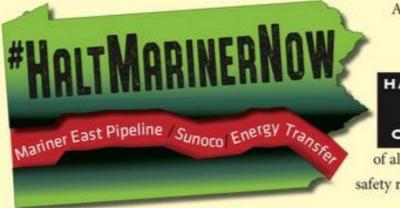


Drilling & Spilling

YOU ARE INVITED TO JOIN IN LEARNING ABOUT



A statewide movement calling on Governor Wolf to

HALT OPERATION

AND CONSTRUCTION

of all Mariner Pipelines until safety risks are properly mitigated.

Webinar: Drilling and Spilling

How Mariner East impacts wetlands, waterways and drinking water

October 30, 2019 7-8 pm



Welcome to the webinar!



Ryan Clover

Halt the Harm Network
Operations Team



Gillian Graber

Executive Director
Protect PT



Background

A coalition of groups including Protect PT, Del-Chesco United for Pipeline Safety, Middletown Coalition for Community Safety, Clean Air Council, and Mountain Watershed Association are hosting a webinar for leaders to discuss the #HaltMarinerNow campaign. The campaign aims to engage and educate the public in a campaign to increase pressure and demand that Governor Tom Wolf and the Public Utility Commission (PUC) halt the Mariner East pipeline project.

The operation of Sunoco's Mariner East 1 and construction of Mariner East 2 and 2X pipelines have been plaguing residents across Pennsylvania for years. The construction of these pipelines has resulted in the destruction of private and public property and the environment, while the operation of Mariner East 1 and the "workaround" pipeline are already putting public safety at risk. Despite notices of violation, fines, and injunctions, Sunoco Logistics continues to negatively impact the lives of Pennsylvanians, their safety, property rights, and the environment.

Yet this pipeline has even more far-reaching impacts. The Mariner East pipelines connect fracking operations in Western Pennsylvania with refineries in Eastern Pennsylvania in a "frack to plastic" scheme. Stopping the Mariner East pipelines is about fighting back against the oil and gas industry that is threatening the safety and wellbeing of Pennsylvanians and the planet.

Who is involved:













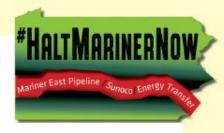








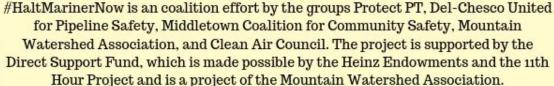
Presenter





Eve Miari Advocacy Coordinator Clean Air Council www.cleanair.org

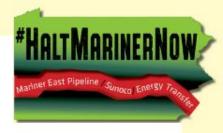








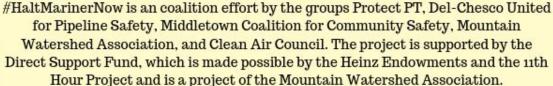
Presenter





Melissa Marshall, Esq.
Community Advocate
Mountain Watershed
Association

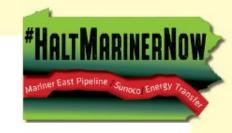










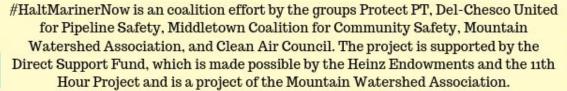




- Watershed & Mariner East basics
- How pipelines can impact watersheds
- History of Mariner East spills, drinking water contamination, sinkholes, and damage to wetlands and streams
- History of DEP permitting issues, legal action against Sunoco and DEP and subsequent settlement agreements
- Where we are now: halted drill sites, re-evaluations, and permit bar
- What residents can do!



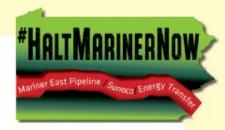


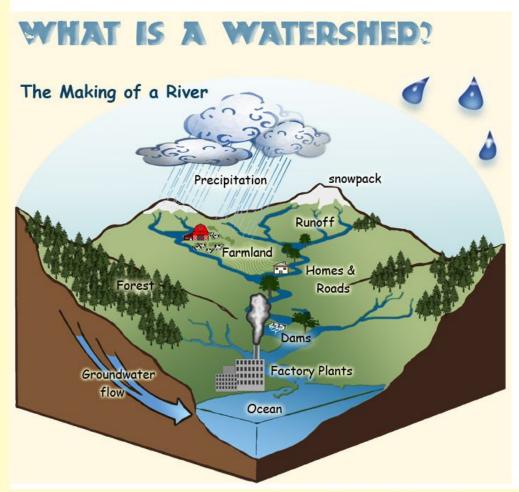






What is a Watershed? Why are Watersheds important?





