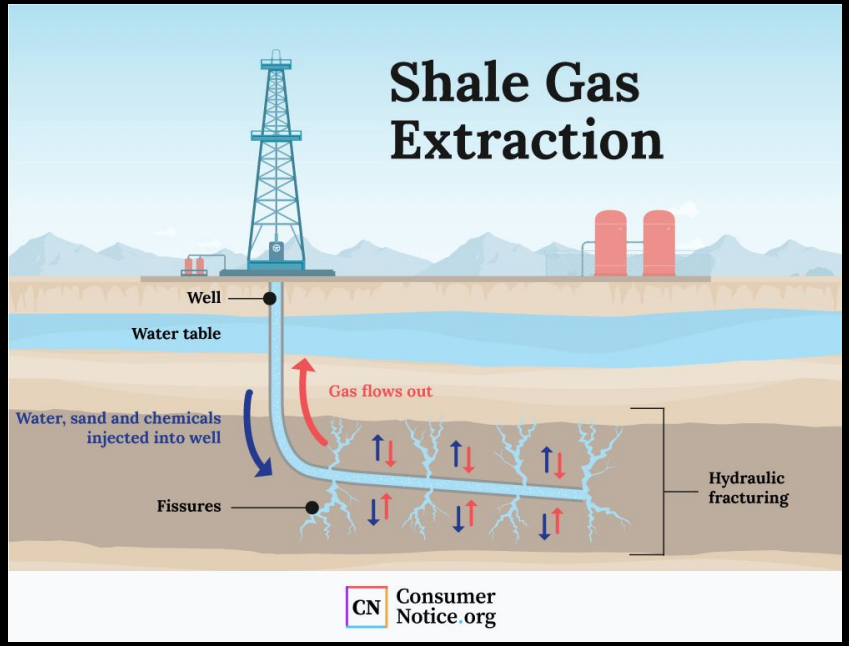
Extremely dynamic system with heavy nutrient load

action!


Defend Our Air


Allegheny River headwaters: proposed project
CANADA
U.S.
Lake Erie
Cattaraugus Territory
ALLEGANY
CHAUTAUQUA
CATTARAUGUS
Oil Spring Territory
Allegheny Territory
PA.
N.Y.
ERIE
WARREN
Allegheny Reservoir
POTTER
Allegheny River
CRAWFORD
Allegheny National Forest
MCKEAN
Coudersport
VENANGO
FOREST
Seneca Nation reservation land*
MERCER
CLARION
BUTLER
ARMSTRONG
ALLEGHENY
20 mi
Pittsburgh
WESTMORELAND
Epiphany Water Solutions, a Lawrenceville-based startup, has proposed hooking up a first-of-its-kind shale gas fracking wastewater treatment plant near the headwaters of the Allegheny River in Potter County. The Seneca Nation in New York, with territories downstream from the proposed project, is opposed.
*Established sovereign Class III gaming operations in Buffalo and Niagara Falls are not shown.
Source: Esri, Seneca Nation of Indians
Post-Gazette


Dangers
of Fracking
Water Well
Gas Well
Aquifer
Fractures
1
2
3
Toxins from natural gas can migrate into drinking water aquifers 1 from the fracking process 2 and through unintended cracks in the gas well casing 3


Shale Gas
Extraction
Well
Water table
Gas flows out
Water, sand and chemicals
injected into well
Fissures
Hydraulic
fracturing
CN
Consumer
Notice.org

From the Offices of

Public Herald

Nonprofit Investigative News

www.publicherald.org

Dear friend of the Seneca Nation:

It has come to our attention that "treated" radioactive shale gas waste is proposed for discharge into the Ohi:yo' (beautiful river in our language), more commonly known as the Allegany (also spelled Allegheny) River in Pennsylvania upstream from the Seneca Nation. Critical concerns first publicized by investigative journalists at Public Herald cite recent studies by scientists at Duke University, Duquesne University, and Penn State University that found an accumulation of radiation in river sediment near existing oil and gas wastewater treatment facilities in Pennsylvania.

Pittsburgh-based Epiphany Allegheny, LLC claims to have "new technology" that turns shale gas wastewater into "pure, clean water," according to their August 2017 permit application to the Pennsylvania Dept. of Environmental Protection (PA DEP). However, this technology has not been thoroughly tested, and Epiphany does not plan to monitor key contaminants of concern, including radioisotopes, before discharging 42,000 gallons of treated waste into the Allegany River per day, with a potential daily maximum of 80,000 gallons.

Radioactive material in shale gas fracking waste will not be completely eliminated by treatment:

> "Naturally-occurring radioactive material (NORM) and salts can be removed from the wastewater to background levels. However, even if only a small amount of radium would remain in the outfall, and the volume of effluents is large, one can expect to see build up of NORM in the impacted sediments."
> – Dr. Avner Vengosh, February 1, 2018

Our concerns are now echoed by the U.S. Army Corp of Engineers, U.S. Department of the Interior, Pennsylvania Fish & Boat Commission, New York State Department of Environmental Conservation, and several independent scientists in official comments submitted to PA DEP.

The Seneca Nation requested that PA DEP hold a public hearing on the nation's territory downstream from the proposed facility. However, PA DEP denied that request. Since the state will not require continuous water quality testing and reporting for radioactive material in the influent and effluent we urge you to request PA DEP and U.S. EPA deny the Epiphany Allegheny, LLC permit application.

Sincerely,

Seneca Nation of Indians Council

Allegany	*Cattaraugus*
Tina Abrams	Linda Doxtator
Ricky Armstrong Sr.	Jeff Gill
Arlene Bova	Rick Jemison
William Canella	Ross John Sr.
Al George	Llona LeRoy
Stephen Gordon	Presley Redeye
Timothy Waterman	Keith White Sr.
Mike Williams	John Williams Jr.

Melissa A. Troutman
Executive Director, Public Herald
(724) 388-0464

Joshua B. Pribanic
Editor-in-Chief, Public Herald
(419) 202-8503

DANGERS OF EPIPHANY ALLEGHENY WASTE WATER PLANT

CONCERNS FROM OTHER AGENCIES:

The Department of Army, Corp of Engineers:

- The proposed facility will be located in a 100-year floodplain. Waste and chemicals stored onsite pose high risk to river ecosystem in the likely event of a flood.
- More thorough waste characterization and continuous water quality monitoring of distillate and discharge for contaminants of concern, including radioisotopes, benzene, barium, bromide, etc.

