



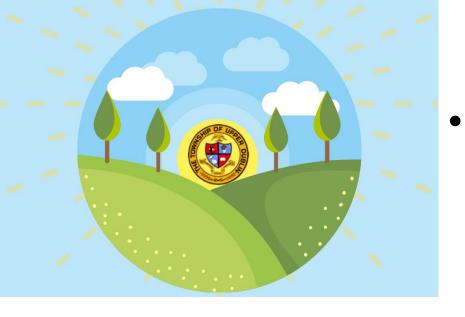
Environmental Open House March 9, 2024

Upper Dublin Environmental Protection Advisory Board (EPAB)

Mike Haas, Chair Email - mhaas270@comcast.net

EPAB: Who We Are





EPAB: What We Do

- Advise the Commissioners on matters related to the protection and enhancement of the environment, e.g., in areas such as waste disposal, water quality and conservation, recycling, pollution, energy usage, and erosion control
- Community outreach for exchange of information
- Review commercial development plans



EPAB Open House

 Short presentations by EPAB and other community groups on environmental topics

• Please sign up outside for further information or to volunteer



Samantha McLean Michael Baker International

Upper Dublin's Comprehensive Plan

Samantha McLean - Samantha.McLean@mbakerintl.com

Alison Giles, UDT Zoning Officer & Planning Coordinator, agiles@upperdublin.net



Share Your Priorities for the Future Today!

Upper Dublin Township is seeking community feedback for its Comprehensive Plan update and time is running out! You can help shape the future of the township by taking the

UD Plan Survey TODAY!

The survey closes March 12, 2024.



Scan the QR code or visit www.surveymonkey.com/r/UDPlanSurvey to take the survey.





Carolyn Grayshaw WeConservePA

WeConservePA Initiatives

Carolyn Grayshaw - cgrayshaw@weconservepa.org



The EAC Network Is

A peer-support network of Environmental Advisory Council members administered by WeConservePA.

What The EAC Network Does

- Provides RESOURCES and TECHNICAL ASSISTANCE
- Facilitates PEER CONNECTIONS
- Shares important NEWS and GRANT OPPORTUNITIES
- Develops EDUCATIONAL OPPORTUNITIES

Resources and Technical Assistance:

- WeConservePA.org/EAC
- Library.WeConservePA.org

The Library at WeConservePA contains an entire section for EAC Resources, including sample bylaws, ordinances and resolutions, and educational and outreach materials.

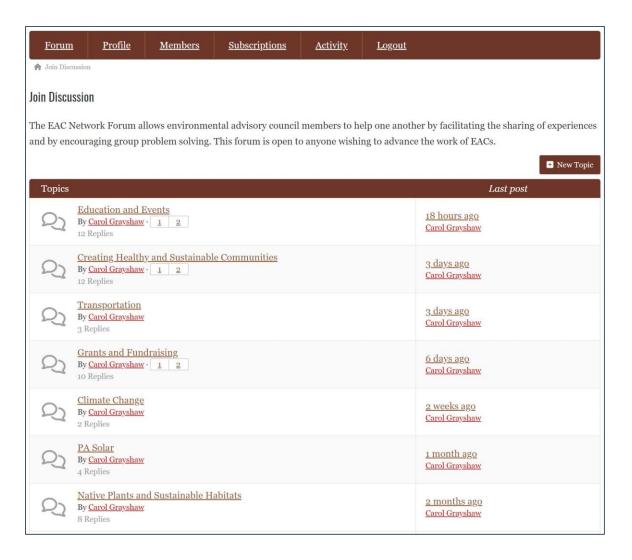
The Environmental Advisory Council Handbook

Guidance for Establishing and Operating EACs in Pennsylvania



Peer Connections:





WeConservePA.org/eac/join-discussion

News, Stories, and Grant Opportunities:

Sign up for the EAC Network Newsletter at WeConservePA.org/get-informed



EAC Network Newsletter

EAC Network Virtual Conference: Register Today!

The EAC Network Virtual
Conference will be
held Saturday, February 24,
starting at 9AM. Join fellow
Environmental Advisory Council
(EAC) members, municipal staff,
elected officials, and others
interested in the work of EACs for
a full day of training and
networking, without the hassle of
travel.



Lightning Sessions Announced:

Happening as a part of the morning plenary at 9AM, lightning share sessions are brief presentations highlighting EAC initiatives, project success stories, or new and innovative ideas meant to inspire.

Educational Opportunities:

- Living with Logistics: PennFuture's Model Zoning Ordinance
- Why Municipalities Should Consider a Utility Scale Solar Ordinance
- The Pennsylvania Outdoor Corp: Workforce Development for the Benefit of Conservation and Outdoor Recreation
- Graphic Grammar: Design Advice from a Guy Who Can't Draw
- GIS Options for EACs

WeConservePA.org/events

Recordings available for most events

Large Scale Events:

- EAC Network Virtual Conference (February)
- Pennsylvania Land Conservation Conference (April)
- Greenways and Trails Summit (September)
- EAC Fall Gathering (October)



Contact Me

- Carolyn Grayshaw
- Director of Education
 cgrayshaw@weconservepa.org
- 717 291 4074