- An area of land that contains a common set of streams and rivers that all drain into a single larger body of water, such as a larger river, a lake or an ocean.
- Acts as water filter, supplies our drinking water, water for agriculture, opportunities for recreation (swimming, fishing, boating), and provides habitat to numerous plants and animals.









Example: Delaware River Watershed

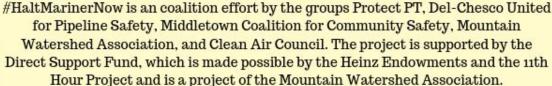


- Drinking water supply for
 - > 15 million people
- Economic value ~\$25 billion
- Ecosystem services ~\$21 billion
- 400 miles of National Wild and Scenic Rivers
- Six national wildlife refuges



It is **essential to consider downstream impacts when implementing water quality protection actions. **Everything upstream ends up downstream.****

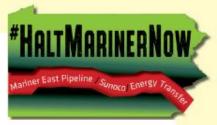








Pennsylvania Watersheds







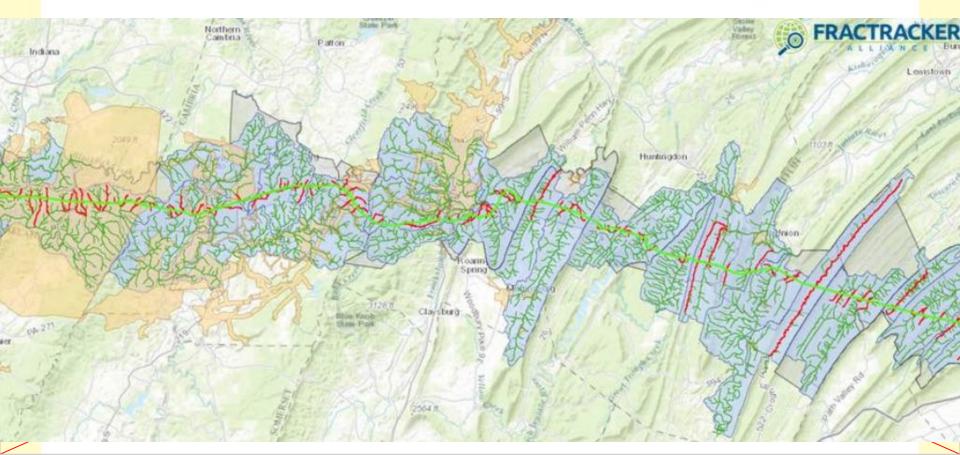






Mariner East Watersheds











Mariner East Impacted Waterways



1,227 stream crossings

- 19 Exceptional Value
- 318 High Quality
- Total 337 "special protection"

570 wetland crossings

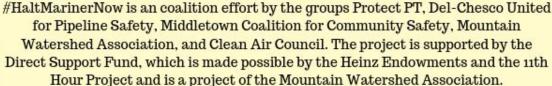
 129 Exceptional Value



11 pond crossings

Additional waterways not listed in original application









What are the Potential Pipeline Impacts t Watersheds (What Can Go Wrong?)

#HALT MARINER NOW

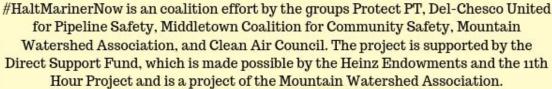
Marlner East Pipeline Sumoca Energy Transfer

- Clearing of vegetation loosens soil, mobillizes contaminants
- Erosion, flooding, and stormwater runoff issues
- Contamination of waterways and wetlands via HDD spills, open-cut crossings, runoff, construction equipment, etc.
- Drinking water contamination
- Impacts to wildlife, fish, endangered species



Chester Creek, Brookhaven Township Delaware County, PA









Mariner East: A Case Study in Pipeline Watershed Impacts













Drilling & Spilling:

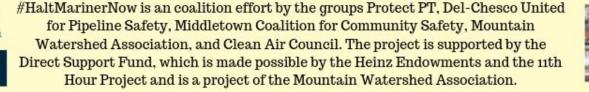
- February 13, 2017: deficient permits granted by DEP
- Feb- April 2017: Pre-Construction activities
- May 3, 2017: first reported "frackout" into Chester Creek in Delaware County (pictured right)
- Hundreds of subsequent spills 2017-Present; 275,000 gallons of drilling fluid released via IRs to Pennsylvania waters