Department of the Interior, Fish & Wildlife:

- The federally endangered rayed bean mussel has been observed just downstream of the proposed discharge facility. Recent studies demonstrate mussels experience toxicity at concentrations below State and Federal standards for contaminants.

Pennsylvania Fish & Boat Commission:

- Several endangered and protected aquatic species live in the Allegheny River at the site of the proposed facility.

New York Department of Environmental Conservation:

- The discharge permit for this facility does not include monitoring of effluent limits of parameters of concern and recommends inclusion of continuous influent and effluent sampling.

OTHER IMPORTANT FACTS:

- There are no federal or state regulations being applied for daily testing of influent or effluent for radioactive elements. Therefore, the burden of proof rests on those directly impacted.
- Fracking includes a host of carcinogenic volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). Daily testing for these compounds is also not required by state or federal agencies for the proposed facility.
- The company, Epiphany Allegheny LLC, claims that its treatment process will produce "pure, clean water." This claim is false by definition and attempts to mislead the public.
- The Allegheny watershed is part of the Triple Divide, a precious ecosystem that gives birth to three major U.S. rivers (Ohio, Susquehanna, and Genesee) which serve water to millions of people downstream in addition to the Seneca Nation, from Lake Ontario to the Chesapeake Bay to the Gulf of Mexico. The accumulation of radioactive materials in these headwaters are a national issue.
- The recently released *Triple Divide [Redacted]* documentary about the Triple Divide and risks of water contamination related to fracking in Pennsylvania is available from Public Herald.

References:

1. Burgos, Williams D., etc. Watershed-Scale Impacts from Surface Water Disposal of Oil and Gas Wastewater in Western Pennsylvania. Environ. Sci. Technol., 2017, 51 (15), pp 8851-8860. July 12, 2017. https://pubs.acs.org/doi/abs/10.1021/acs.est.7b01696

2. Laure, Nancy E, Warner, and Vengosh. Sources of Radium Accumulation in Stream Sediments near Disposal Sites in Pennsylvania: Implications for Disposal of Conventional Oil and Gas Wastewater. Environ. Sci. Technol., 01 Jan 2018. https://pubs.acs.org/doi/abs/10.1021/acs.est.7b04952

3. Stolz, John, etc. Scintillation gamma spectrometer for analysis of hydraulic fracturing waste products. Journal of Environmental Science & Health, Part A - Toxic/Hazardous Substances and Environmental Engineering (2015) 50, 499-503. http://www.tandfonline.com/doi/abs/10.1080/10934529.2015.992682

Table 1 - Who should I contact with my comments and concerns?

Contact	Agency	Address	Phone
Eric Schneiderman	NYS Attorney General	The Capitol, Albany, NY 12224-0341	518.776.2000
Peter Lopez	US EPA Region 2 Regional Administrator	290 Broadway, New York NY 10007-1866	212.637.5050
Cosmo Servilio	US EPA Region 3 Regional Administrator	1650 Arch Street, Philadelphia, PA 19103-2029	215. 814.5122
Martin T. Causer	Pennsylvania General Assembly - District 67	107 South Main Street Room 1, Coudersport, Pa 16915	814.274.9769
Joseph B. Scarnati III	Pennsylvania Senate - District 25	5 Main Street, Wellsboro, Pa 16901	570.724.5231
Glen Thompson	US House - District 5	124 Cannon HOB Washington, D.c. 20515	202.225.5121
Catherine Young	NYS 57th District Senator	700 W. State Street, Olean NY 14760	716.372.4901
Charles E. Schumer	New York Senator	130 South Elmwood Avenue, #660 Buffalo NY 14202	716.846.4111
Lisa Baker	Pennsylvania Senator - 20th district	22 Country Club Shopping Center, Dallas, PA 18612	570.675.3931
Robert Casey	Pennsylvania Senator	248 Russell Senate Office Building, Washington, D.C. 20510	202.224.6324
Patrick Toomey	Pennsylvania Senator	304 Russell Senate Office Building, Washington, D.C. 20510	202.224.4254
Susan Labuhn	Cattaraugus County Legislature - District 5	450 Broad Street, Salamanca NY 14779	716.945.5383
Tom Reed	NYS Congressman - 23rd District	One Bluebird Square, Olean NY 14760	716.379.8434
Brenda Whitman	Coudersport Borough Mayor	180 Route 6 West, Coudersport PA 16915	814.274.9775
Lynn Gnipp	Eulalia Township Supervisor	6441 Route 6W) P.O. Box 228, Coudersport PA 16915	814.274.8565
Dale Anderson	Eulalia Township Supervisor	6441 Route 6W) P.O. Box 228, Coudersport PA 16915	814.274.8565
James Lane	Eulalia Township Supervisor	6441 Route 6W) P.O. Box 228, Coudersport PA 16915	814.274.8565
Joseph M. Giglio	NYS Assembly - 148th District	700 West state Street, Olean NY 14760	716.373.7103
John Tahsuda	Bureau of Indian Affairs	1849 C Street, NW, MS-4606-MIB, Washington DC 20240	202.208.7163
Thomas Randle	PA DEP	208 West Third Street, Suite 101 Williamsport, PA 17701	570.327.0550
Mark Klotz	NYS DEC	625 Broadway, Albany, NY 12233	518.402.8233
Francis S. Collings, MD, Ph.D.	Director of the National Institute of Health	9000 Rockville Pike, Bethesda, MD 20892	301.496.2433
Alexander Vigo- Valentin, Ph.D	US Dept of Health and Human Services Public Health Advisor	1101 Wootin Parkway, Suite 600 Rockville, MD 20852	240.453.6159