WeConservePA.org/EAC



Ed Landau Upper Dublin EPAB

Recycling Program in UDT

- What happens to your recycled material
- DOs and DON'Ts of recycling

elrla@erols.com

Upper Dublin Township Guide to Trash, Recycling, Yard Waste, Drains

	and what to do with things y	ou no longer want
Recycling	Yes	No
7	<u>Clean</u> & <u>Dry</u> Materials ONLY. Contamination in the Recycling S	Rinse out all food containers tream has become a big problem.
ary day.	Glass bottles and jars only all colors #1 thru #7 plastic bottles & containers Leave bottle caps on plastic bottles Aluminum and bi-metal cans & lids. empty Aerosol cans · Metal lids Cartons - milk, juice, broth, eggs Cardboard Newspaper	Anything with grease or food stains Styrofoam Styrofoam cups Plastic bags Bubble wrap Food Waste Pizza boxes Hangers · Wire Rope · Hoses Shredded Paper CD's - DVD's Clothing Diapers
Try to only place this cart	Office paper, folders, junk mail Phone books, paperbacks, catalogs Paper over about 5" dimensions Wrapping paper (no glitter,foil,ribbon) Amazon paper-padded packaging Call Twp for cardboard box pick-up	•• Don't place things in plastic bags•• Paper towels or tissues Glassware, Dishes, Window glass Paper or red solo cups • Straws Scrap metal, motors, nails, etc PVC Pipe • Plastics w/o numbers
it is over half full.	If in Doubt Leave it Out	Plastic Toys Hardback books
Yard Waste	Yes	No
Nothing should stick out above top of bin. All yard waste goes to UD Twp compost sites	Grass Leaves Branches under 5-inch diameter Branches under 4-foot length Yard waste (Kraft) bags Sticks can be tied with twine, and placed out separately (max 50#) Up to 9 containers/bags per week Kitchen waste Fruit and Veggie scraps, egg shells, stale baked goods, coffee grounds/filters, pizza crusts, corn husks For Area 'B' and 'C' residents all waste must be in yard waste bin. If in Doubt Leave it Out Composting If you have space, creat to place general food waste, egg sh	
General Trash	Yes	No
PER DELL'INCOME.	General household trash that doesn't belong in the Recycling or Yard Waste bins. Styrofoam Alkaline batteries Latex paint (no liquid - must dry out first) Bamboo	(See Hazardous Waste list on pg 2) Oil-based paints and stains Paint thinners, strippers, etc Weed killers, pesticides Sealers, cements, adhesives Gas, oil, anti-freeze, fluids Kerosene. fire extinguishers Cleaning fluids, solvents
	Medical Waste Tires	 Flourescent bulbs, ballast, CFLs

Construction Materials

Fire hazards >> Pool chemicals

Lithium batteries

· Mercury thermometers

· Radiation patient waste materials

· Bamboo (use private company)

Upper Dublin Towns	hip Guide to Trash, Recycling, Yar	rd Waste, Drains	, etc (pg 2)
House Drains	Yes		No
A.A.	Normal household wastewater Household waste		in our streams.
	No	Prescription & ov drugs (police of Egg shells	
	Fats, oils and grease Gas, oil, anti-freeze, auto fluids	Coffee grounds Cat litter	Disinfectant wipes
	Paint Latex or Oil based	Fertilizers	Tampons Condoms
	Cleaning fluids, solvents	Pesticides	Contact lenses
Hazardous Waste	Yes		No
å O	Oil-based paints and stains Paint thinners, strippers, etc.	· Evnlosives - Am	nmunition

Hazardous Waste	Yes	No
Drop-off locations (2023) www.montcopa.org (click on "Hazardous Waste") Saturdays 8:30AM to 2PM · Must register on-line · June 1 - Temple Ambler June 15 - Abington Mid Sch	Oil-based paints and stains Paint thinners, strippers, etc Weed killers, pesticides Sealers, cements, adhesives Gas, oil, anti-freeze, fluids Kerosene. fire extinguishers Rechargeable batteries Cleaning fluids, solvents Flourescent bulbs, ballast, CFLs Mercury thermometers Deliver items in original labeled containers when possible.	Explosives - Ammunition Infectuous or medical waste Tires Electronics Asbestos Radioactive waste Helium tanks Appliances Refrigerants, PCBs Latex paint (regular trash) Alkaline batteries (regular trash)

Electronic Waste	Yes	No
	Anything with a plug Electronic devices · Computers Cell phones · Telephones Copiers TVs & Monitors (will charge fee)	Large Appliances Dehumidifiers Video tapes
	Sat, June 22,2024 (9-12) at UD	Library 520 Virginia Drive

Shredding	A Section of the sect	Spring & Fall events Upper Dublin Library check website for dates
	A STATE OF	Saturdays April 6 & Sept 21, 2024 (8AM to 10AM) UD Library 3 box/bag limit