Sunoco Mariner East II - Pipeline Construction Inadvertent Returns - Waters of the Commonwealth



Date	DEP HDD # or DEP Permit HDD Reference #	County	Location	Description	Status
	. AT	55	Southwest	Region	2
5/4/2017	5	Westmoreland	40.441, -79363	150 Gallons; UNT Boatyard Run (CWF) and W-P14; turbid Water ~600 feet in channel	NOV issued 7/28/2017
5/12/2017	8	Westmoreland	40.44213, -79.34305	300 gallons, 90'x50' area - Wetland W- 045	NOV issued 7/28/2017
5/13/2017		Indiana	40 27'10.16", -79 13'30.34"	130 gallons bentonite clay; 20 gallons to UNT Blacklick Creek, no deposition; 200'x5'in W J53 and 2'x300' plume in S-J58	NOV issued 7/28/2017
5/16/2017	(3 (2	Westmoreland	40 26' 17.48", -79 26' 16.11"	30 gallons 2' x 40' area none to lake	IR stopped
5/23/2017	(3)(5 (5)(6)	Westmoreland	40 26' 17.48", -79 26' 16.11"	60 gallons: 30 gal, 20, gal, 10 gal to 3 upland areas (2' x 45', 2' x 30', 2'x 40'	IR stopped
5/23/2017		Westmoreland	40.289, -79.668	20,000 gallons drilling mud, 1,000 to stream and rest in upland or ephemeral channel; Ephemeral Stream (TSF), L Sewickley Creek S-229, 250' x 2' unknown depth	NOV issued 7/28/2017
5/23/2017	8 08	Westmoreland	40.289, -79.668	Part of 20,000 gallons above to a 60' x40' farm field, 4-10" deep	NOV issued 7/28/2017
5/23/2017	3	Westmoreland	40.289, -79.668	Part of 20,000 gallons above to a 100' x 20' farm field, 0.5 -3" deep	NOV issued 7/28/2017
5/24/2017	8 0	Westmoreland	40.44213, -79.34305	525 gallons; 300 Gallons to wetland W- 045 75'x100', 225 gallons to Spruce Run S-061 600'x10'	NOV issued 7/28/2017

http://files.dep.state.pa.us/ProgramIntegration/PA%20Pipeline%20Portal/MarinerEastII/Sunoco Mariner East II-Pipeline Construction Inadvertent Returns-Waters of the Commonwealth Revised.pdf







What is an Inadvertent Return (IR) or "Frac-out"?

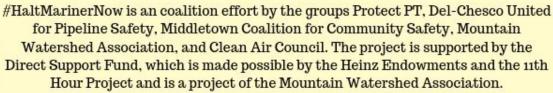


- Transfer of drilling mud to the surface during horizontal directional drilling (HDD)
- Drilling mud returns to the surface by way of naturally occurring fractures or fissures
- IRs can result in significant impacts to wetlands and waterways
- Inadvertent losses can also impact groundwater and drinking sources
- According to SPLP, IRs are not uncommon and are often considered an expected part of HDD (Litvak and Legere, 2018).



"Frackout" behind Martins Lane Middletown
Township Delaware County

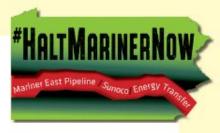








Since Feb 2017, over 245 *reported* spills of drilling fluid across the Commonwealth.

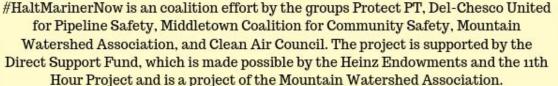






At least 97 Notices of Violation from DEP. Over 13 million dollars in fines.



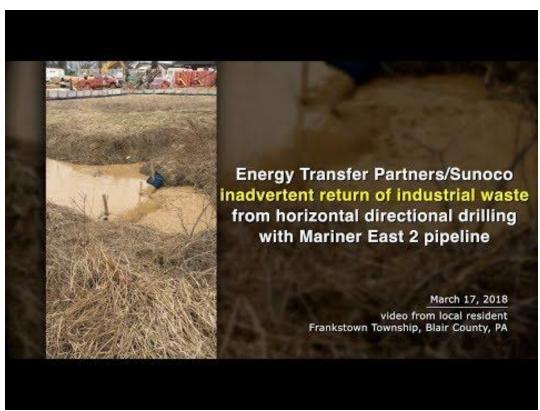






Inadvertent Return Susquehanna Watershed





https://www.youtube.com/watch?v=QzEjf2bIS4Y







Contamination of Private Drinking Water Supplies

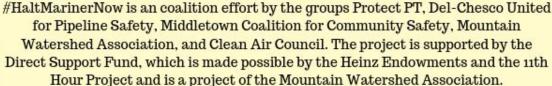
#HALTMARINERNOW
Mariner East Pipeline Sunoca Energy Transpar