Table 2 - Key points and question that may be used or expanded upon

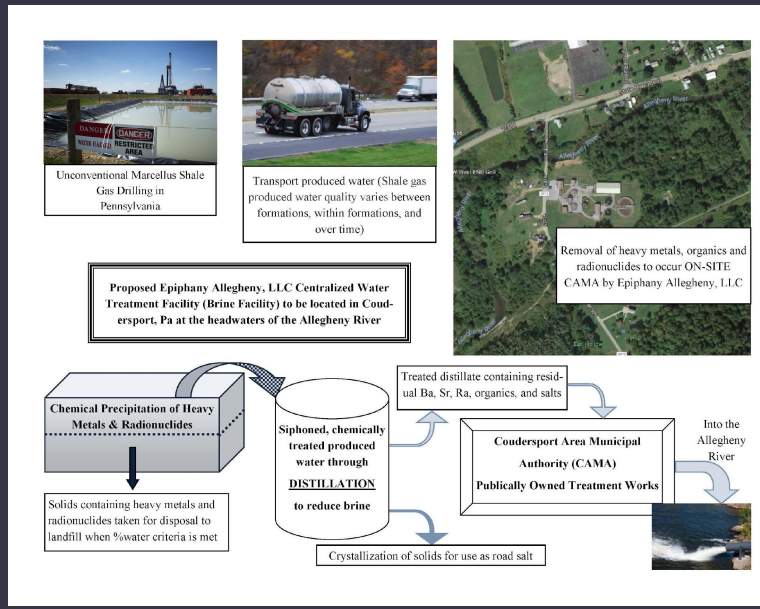
What does Epiphany Allegheny, LLC or Coudersport Area Municipal Authority aim to do when radioactive sediment accumulates downstream as occurred at the Pennsylvania Brine Josephine Treatment and Franklin Facilities? Who is responsible for remediation of the radioactive sediment? Is there a remediation plan to remove or eliminate contaminated sediment of the Allegheny River?
Improved best management practices should be utilized to minimize soil contamination and prevent off-site migration. Chemical precipitation in roll-offs should take place on concrete pad with drainage system to ensure proper collection of leachate and spilled fluids (which will occur during roll-off pick-up). Epiphany Allegheny, LLC is currently planning on using containment and absorbents which will increase risk of contaminants entering waterway. How can one be assured they will be made liable for or be held to a higher standard as their facility sits on the headwaters of the Allegheny River?
The highest concentrations of Radium in shales are within the Marcellus Shale region with levels as high as 9,500 picocuries per liter. The utilization of Sodium Sulfate (Na_2SO_4) and polymer agents to precipitate metals, Barium, and Strontium has been successful in locations with low salinity and radium but water quality criteria could not be met at the Pennsylvania Brine Josephine Treatment and Franklin Facilities. During the treatment process verification, what steps were completed to ensure a representative waste stream was tested? How will compliance be achieved?

Seneca Nation

Defend Ohi:yo'

https://www.youtube.com/watch?v=-dSKOGxd3sQ

Communities unite!
Friends of the Allegheny & Defend Ohi:yo’



Shannon Seneca, a sanitarian with Seneca Nation Health Services and its director of environmental health, said the county Health Department should have been notified of the project to determine if officials there wanted to express concerns.

Seneca noted that the Epiphany Allegheny treatment plant's discharge would not be required to meet drinking-water standards. She said while removing 90 percent to 95 percent of the radionuclides, the plant will discharge a small amount of radium.

Two of the company's other fracking waste treatment plants failed, she said. A study showed radioactive sediment was found 25 miles downstream from the plant, Seneca said.

She suggested the fracking waste could be treated onsite and reused instead of dumping in into the headwaters of the Allegheny.

https://www.bradfordera.com/news/seneca-nation-treasurer-thanks-county-lawmakers-for-support-in-opposing-frack-water-treatment-plant/article_9e757360-27fc-11e8-af81-570b224d573d.html

Continued fight!

Facts About Epiphany Allegheny's Water Treatment Process

Epiphany Allegheny's personnel had the opportunity to engage in a number of conversations and answer questions from a number of people at the January 16 open house/public meeting regarding the company's plans for a wastewater treatment facility co-located at the Coudersport Area Municipal Authority's plant in Eulalia Township, Potter County. Epiphany believes it is important to share the answers to those questions with the community, and has provided detailed responses for the public to review.

1. EPIPHANY TECHNOLOGY QUESTIONS:

Q. How exactly does Epiphany treat the waste water?

A. Waste water will be treated using a two-step process that first removes all metals through chemical precipitation, followed by a distillation process that removes all of the salt in the water. The metals (about 2-3% of the total), including a minute trace of radiological material, will be transported to a permitted landfill, while the salt (15-20%) will meet quality standards for winter road treatment use. Clean, potable water (~80%) is the third byproduct of the treatment process.

Q. Is Epiphany's technology reliable?

A. Yes. Chemical precipitation technologies have been used reliably for decades, and the distillation process has been understood for centuries. In fact, distillation is the only process that is irrefutably proven to be 100% effective at removing salts from this type of waste water.

Q. Is there a chance that Epiphany's technology could fail and accidentally discharge untreated water?

A. No. The design and construction of Epiphany's facility includes multiple redundancies and fail-safe systems that are automatically employed in the highly unlikely event of any type of operational or equipment problem.

Q. How long has Epiphany been doing this?

A. Epiphany began intense research and development of high-efficiency, low-cost, seawater desalination technologies in 2009. Since that time, the company has raised the bar to meet the task of low-cost waste water desalination.

2. INDUSTRY QUESTIONS:

Q. Are there any other distillation plants in Pennsylvania or anywhere else that have the same treatment process and promise of "pure" water as their discharge?

A. Yes. There are many treatment plants that use distillation technology to treat various types of waste water, including three in Pennsylvania that are dedicated to the treatment of waste water from oil and gas production operations. Epiphany has combined the best technologies from those existing facilities to create the most robust and reliable waste water treatment process to date. Our facility will create a new standard for best practices in the industry.

Q. Where does this waste water come from and how much can be treated at Epiphany's facility?

A. Waste water transported to Epiphany's Coudersport facility will include flowback and produced water from existing wells drilled and operated in the immediate vicinity. The amount of water generated by those wells will vary, based on each well's specific stage of completion and production. The facility is designed and constructed to treat a maximum of 42,000 gallons of water per day.

Q. Will waste water be transported into our community from other places?

A. Epiphany's Coudersport facility is intended to treat water generated locally by oil and gas production operations, from wells between 10-20 miles from the plant. It is economically impractical to transport water from distances greater than that.

3. ONSITE STORAGE QUESTIONS:

Q. How much untreated waste water will Epiphany store on site?

A. The facility will have the capability of storing a maximum of 67,000 gallons of waste water, in a series of secure tanks that are elevated above the flood plain and outfitted with a redundant secondary containment system.

Q. What kinds of waste solids will Epiphany store on site?

A. Small amounts of heavy metals and traces of radiological material removed during the chemical precipitation process will be stored in secure containers until they are prepared and shipped for disposal at a permitted landfill. Clean salt that is removed in the distillation process will also be stored in secure containers at the facility while it is awaiting transport to customers for use as road salt.

Q. Is there any possibility of contaminants being accidentally released to the river or the environment, or in the event of a flood or heavy rain?