100	Saturdays April 6 & Sept 21, 2024 (SAIVI to TUANI) OD Library 3 box/bag lift
Drugs	Drop off any drugs in the lobby of the UD Township police dept - day or evg. (no needles, sharps or liquids • Call PD with questions 215-646-2101)
Styrofoam	Northeast Foam Recycling 90 Hamilton St, Chalfont, PA 18914 215-699-4541 Only #6 styrofoam No peanuts, colors, or with any food residue
Plastic Bags	Supermarkets All plastic bags, including clean food bags, bubble wrap
Metals, wire, motors	Take to 611 Metals in Willow Grove, Sullivan in Hatboro, or other recyclers
Construction Mat'ls	Clean drywall, lumber, bricks, etc click "Building Materials" on "A-Z Recycling"
Tires	Take to tire retailers who may charge a small fee
Clothing, Textiles	· Parking lot boxes · Local 2nd-hand stores · Keystone Green textile recyclers.
Batteries	Rechargeable batteries to Home Depot and other stores, or hazardous waste
For anything not	listed in the "Yes" columns above, refer to this Montgomery County website:
Google	"Montcopa recycling" then click on "A-Z Recycling Guide"
The 3 R's of Recycling	1. Reduce what is consumed, buy bulk, compost scraps and Refuse plastic.
2. Reuse Reevaluate w	hat can be reused/repurposed in some way.
3. Recycle as a third opt	tion. This summary is still in progress Updated 2-20-24

Prepared by: Upper Dublin Township Environmental Protection Advisory Board (EPAB)

Stormwater Management for Residential Properties

Upper Dublin EPAB
3rd Annual Environmental Open House
March 9, 2024

by: Domenic Rocco, P.E. Chair, Conshohocken EAC





Stormwater - Background

- Stormwater Control Measure SCMs reduce or mitigate the generation of stormwater runoff and associated pollutants.
- For new land development –stormwater management factors are addressed.
- For older built-out communities, SWM was only incorporated for drainage (conveyance) not to collect, store and/or control.
- Until recently, there has not been entities established with the responsibility of doing all these functions at the community level. (Stormwater Utilities are now emerging)



Opportunities for SWM on Residential Property

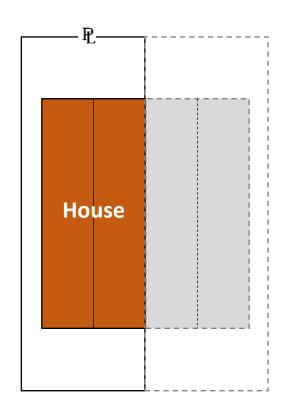
- All properties have opportunities for Stormwater Management (SWM).
- Here are factors that affect options.
 - Lot Size
 - Percent impervious cover
 - Landscaping/Vegetal Cover
 - Terrain: Slope & Soil Type
 - Location of downspouts