- June- July 2017: first reports of water contamination, damaged/ destroyed wells
- Summer 2017: At least 16 wells permanently destroyed, and at least 1 public aquifer punctured in Chester County
- TODAY residents in multiple counties across the state are without drinking water: Delaware, Chester, Berks, Lebanon, Indiana, Westmoreland, Cumberland that we know of













Residents Across the State Left Without Drinking Water



















https://youtu.be/fOF1tiSHvus



MCCS MIDDLETOWN COALITION OF COMMUNITY SAFETY





Sinkholes





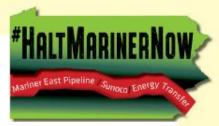
November 2017, March 2018, January 2019 Sinkholes at Lisa Drive in West Whiteland Township, Chester County, PA







Sinkholes





April, September, and October 2019 Sinkholes in Middletown Township, Delaware County, PA









Mariner East Sinkholes Due to Mining Subsidence















Acid Mine Drainage Due to Mariner East Construction













Stormwater Runoff & Erosion from Pipeline Construction



SPLP failed to do the following:

- Implement effective controls to minimize accelerated erosion and sedimentation at the sites
- Maintain BMPs to effectively minimize accelerated erosion and sedimentation at the sites
- Conduct earth disturbance activities in compliance with the conditions in its Erosion and Sediment permit

https://www.tu.org/wp-content/uploads/2019/10/Pipeline-Water-Quality-Impacts-FINAL-8-2 1-2019.pdf











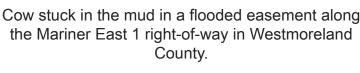
Flooded Easements





Mariner East 1 right-of-way in Westmoreland County that flooded a Mountain Watershed Association member's property. The flooded farm field on the right hand side of the image is outside of Sunoco's easement.

the Mariner East 1 right-of-way in Westmoreland County.





#HaltMarinerNow is an coalition effort by the groups Protect PT, Del-Chesco United for Pipeline Safety, Middletown Coalition for Community Safety, Mountain Watershed Association, and Clean Air Council. The project is supported by the Direct Support Fund, which is made possible by the Heinz Endowments and the 11th Hour Project and is a project of the Mountain Watershed Association.





07.11.2015

Flooded Easements & Neighbors



















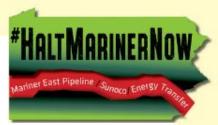


MCCS MIDDLETOWN COALITION OF COMMUNITY SAFETY





Mariner East Impact Story



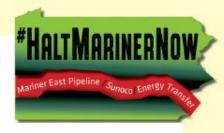


https://www.youtube.com/watch?v=VacWxM6IcEI&feature=youtu.be



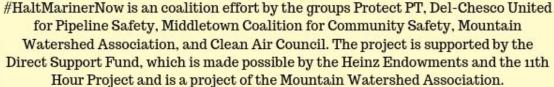






Legal Actions









Water Permit Appeal



February 13, 2017: DEP issued Chapter 102 and 105 permits to Sunoco/ ET **February 14, 2017:** Clean Air Council, Mountain Watershed Association, and Delaware Riverkeeper Network filed an *appeal* of the permits + supersedeas

"Sunoco's permit applications were woefully incomplete, inaccurate, and contradictory, and DEP's review and approval was utterly inadequate," said Joseph O. Minott, Executive Director and Chief Counsel of Clean Air Council. DEP's decision was made too hastily and will allow Sunoco Logistics to violate the law. "What DEP has authorized with these permits is the destruction of Pennsylvania streams and wetlands, the endangerment of the public, and great damage to both public and private property."



https://cleanair.org/mariner-east-2-appeal/









Permit Appeal Timeline



February 2017: 1st Supersedeas (same an injunction) filed, denied

July 2017: 2nd Supersedeas filed after repeated water contamination events, including multiple spills in certain locations, and loss of private wells

July - August 2017: 2 week moratorium

Aug/ Sept 2017: Settlement Agreement #1

February 2018: 3rd supersedeas as a result

of DEP/ Sunoco Consent Decree

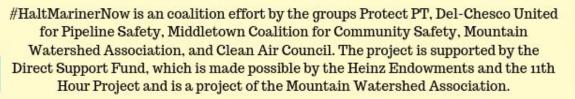
March 2018: Settlement Agreement #2

Summer 2018: Final settlement to original

appeal of Feb 2017











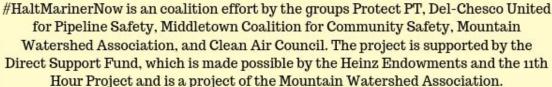
Settlement Agreements: What did we get?