A. Epiphany's facility has fail-safe redundancies built into its design and construction, including elevating all equipment above the level of a 100-year flood event, as well as secondary containment systems designed to prevent any water from ever unintentionally flowing in or out of the facility. The treatment system also includes real-time monitors that will detect any disruption to either the precipitation or the distillation processes that automatically prevent any potential impact to the environment and immediately alert our on-site technicians.

4. AIR QUALITY QUESTIONS:

Q. What will Epiphany's facility emit to the air, if anything?

A. Epiphany's closed-loop treatment process will not produce any emissions to the air. The only emission created by Epiphany's facility will be produced by its natural-gas fired boiler system, which is the equivalent of emissions produced by about 10 household boilers.

Q. Will Epiphany's facility be misting frack wastewater "vapor" as part of its treatment system?

A. No. Despite some inaccurate reports, there is no form of "mist-evaporation process" in Epiphany Allegheny's treatment process.

Q. Has there been baseline air sampling at the facility site or near the Coudersport Elementary School?

A. Based on the fact that no emissions will be produced from Epiphany's treatment process, there is no need to collect baseline air monitoring data either near the facility or the elementary school. Regardless, the company will collect that baseline information.

5. WATER QUALITY QUESTIONS:

Q. What is in the untreated waste water?

A. Oil and gas waste water typically contains about 20 percent salt and approximately 2-3 percent metals. Within that trace amount of metal content is an even smaller amount of naturally occurring radioactive material, less than one-half of one percent. All of these constituents are removed during the treatment processes.

Q. How clean is Epiphany's discharge water after it is treated?

A. The discharge water from Epiphany's facility not only exceeds the minimum treatment standards for discharge, but it also meets drinking water standards. It is so clean that we regularly drink the water produced from our facilities when we are working at those sites. Epiphany believes strongly that it has a moral responsibility to produce water that meets a higher standard for treatment, and this facility accomplishes that goal.

Q. What will happen to the water after it is treated by Epiphany?

A. Water will either be recycled to support additional oil and gas completion operations or conveyed to CAMA's treatment facility, where it will improve the quality of the water being treated prior to its discharge under CAMA's NPDES permit.

Q. Will Epiphany's discharge water pose a risk to the river or the environment?

A. There will be no potential risk to the river or the environment from the discharge of treated water from Epiphany's facility, and redundant safeguards are built into the facility's operations to prevent any inadvertent release of water that has not undergone treatment.

6. NORM and TENORM QUESTIONS:

Q. Does untreated waste water contain NORM or TENORM?

A. Epiphany understands community's concern about radiation. The scientific facts below will help put things into perspective.

FACT: Radium exists naturally in our environment, so all water in the area contains measurable levels of naturally occurring radium. It is true that untreated waste water from oil and gas operations often contains radium at levels that exceed drinking water standards, but the waste water is not drinking water. That is exactly why Epiphany is treating it.

FACT: Even with radium levels in waste water, it does not pose an immediate exposure risk to people or the environment. Truck drivers who have handled and transported this same water every day for their whole career typically receive less radiation exposure from handling the water than they do from annual medical procedures.

FACT: The geology in this region does not contain any appreciable amounts of uranium or thorium, so those elements are not a concern in the waste water treated by Epiphany. If those elements were present, Epiphany's two-step purification process would easily remove them.

FACT: Epiphany requires that waste water samples from every well pad be submitted for third-party laboratory testing prior to Epiphany accepting water from that location.

FACT: Every truckload of waste water received at Epiphany's facility will be scanned for radiological emissions prior to unloading. That data will be logged and certified by the driver and our on-site technician.

Q. Will Epiphany's discharge water contain NORM or TENORM?

A. No. There are several water treatment methods that easily and reliably remove radium and other radiological materials from water. Epiphany's process employs two of those methods, back-to-back. Either one of those methods alone would be enough to reduce the radiological content in the output water to non-detectable levels, which means our output water contains far lower levels of radioactive compounds than the naturally occurring water from the springs, lakes and streams in the area.

Q. Where do the NORM and TENORM end up?

A. The heavy metals, including NORM and TENORM materials, are contained in the solids that are removed in the first step of our process. Those waste solids are securely stored and transported for disposal at permitted landfills. Total levels of radiological material in each landfill shipment will be scanned twice, first at Epiphany's facility and a second time prior to being accepted for disposal at the landfill.

Q. Has there been baseline sampling for TENORM upstream, downstream and adjacent to CAMA's discharge point?

A. Because Epiphany's treatment process results in the release of water that is far cleaner than state and federal standards, baseline sampling is unnecessary. However, as an added assurance, the company will conduct that baseline sampling.

7. COMMUNITY BENEFITS:

Q. How will Epiphany's facility benefit the citizens of Coudersport?

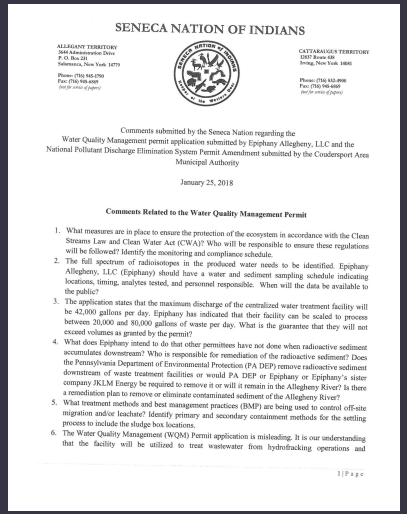
A. Epiphany's facility is expected to provide approximately $80,000 per year to CAMA in the form of land lease and payments to discharge water to CAMA's system. The facility will also reduce total truck traffic and emissions associated with that truck traffic, estimated to be approximately 700 tons of carbon emissions annually, along with similar reductions in particulate matter, sulfur dioxide and nitrogen oxides.

Q. Will Epiphany's facility generate local jobs?

A. Epiphany's facility will employ local full-time technicians, as well as interim construction jobs while we prepare the site for operations.