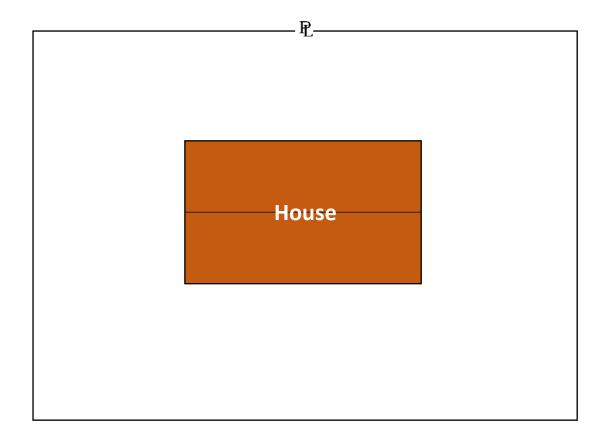
MISSED OPPORTUNITIES FOR SWM



Townhouse or Twin

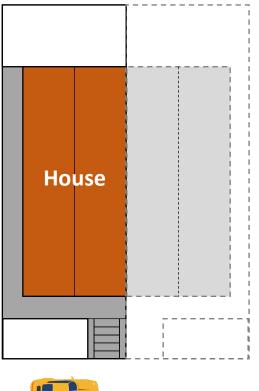


1/2 Acre Lot

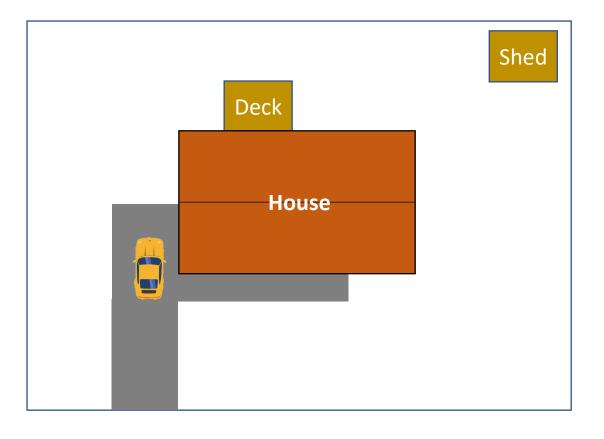


Impervious Cover

Townhouse or Twin



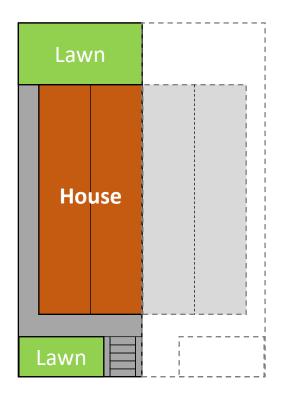
1/2 Acre Lot



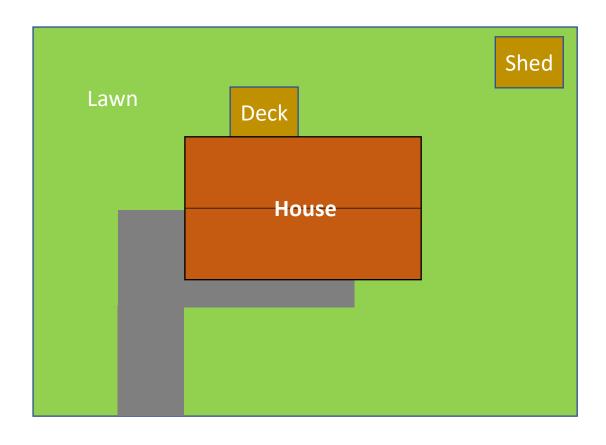


Landscaping/Vegetal Cover

Townhouse or Twin



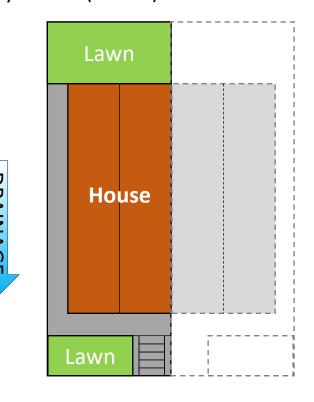
1/2 Acre Lot



Terrain: Slope and Soil Type

Townhouse or Twin

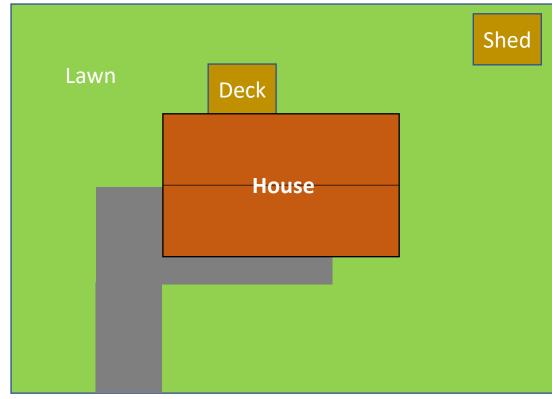
Soils: Mont. Co Silty Loam (HSG C)



½ Acre Lot

Soils: Mont. Co

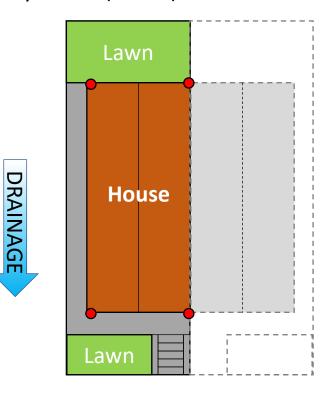
Silty Loam (HSG C)



Downspout Location

Townhouse or Twin

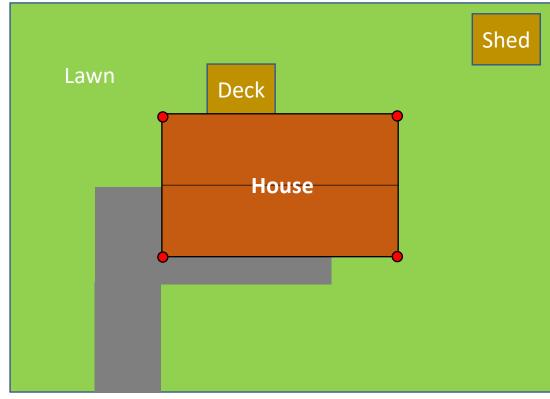
Soils: Mont. Co Silty Loam (HSG C)



1/2 Acre Lot

Soils: Mont. Co

Silty Loam (HSG C)



Townhouse



NATIVE PLANTINGS (\$\$)



DOWNSPOUT PLANTER (\$)



Viable Options:

- Native Plantings (\$\$)
- Rain Barrel (\$)
 - Need a use for the water
- Downspout Planter (\$)
 - Good in urban areas
- Disconnected Downspout (0)
 - Easy and cost effective





DISCONNECTED DOWNSPOUT(0)

½ Acre Lot



Viable Options:

- Native Plantings(\$\$)
- Rain Barrel (\$)
- Downspout Planter (\$)
- Disconnected Downspout (0)

+

- Plant A Tree (\$)
- Rain Garden (\$\$)
- Porous Pavement (\$\$\$)

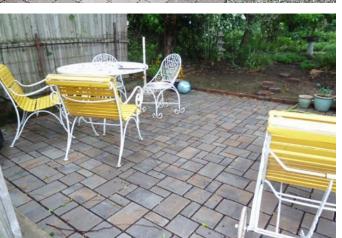


PLANT A TREE (\$)



RAIN GARDEN (\$\$)





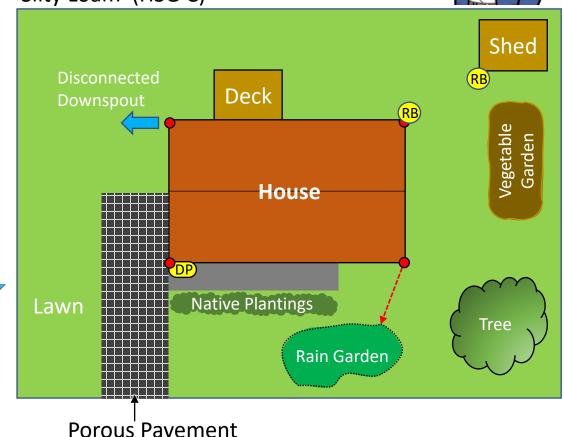
POROUS PAVEMENT (\$\$

Wrap Up

- There are a variety of opportunities for SWM on residential properties.
- Cost is variable.
 - The most economic option is to disconnect a downspout.
- Local municipalities/ sewer authorities are focusing much more on stormwater.