- 1) **Increased transparency** practices including documents available online to public.
- 2) Sunoco must **notify landowners with water wells located within 450 feet of a drill site**, provide testing before, during and after drilling, and offer to provide access to temporary water for those properties.
- 3) **Stakeholder groups** to assist DEP with development of new guidance for pipeline companies and construction projects (Clean Air Council et al. v. PADEP, 2018b).
 - HDD Advisory Group (trenchless technologies)
 - Alternatives Analysis Advisory Group
 - Erosion and Sediment Control Advisory Group
- 4) New **HDD Protocol** to prevent and respond to spills. Recommendations now being used by other members of industry
- 5) HDD Re-Evaluation Process Numerous drill sites must be reevaluated by professional geologists and engineers before restart to ensure plans are safer for residents and the environment. The public can also participate in the process by submitting comments.











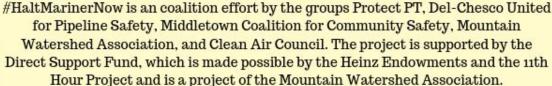
Importance of HDD Re-Evaluation Process



- 1) Drill sites across the state paused for re-evaluation as part of the Clean Air Council settlement.
- 2) Re-evaluation requires credentialed scientists to review site geology and construction plans (had not previously happened- Sunoco used same boiler-plate language for each site).
- 3) Re-evaluation is an opportunity for public input. Residents near drill sites can submit specific comments about how construction might affect their property. DEP has used past technical comments to push Sunoco for more information and to further improve plans.
- 4) The plans for every re-evaluated site have been changed, often significantly, indicating prior plans were inadequate.
- 5) DEP **Permit Bar on ETP** means no approvals. HDD Re-evaluations are considered an approval. There are dozens of outstanding HDD reevaluations, ultimate number unknown because the settlement is designed such that the more Sunoco spills, the more sites need to re-evaluated.

These sites cannot be granted new permits due to the current Permit Bar













What Residents Can Do









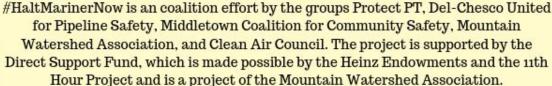
Participate in HDD Re-Evaluation Comments

- Pay attention to what's happening in your community
- Are local drill sites halted?
- Are there HDD Re-evaluation applications in your area?
- Check the HDD Re-evaluation table on the DEP website:
 - https://www.dep.pa.gov/Business/ProgramIntegration/Pennsylvania-Pipeline-Portal/Pages/HDD-Reevaluation-Reports.aspx
- Participate in all commenting periods for your neighborhood
- Reach out to your neighbors, township, county, and state elected officials and ask them to comment











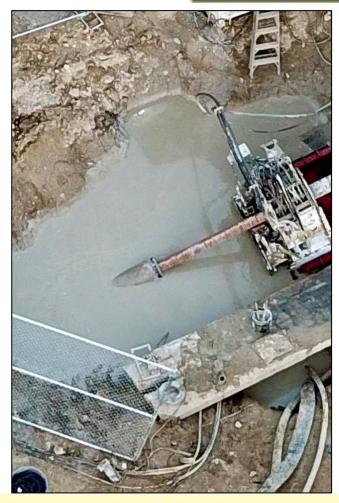


Watchdog & Report

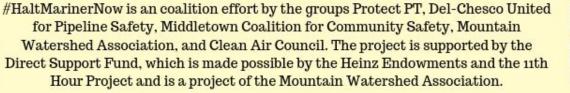
#HALTMARINERNOW

Mariner East Pipeline Sunoco Energy Transfer

- If drilling has restarted, keep an eye out for spills
- If you see something that "doesn't seem right" report it.
 Call DEP 24 hour emergency number, County Conservation District, township supervisors, state elected officials.
- Some sites may need to be shut down until issues corrected











Create a Local "Rapid Response" Field Team







10/28 Example:

- Resident observes new sinkhole at park
- Resident reaches out to inform Coalition
- Coalition reaches out to Field Team members: "can we get eyes on intersection near the park"
- Field team deploys any members available to put up drone
- Field team quickly disseminates pictures back to coalition members
- Coalition members share images via social media and email
- Stay tuned for future webinar on how to do this!!