EPIPHANY ENVIRONMENTAL

www.EpiphanyEnv.com



SENECA NATION OF INDIANS

ALLEGANY TERRITORY
3604 Administration Drive
P. O. Box 231
Salamanca, New York 14779

Phone: (716) 945-3760
Fax: (716) 936-4369
(not for service of papers)

CATTARAUGUS TERRITORY
12837 Route 438
Irving, New York 14081

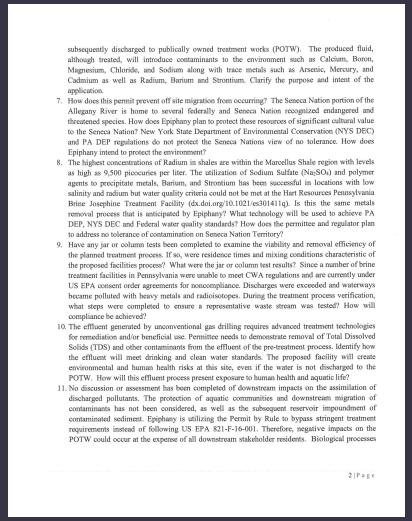
Phone: (716) 532-4900
Fax: (716) 940-4060
(not for service of papers)

Comments submitted by the Seneca Nation regarding the
Water Quality Management permit application submitted by Epiphany Allegheny, LLC and the
National Pollutant Discharge Elimination System Permit Amendment submitted by the Coudersport Area
Municipal Authority

January 25, 2018

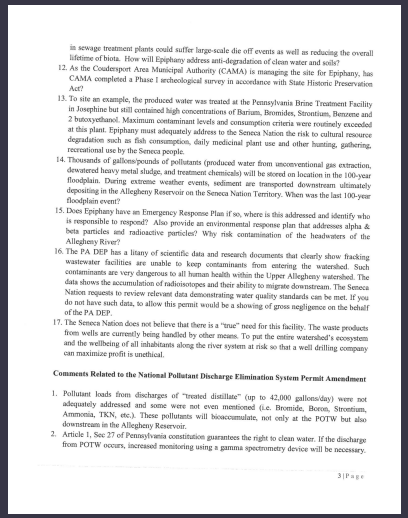
Comments Related to the Water Quality Management Permit

1. What measures are in place to ensure the protection of the ecosystem in accordance with the Clean Streams Law and Clean Water Act (CWA)? Who will be responsible to ensure these regulations will be followed? Identify the monitoring and compliance schedule.
2. The full spectrum of radioisotopes in the produced water needs to be identified. Epiphany Allegheny, LLC (Epiphany) should have a water and sediment sampling schedule indicating locations, timing, analytes tested, and personnel responsible. When will the data be available to the public?
3. The application states that the maximum discharge of the centralized water treatment facility will be 42,000 gallons per day. Epiphany has indicated that their facility can be scaled to process between 20,000 and 80,000 gallons of waste per day. What is the guarantee that they will not exceed volumes as granted by the permit?
4. What does Epiphany intend to do that other permittees have not done when radioactive sediment accumulates downstream? Who is responsible for remediation of the radioactive sediment? Does the Pennsylvania Department of Environmental Protection (PA DEP) remove radioactive sediment downstream of waste treatment facilities or would PA DEP or Epiphany or Epiphany's sister company JKLM Energy be required to remove it or will it remain in the Allegheny River? Is there a remediation plan to remove or eliminate contaminated sediment of the Allegheny River?
5. What treatment methods and best management practices (BMP) are being used to control off-site migration and/or leachate? Identify primary and secondary containment methods for the settling process to include the sludge box locations.
6. The Water Quality Management (WQM) Permit application is misleading. It is our understanding that the facility will be utilized to treat wastewater from hydrofracking operations and



subsequently discharged to publically owned treatment works (POTW). The produced fluid, although treated, will introduce contaminants to the environment such as Calcium, Boron, Magnesium, Chloride, and Sodium along with trace metals such as Arsenic, Mercury, and Cadmium as well as Radium, Barium and Strontium. Clarify the purpose and intent of the application.

7. How does this permit prevent off site migration from occurring? The Seneca Nation portion of the Allegany River is home to several federally and Seneca Nation recognized endangered and threatened species. How does Epiphany plan to protect these resources of significant cultural value to the Seneca Nation? New York State Department of Environmental Conservation (NYS DEC) and PA DEP regulations do not protect the Seneca Nations view of no tolerance. How does Epiphany intend to protect the environment?
8. The highest concentrations of Radium in shales are within the Marcellus Shale region with levels as high as 9,500 picocuries per liter. The utilization of Sodium Sulfate (Na_2SO_4) and polymer agents to precipitate metals, Barium, and Strontium has been successful in locations with low salinity and radium but water quality criteria could not be met at the Hart Resources Pennsylvania Brine Josephine Treatment Facility (dx.doi.org/10.1021/es301411q). Is this the same metals removal process that is anticipated by Epiphany? What technology will be used to achieve PA DEP, NYS DEC and Federal water quality standards? How does the permittee and regulator plan to address no tolerance of contamination on Seneca Nation Territory?
9. Have any jar or column tests been completed to examine the viability and removal efficiency of the planned treatment process. If so, were residence times and mixing conditions characteristic of the proposed facilities process? What were the jar or column test results? Since a number of brine treatment facilities in Pennsylvania were unable to meet CWA regulations and are currently under US EPA consent order agreements for noncompliance. Discharges were exceeded and waterways became polluted with heavy metals and radioisotopes. During the treatment process verification, what steps were completed to ensure a representative waste stream was tested? How will compliance be achieved?
10. The effluent generated by unconventional gas drilling requires advanced treatment technologies for remediation and/or beneficial use. Permittee needs to demonstrate removal of Total Dissolved Solids (TDS) and other contaminants from the effluent of the pre-treatment process. Identify how the effluent will meet drinking and clean water standards. The proposed facility will create environmental and human health risks at this site, even if the water is not discharged to the POTW. How will this effluent process present exposure to human health and aquatic life?
11. No discussion or assessment has been completed of downstream impacts on the assimilation of discharged pollutants. The protection of aquatic communities and downstream migration of contaminants has not been considered, as well as the subsequent reservoir impoundment of contaminated sediment. Epiphany is utilizing the Permit by Rule to bypass stringent treatment requirements instead of following US EPA 821-F-16-001. Therefore, negative impacts on the POTW could occur at the expense of all downstream stakeholder residents. Biological processes

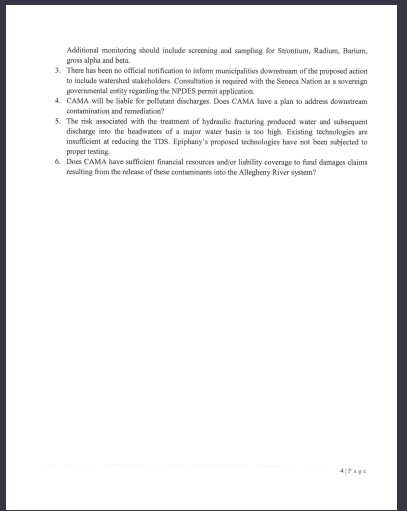


in sewage treatment plants could suffer large-scale die off events as well as reducing the overall lifetime of biota. How will Epiphany address anti-degradation of clean water and soils?