½ Acre Lot w/ SCMs
Soils: Mont. Co

Silty Loam (HSG C)



DRAINAGE

Contact Info:

Domenic Rocco, P.E.

Conshohocken EAC Chair

greenconshohocken@gmail.com

Join Us for **Conshy GreenFest** Sat. April 27, 2024, 11a-2p Mary Wood Park





Austin Faberman Upper Dublin EPAB

Single-Use Plastic Bags

austin.faberman@gmail.com

UPPER DUBLIN TOWNSHIP – OPEN HOUSE – SATURDAY MARCH 9, 2024

ENERGY AUDITS AS A FIRST STEP TO NET ZERO CARBON EMISSIONS

PAUL SPIEGEL, PE, LEED AP
DIRECTOR, ENERGY SERVICES
PRACTICAL ENERGY SOLUTIONS/SSM GROUP



Practical Energy Solutions
Engineering, Surveying and Environmental Services
ssmgroup.com

NET ZERO ENERGY INITIATIVES – ENERGY AUDITS

What we're exploring today!

Why Net Zero?

Where to start

The "Energy Pyramid" (updated)

Energy Initiatives in Municipal Buildings

Operational Assessments and Optimization

Monitoring and Managing Your Building(s)

Capital Projects

Renewable energy

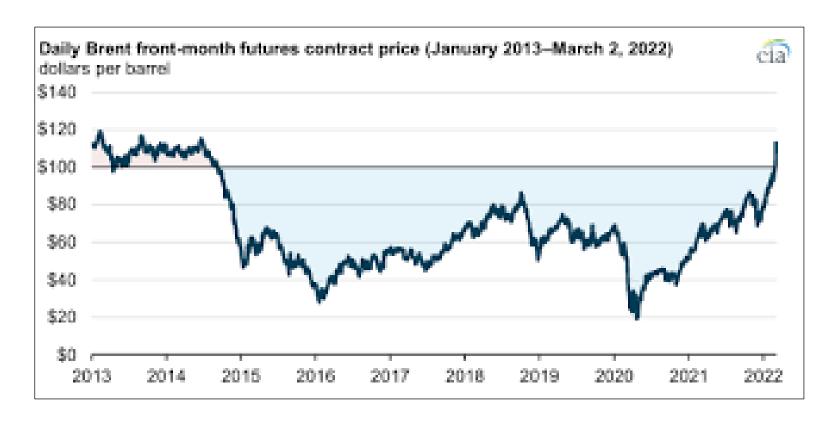
Tax credits, Rebates, and Grants, oh my!! (for another day with more time)

A CLEAN ENERGY FUTURE

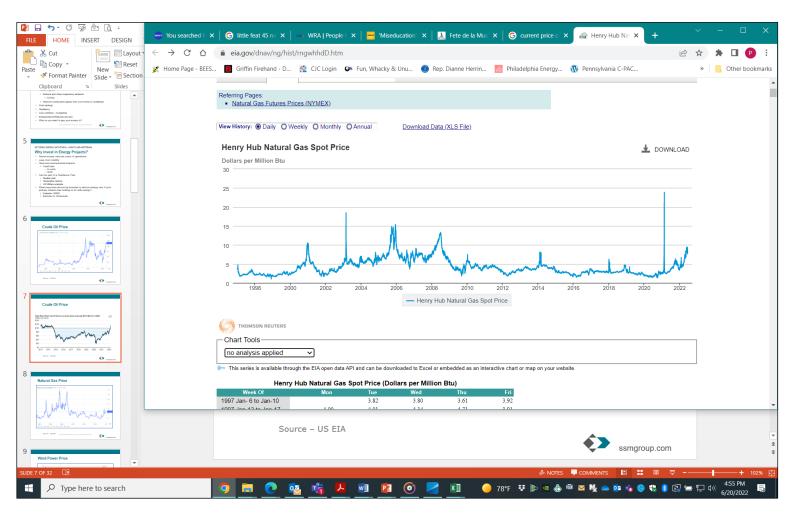
Reasons to Support Clean Energy Initiatives

- Environmental impacts
 - Air and water pollution
 - Climate
- Health impacts
 - Asthma and other respiratory ailments
 - COVID
 - Remove combustion gases from your home or workplace
- Cost savings
- Large corporations "greening" their supply chains
- Resiliency
- Cost certainty budgeting
- Energy Independence
- Commitment to climate goals