Develop Local Ordinances for Watershed & Stream Protections



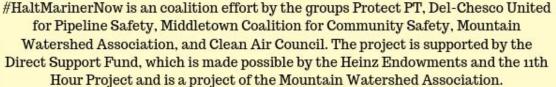
Work with local townships and counties to increase water and stream protections through local ordinances:

- Source water protection plans
- Stream buffer ordinances
- Stormwater ordinances
- Reduction of impervious surfaces ordinances
- Tree replacement ordinances
- Ordinances to prevent spread of fracking brine on roadways
- Setback ordinances
- Conservation easements
- Pipeline Ordinances













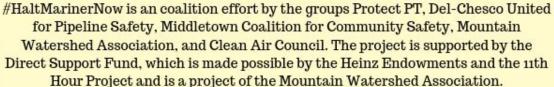
Upgrading Stream Designations for Greater Protections

All streams in Pennsylvania have a designation:

- Examples: Exceptional Value, High Quality, Migratory Fishes, Trout Stocking Fishery, Cold Water Fishery, Warm Water Fishery
- The higher the designation, the greater the protection.
- For some streams, the current level of protection *does not* meet their existing use
- DEP can grant higher protection status, which can in turn better protect streams from pipelines and other infrastructure.
- Residents can work with local watershed groups and other non profit organizations to apply for a higher designation and greater water protections.

Clean Air Council and other organizations can support residents in advocating for greater streams protections.





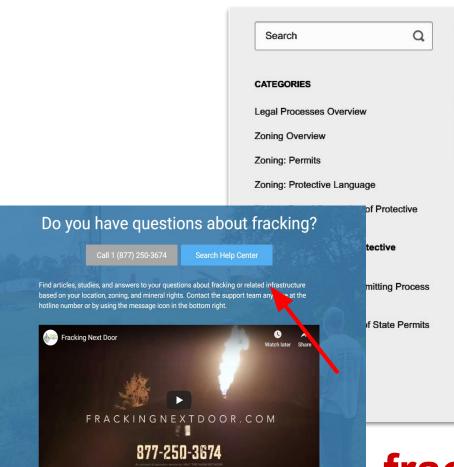






Fracking & Zoning Help Center





Zoning: Examples of Protective Language

Specific examples and further discussion of protective language types

- Type of Protective Zoning: Limit Fracking to Industrial Zones
- Type of Protective Zoning: Increased Setbacks
- Type of Protective Zoning: Overlay Districts
- Type of Protective Zoning: Limit Activity By Creating a Minimal Acreage
- Type of Protective Zoning: Pipeline Ordinances
- Type of Protective Zoning: Injection Well Ordinances
- Type of Protective Zoning: Seismic Testing Requirements
- Type of Protective Zoning: Noise Limitations
- Type of Protective Language: Lighting Limitations

frackingnextdoor.com







Educate, Advocate, Organize

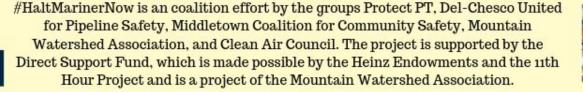
#HALTMARINERNOW
Mariner East Pipeline Sunoco Energy Transpire

- Talk with neighbors or host a neighbors group meeting
- What are the concerns? What are the local issues? Is stormwater runoff a problem? Are people in your community without drinking water?
- Go to township and county council meetings and speak about your concerns.
- Schedule meetings with state elected officials to educate them about community impacts.
- Advocate for your rights: Public safety, private property, clean air, pure water,
 & a healthy environment
- Write letters to the Editor to submit to your local paper













Get Involved:

#HALTMARINERNOW
Mariner East Pipeline Sunoco Energy Transpire

- Visit the <u>www.haltmarinernow.org</u>
 website to keep up on the latest Mariner
 East updates
- 2. Sign the petition: bit.ly/marinerpetition
 - This is an ongoing petition and we will deliver it with updated signatures every month.
- 3. **Stay Connected:** Sign up for email alerts at www.haltmarinernow.org and post on social media











Contacts & Q&A

Gillian Graber gillian@protectpt.org

Eve Miari emiari@cleanair.org

Melissa Marshall melissa@mtwatershed.com









Thank you!!!

There will be a recording available on www.haltmarinernow.org

Interested in future trainings?

info@haltmarinernow.org