12. As the Coudersport Area Municipal Authority (CAMA) is managing the site for Epiphany, has CAMA completed a Phase I archeological survey in accordance with State Historic Preservation Act?
13. To site an example, the produced water was treated at the Pennsylvania Brine Treatment Facility in Josephine but still contained high concentrations of Barium, Bromides, Strontium, Benzene and 2 butoxyethanol. Maximum contaminant levels and consumption criteria were routinely exceeded at this plant. Epiphany must adequately address to the Seneca Nation the risk to cultural resource degradation such as fish consumption, daily medicinal plant use and other hunting, gathering, recreational use by the Seneca people.
14. Thousands of gallons/pounds of pollutants (produced water from unconventional gas extraction, dewatered heavy metal sludge, and treatment chemicals) will be stored on location in the 100-year floodplain. During extreme weather events, sediment are transported downstream ultimately depositing in the Allegheny Reservoir on the Seneca Nation Territory. When was the last 100-year floodplain event?
15. Does Epiphany have an Emergency Response Plan if so, where is this addressed and identify who is responsible to respond? Also provide an environmental response plan that addresses alpha & beta particles and radioactive particles? Why risk contamination of the headwaters of the Allegheny River?
16. The PA DEP has a litany of scientific data and research documents that clearly show fracking wastewater facilities are unable to keep contaminants from entering the watershed. Such contaminants are very dangerous to all human health within the Upper Allegheny watershed. The data shows the accumulation of radioisotopes and their ability to migrate downstream. The Seneca Nation requests to review relevant data demonstrating water quality standards can be met. If you do not have such data, to allow this permit would be a showing of gross negligence on the behalf of the PA DEP.
17. The Seneca Nation does not believe that there is a "true" need for this facility. The waste products from wells are currently being handled by other means. To put the entire watershed's ecosystem and the wellbeing of all inhabitants along the river system at risk so that a well drilling company can maximize profit is unethical.

Comments Related to the National Pollutant Discharge Elimination System Permit Amendment

1. Pollutant loads from discharges of "treated distillate" (up to 42,000 gallons/day) were not adequately addressed and some were not even mentioned (i.e. Bromide, Boron, Strontium, Ammonia, TKN, etc.). These pollutants will bioaccumulate, not only at the POTW but also downstream in the Allegheny Reservoir.
2. Article 1, Sec 27 of Pennsylvania constitution guarantees the right to clean water. If the discharge from POTW occurs, increased monitoring using a gamma spectrometry device will be necessary.



Additional monitoring should include screening and sampling for Strontium, Radium, Barium, gross alpha and beta.

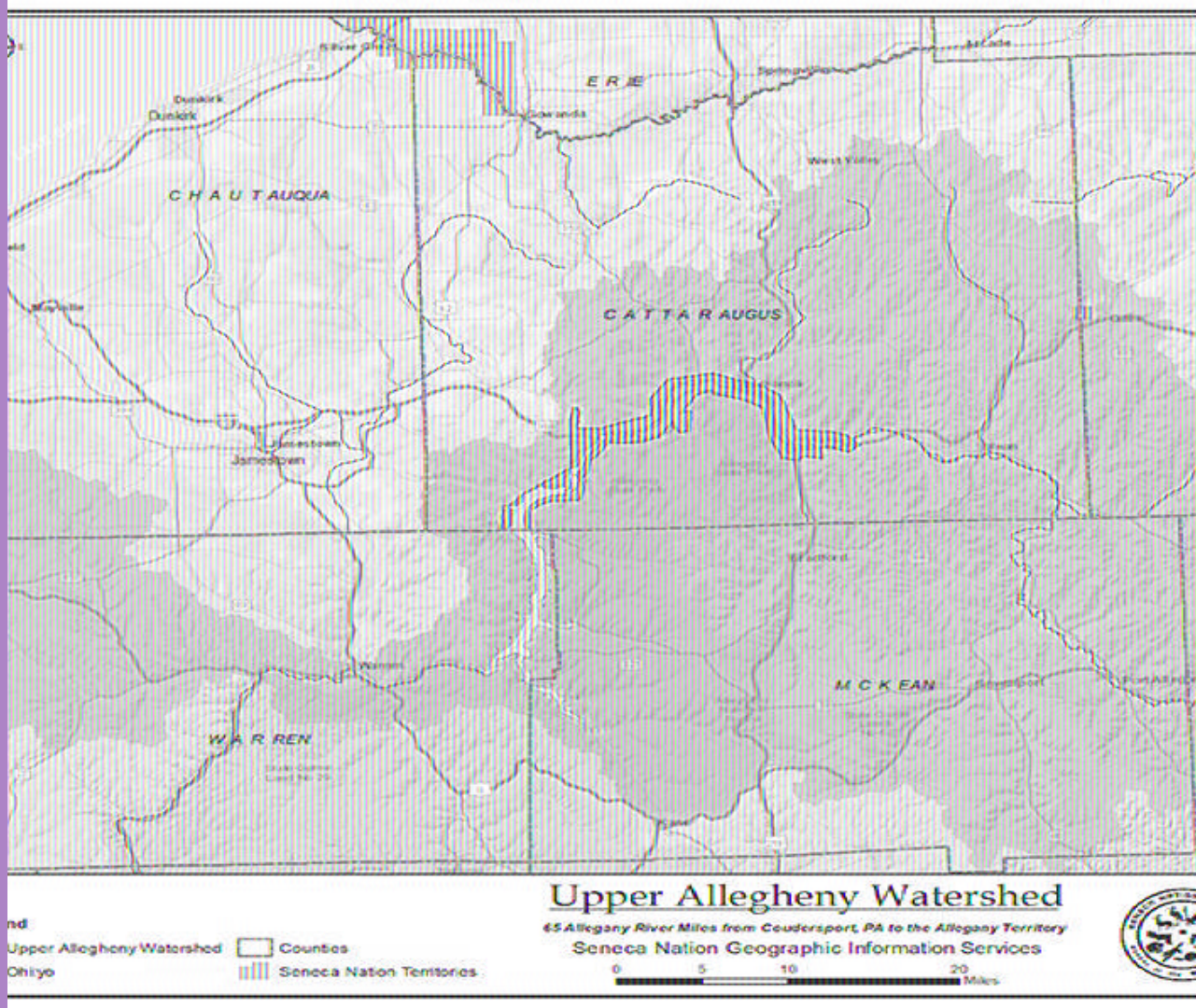
3. There has been no official notification to inform municipalities downstream of the proposed action to include watershed stakeholders. Consultation is required with the Seneca Nation as a sovereign governmental entity regarding the NPDES permit application.
4. CAMA will be liable for pollutant discharges. Does CAMA have a plan to address downstream contamination and remediation?
5. The risk associated with the treatment of hydraulic fracturing produced water and subsequent discharge into the headwaters of a major water basin is too high. Existing technologies are insufficient at reducing the TDS. Epiphany's proposed technologies have not been subjected to proper testing.
6. Does CAMA have sufficient financial resources and/or liability coverage to fund damages claims resulting from the release of these contaminants into the Allegheny River system?