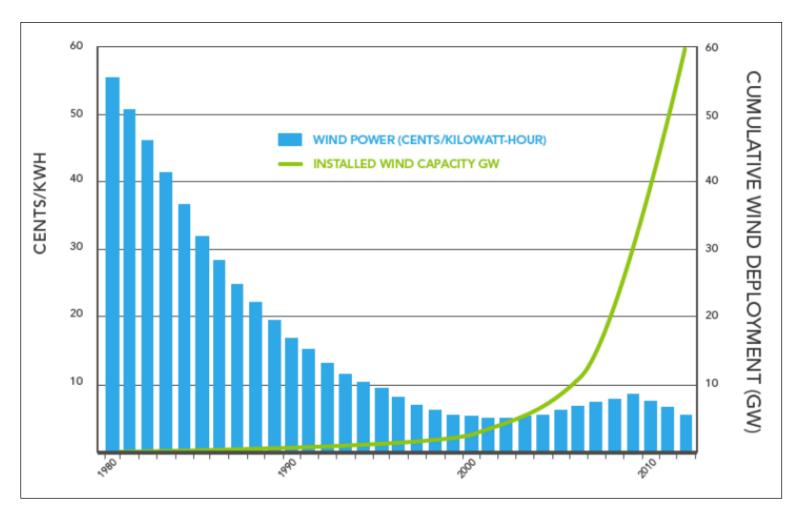
Crude Oil Price



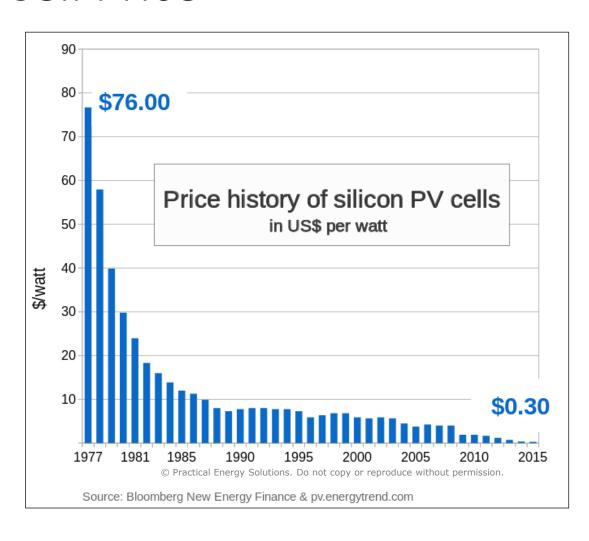
Natural Gas Price



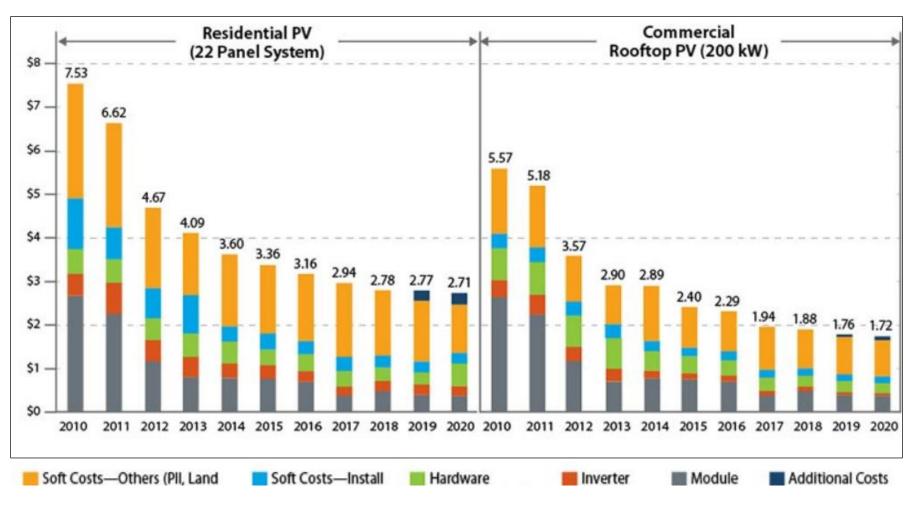
Wind Power Price



Solar Cell Price



Solar Cell Price - Installed



NET ZERO ENERGY INITIATIVES – AUDITS AND METERING Where to Start

 A logical progression for planning and implementing a long-term energy initiative Renewable

Energy Time of Use Management **Energy Efficiency Energy Conservation Energy Analysis**

NET ZERO ENERGY INITIATIVES – ENERGY AUDITS

Energy Assessment, Analysis and Planning

- Where you are now, and how and where your building uses energy.
- When do your buildings use the most energy?
- How are you charged for energy and how much does it cost?
- Identify opportunities for operational cost savings
 - Consumption
 - Demand
- Develop a plan for capital projects, especially when equipment is nearing end of life.
- Outline and check feasibility of renewable energy options.
- ASHRAE Level 1, Level 2, or Level 3 energy audits.

NET ZERO ENERGY INITIATIVES – AUDITS AND METERING

Impact of Energy Decisions Today

- Planning for now, and 5 20 years out from now.
- Certain types of equipment have such a long service life, that decisions you are making now, and upgrades you're already doing, or replacement of EOL equipment will affect you for years to come, in an energy landscape that looks very different than today.
- Don't just look at the short-term impacts on costs, have someone guide you to anticipate possible changes in the energy. marketplace – guaranteed to have volatility.
- Save money for years while reducing your impact on the environment today.
- Reinvest savings in future projects.
- Be prepared for funding opportunities.

NET ZERO ENERGY INITIATIVES – AUDITS AND METERING Operational Changes & Capital Upgrades

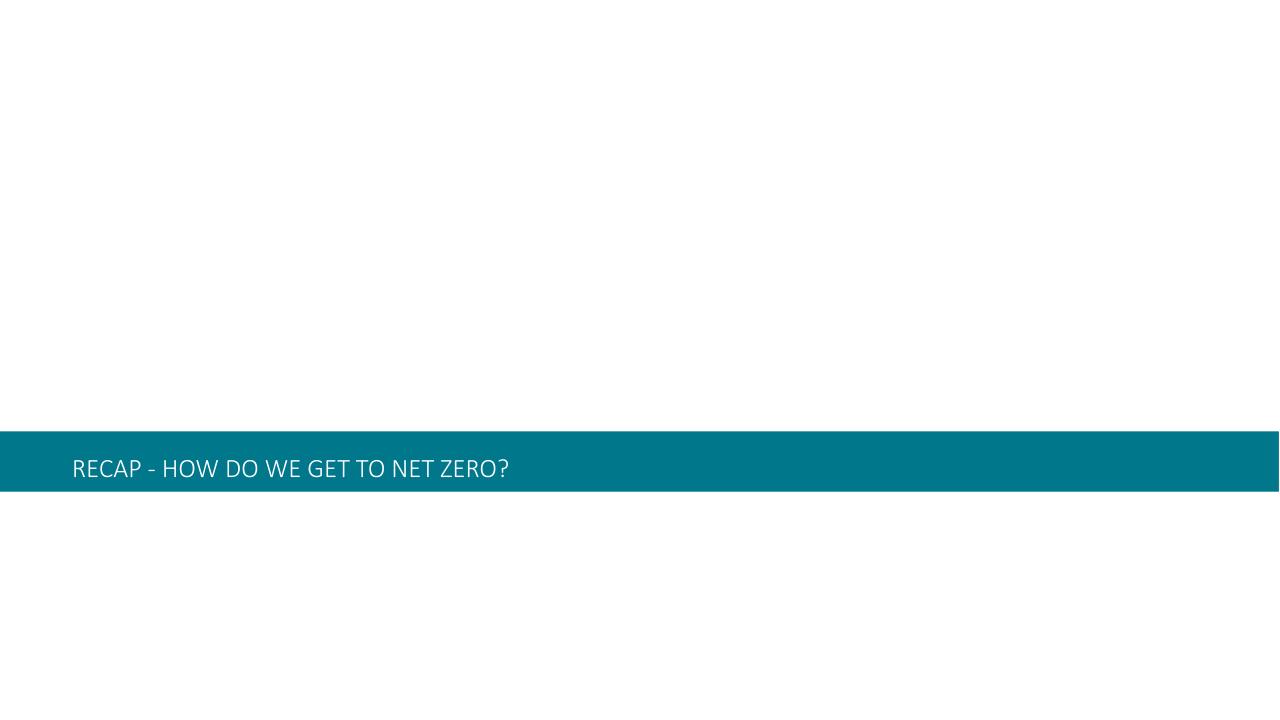
- The "down in the trenches" view looks at how capital upgrades and operational changes can pay for themselves in energy cost savings
- Daily management of facilities and operations can be adjusted to take advantage of the opportunities available in the changing energy landscape
 - Energy price fluctuations
- Improves resilience of your energy supply during natural and man-made disasters

NET ZERO ENERGY INITIATIVES – AUDITS AND METERING

Funding Resources

- How can you pay for capital projects to help your bottom line?
- CPACE
- Utility Rebates in PA
- Regional Greenhouse Gas Initiative (RGGI) (on hold)
 - Puts a cap on the total emissions from existing power plants. If they want to increase output, they can be more efficient and use renewable energy, or buy rights to efficiency gains of others, such as a water authority or building owner. Funds to be used for new projects.

- Commonwealth Financing Authority (CFA)
- Green Energy Loan Fund (GELF) through Reinvestment Fund
- USDA REAP program for rural areas
- PA DEP small business grants; subsidized energy managers and audits
- Federal Infrastructure Bill
 - EV
 - Efficiency
 - Renewables
 - Resilience



NET ZERO ENERGY INITIATIVES – AUDITS AND METERING

Recap: Energy Assessments

- Meeting aggressive energy goals doesn't happen by accident
 - Start with assessments/audits where you are and future options
 - Operational changes (conservation)
 - Capital projects (efficiency)
 - HVAC geothermal or VRF
 - Electrification
 - Renewable energy
 - Install solar
 - Direct purchase
 - PPA
 - Community solar
 - Purchase credits or offsets
 - Wind
 - Hydro
 - Solar
- Get expert support
- Have a list of priority projects to take advantage of grants

Thanks for joining us!



PAUL SPIEGEL, PE, LEED AP

Director, Energy and Sustainability Services Practical Energy Solutions

Direct: 610-609-8313

Paul.Spiegel@ssmgroup.com



Gary Scarpello Upper Dublin Commissioner

Municipal Complex Update – Environmental and Energy Considerations

gscarpello@upperdublin.net



New

Upper DUbliN TowNship aND police bUilDiNg

Amodelnet zero public facility serving the needs

of the community

The Upper Dublin Township building was destroyed in a tornado in September 2021.

After numerous evaluations, the decision was made to rebuild a more compact, efficient, sustainable and energy efficient new building to serve the community.