Comments, questions, concerns…….REAL SCIENCE

Protection of the watershed

Since oil and gas extraction waste is not discharged in many states, water quality and human health issues associated with discharges under NPDES permits have not been extensively examined.

- The discharge of shale gas wastewater from POTWs or CWTs has the potential to result in a discharge of radioactive contaminants.
- When the 40 CFR Part 437 effluent limitations guidelines were developed, EPA found that CWTs were not designed to remove radionuclides.



Responsibility as outlined in The Great Law of Peace

Seneca Nation of Indians

12837 ROUTE 438
CATTARAUGUS TERRITORY
SENECA NATION
IRVING 14081

Tel. (716) 532-4900
FAX (716) 532-9132

90 OHI:YO' WAY
ALLEGANY TERRITORY
SENECA NATION
SALAMANCA 14779

Tel. (716) 945-1790
FAX (716) 945-0150

AT THE REGULAR SESSION OF COUNCIL OF THE SENECA NATION OF INDIANS HELD ON MAY 12, 2018 AT THE SENECA ALLEGANY ADMINISTRATION BUILDING ON THE ALLEGANY TERRITORY SALAMANCA, NEW YORK, 14779.

CN: R-05-12-18-20

EXECUTIVES PRESENT:

PRESIDENT - TODD GATES
CLERK - LENITH WATERMAN
TREASURER - MAURICE JOHN, SR.

TRANSPORTATION

TO APPROVE SENECA NATION BAN OF UNCONVENTIONAL GAS DRILLING: DISPOSAL, STORAGE, OR TREATMENT OF UNCONVENTIONAL GAS DRILLING BY-PRODUCTS; AND TRANSPORTATION OF UNCONVENTIONAL GAS DRILLING BY-PRODUCTS; ON OR THROUGH NATION TERRITORIES

MOTION: by Stephen Gordon, seconded by Tina Abrams, that the Nation's Council approves the following resolution:

WHEREAS, the Seneca Nation possesses the sovereign authority to protect the health, welfare, safety, environment, political integrity and economic security of the Nation, its citizens, and persons subject to thejurisdiction of the Nation; and

WHEREAS, by-products from unconventional gas extraction through hydraulic fracturing and deep horizontal drilling (unconventional gas drilling) are known to contain dangerous levels of heavy metals, radionuclides, hydrocarbons, and other toxic substances which create severe negative health impacts; and

WHEREAS, unconventional gas drilling threatens rivers, streams, and potable water supplies and there have been many documented spills of drilling fluids and wastewater; and

WHEREAS, the Seneca Nation deems it imperative to protect our community's health, welfare, and environment from irreparable and irreversible harm.

NOW, THEREFORE, BE IT RESOLVED, that the Seneca Nation bans unconventional gas drilling on Nation lands; and

BE IT FURTHER RESOLVED, that the Seneca Nation bans any disposal, storage, or treatment of unconventional gas drilling by- products on Nation lands; and

BE IT FURTHER RESOLVED, that the Seneca Nation bans transportation of unconventional gas drilling by-products by any means through Seneca Nation Lands; and

BE IT FURTHER RESOLVED, that the Seneca Nation Fish & Wildlife Department and the Environmental Protection Department are tasked with updating regulations and enforcement of this resolution.

ALL IN FAVOR MOTION CARRIED

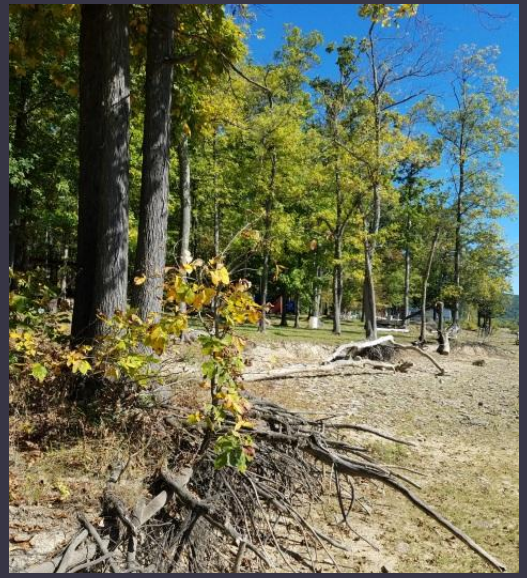
CERTIFICATION

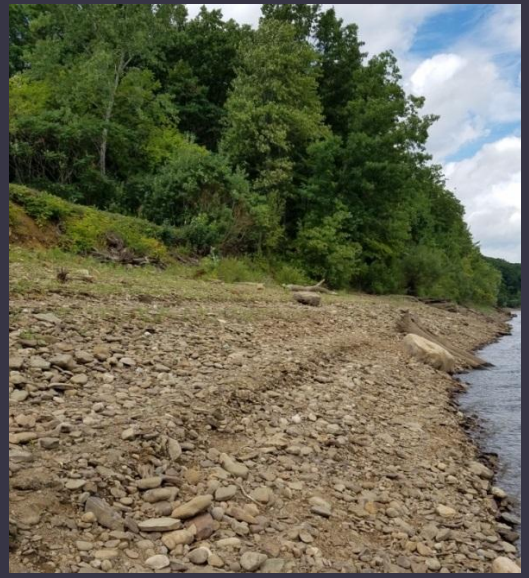
I hereby certify the foregoing extract is a true and correct copy from the minutes of the Regular Session of Council of the Seneca Nation of Indians held on May 12, 2018 on the Allegany Territory, original of which is on file in the Clerk's Office of the Seneca Nation of Indians.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and caused the seal to be affixed at the Seneca Allegany Administration Building, on the Allegany Territory, on the 16th day of May, 2018.

ATTEST: {SEAL}
LENITH K. WATERMAN, CLERK
SENECA NATION OF INDIANS

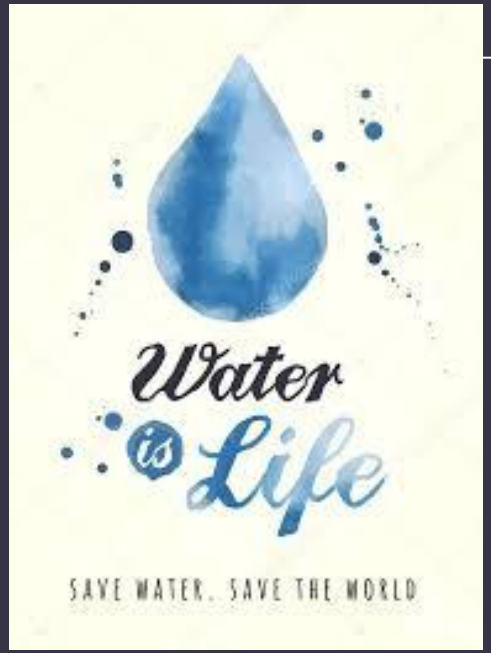
Defend Ohi:yo' Victory!
https://www.youtube.com/watch?v=ipW0xuPRFrw





Shoreline erosion & Bluegreen algae

Turtle Island



- Inclusion of Indigenous Nations from outstep and every point along the way
- **Respect** of Tribal Sovereignty
- Self-governance & data sovereignty

Treaty of Canandaigua, 1794

https://americanindian.si.edu/nationtonation/treaty-of-canandaigua.html

https://history.nycourts.gov/navigating-sovereignty-unraveling-treaty-canandaigua-impact-on-haudenosaunee-us-relations/

https://www.onondaganation.org/government/the-canandaigua-treaty-of-1794/

https://catalog.archives.gov/id/12013254?objectPanel=transcription

The Canandaigua Treaty is a treaty between the United States of America and the Six Nations of the Iroquois Confederacy - Seneca, Cayuga, Onondaga, Oneida, Mohawk and Tuscarora. It was signed in Canandaigua, New York on November 11, 1794 by sachems representing the Grand Council of the Six Nations of the Iroquois Confederacy and by Colonel Timothy Pickering who was the official agent of President George Washington. This treaty is sometimes called the "Pickering Treaty."

Assimilation as Policy, Termination & Relocation

1802 – President Thomas Jefferson asks Congress to prohibit the sale of “spirituous liquors” to Indians. That same year, he wrote to Handsome Lake, Seneca, to applaud him for preaching abstinence. The law stood until 1953.

War of 1812 – President James Madison signed a declaration of war against Britain. For Natives seeing their homelands usurped by soldiers and settlers, they thought joining the British was their best chance for outside military help by taking Fort Detroit. Tecumseh died fighting along side the British in the Battle of Thames, 1813.

1814 - The signing of the Treaty of Ghent, December 24, 1814, the Americans and British agreed to return to the prewar status quo. In doing so, the British abandoned their Native allies.

1817-25 – Erie Canal progresses.

1819 – US Congress appropriates $10,000 Civilization Fund; President James Monroe writes to Senecas, to scatter themselves into individual homesteads like their white neighbors, divide up the LAND, separate by fences and farm. Ultimately opening to white settlers; Ogden Land Company. Senecas have become vulnerable to changing landscape, US economics and politics.

1823 – Presbyterian Congregation Cattaraugus.

1832-51 – Erie Railroad is constructed through Seneca Country; Allegany territory becomes a major hub.

1830 – Andrew Jackson; remove Native Americans from East of the Mississippi to lands west in Indian Territory. Cherokee Trail of Tears lost 8,000 on that trek west. The thought, “tribes and nations must perish and live only as men”.

1836 – (2nd) Buffalo Creek Treaty, It covered land sales of tribal reservations under the U.S. Indian Removal program, by which they planned to move most eastern tribes to Kansas Territory west of the Mississippi River. Rejected and replace with 1842.

1842 – (3rd Revision) Treaty with the Seneca of 1842 signed by the U.S. and the Seneca Nation modified the second revision. This reflected that the Ogden Land Company had purchased only two of the four Seneca reservations, the Buffalo Creek and Tonawanda reservations, that the Senecas had agreed to sell in the Second Treaty; it thus restored possession to the Allegany, Cattaraugus and Oil Springs reservations. Senecas reduced to a tiny fraction of the original four million acres it once lived, recognized in this treaty.

FEDERAL INDIAN POLICY - Seneca Lands and Eminent Domain

1936 project initialized, flood control project, Eisenhower begins project, Congress authorized Army Corps of Engineers (ACE); eminent domain.

1957 – US ruled that ACE could build dam going against the 1794 Canandaigua Treaty. Alternative Morgan Plan offered, rejected by Army Corps.

1966 - John F. Kennedy; Kinzua Dam – 10,000 acres of land taken from the Seneca Nation, flooded dubbed flood control and water quality project, Army Corps of Engineers, Pittsburgh. The US government violated the 1974 Treaty through condemnation of lands and eminent domain policy on Indian lands.

Some 700 Seneca lost their homes in the communities of Coldspring, Quaker Bridge, Shongo, Onoville, Red House, Cornplanter, Sunfish, Bay State, Old Town and Bone Run. One-third, or 10,000 acres, of prime Seneca territory was lost.

Johnny Cash fights for Senecas, “As long as the Grass Shall Grow”. We adopted him to the turtle clan during this era.

The “take area” and watching our homes burn. 700 lost their homes by burning to create the “Lake of Betrayal”. Many Senecas just stopped; stopped speaking the language, stopped practicing their customs and traditions, stopped traditional teachings turning to Western ideology. That day in 1966, the federal government meant to drown the Senecas. Many elders died of broken hearts.

THE CONTEMPORARY LOSS OF SENECA NATION LANDS IN PENNSYLVANIA AND NEW YORK (THE CORNPLANTER TRACT) DUE TO CONDEMNATION FOR FEDERAL CONSTRUCTION OF THE KINZUA DAM IN THE EARLY 1960S. PL 88-533 PASSED 8/31/64. PRESIDENT LYDON JOHNSON.