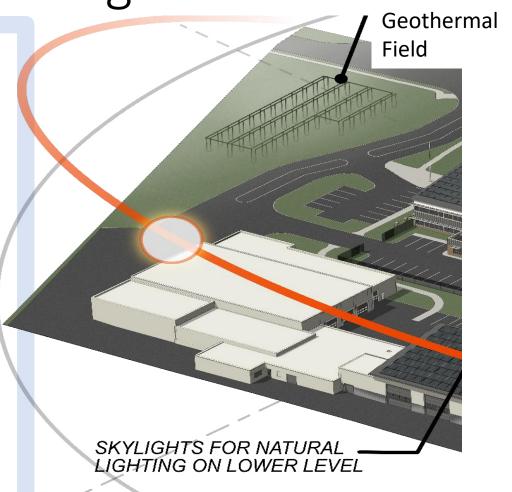






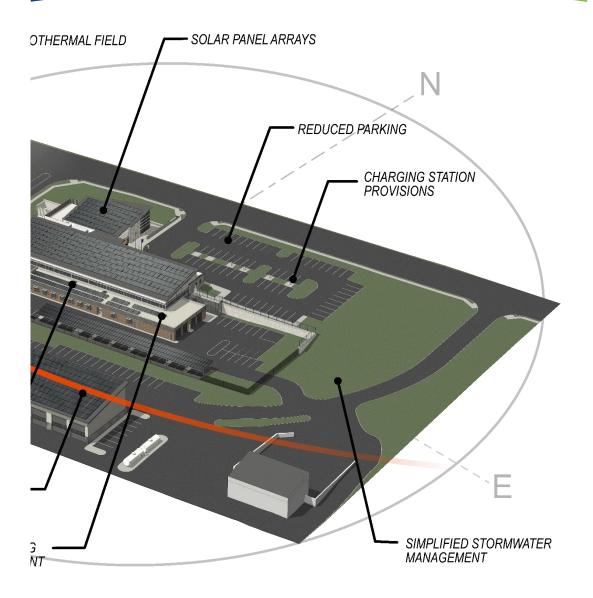
The energy efficiency priorities and Net Zero design solution:

- •The Board of Commissioners resolution for 100% renewable electricity and energy efficiency.
- •Incorporate solar on roofs by utilizing systems constructed for the building and parking.
- · Use a geothermal closed loop system to deliver heating and cooling and avoid carbon emissions.
- Efficient building design utilizing the optimal orientation for daylighting and heating and cooling.
- Design building footprint to reduce roof area.
- · Create an efficient thermal envelope for the building.
- · High-Efficiency insulated glazing with Low-E and Argon and exterior sun shades to reflect solar heat gain.
- · Utilize existing site features and reduce impervious cover.
- Divert the building demolition from the landfill with recycling and construction waste management.
- Place building primarily on existing footprint to reduce additional disturbance.
- All energy generated on site, no utility purchase for electricity gas or fuel oil to heat or cool the building.
- EV charging stations for electric vehicles.



OPTIMIZED LOCATION ON SITE TO MAXIMIZE SUNLIGHT CAPTURE

REUSE OF EXISTING











Location & Transportation

- Facilities to encourage pedestrian and biker activity
- Reduced parking footprint
- EV charging stations

Sustainable Site

- Fixtures chosen to reduce light pollution
- Reduced runoff and restoration of natural hydrology

Water Efficiency

- Low flow fixtures (reduced consumption by 26%)
- Native plantings (no irrigation)

Energy & Atmosphere

- Energy production equals energy consumption
- Exceedes LEED Energy and Atmosphere minimum energy performance
- Highest achievable energy savings performance per LEED/ASHRAE standard 90.1 energy modeling
- Utilizing no fossil fuels, no GHG emissions

Indoor Environment Quality

- No smoking site policy
- Low-emitting materials
- MERV 13 filters and materials that promote IAQ
- Lighting controls for adjustability based on tasks
- Exterior sun shades and interior window treatments
- Acoustic performance for occupant comfort

Innovations in Design

Community education on green principals









Integrated Technical Solutions for a net zero building:

Annual Energy Use		
HVAC	-213,114 kwh	
Lights	-146,763 kwh	
Electrical Equipment	-279,500 kwh	
	-657,377 kwh	
Annual On-Site Ene	rgy Production	
Main Building Roof	+348,324 kwh	
Public Works Building	+140,865 kwh	
Police Building	+56,377 kwh	
Police Canopy	+115,255 kwh	
7	+660,821 kwh	
Ne		
eNer gr		

+3,400 kwh

Energy Plant Model *Upper Dublin Township*

Energy LEARN MORE AT energystar.gov	ENERGY STAR [®] Statement of Energy Design Intent (SEDI) ¹ Upper Dublin Township/Police Building
86	Primary Property Type: Police Station Gross Floor Area (ft²): 39,981 Estimated Date of Certification of Occupancy: Date Generated: February 15, 2024
ENERGY STAR Design Score ²	•





NETENERGY: +3,400 KWH Energy Star Rating: 86











Melissa Laffen Upper Dublin EPAB

Upper Dublin Township Renewable Energy Transition Plan

mjlaffen@gmail.com



Dalton McMaster Upper Dublin High School

Project-Based Learning Activities

24dmcmaster@stu.udsd.org





Laina Stricker Upper Dublin EPAB

Upper Dublin Township Litter Patrol

Elasfarilaina@gmail.com

UD Litter Patrol Group

- Partnered with UD Parks & Recreation
 - U.D. CARES
- Established a group of 8 residents
- Assigned township watch by region
- Coordinated litter events with UD Parks & Recreation

- Since September 2023 Litter Patrol and UD Parks & Rec. has
 - Organized 6 clean up events
 - Removed approximately 75 bags of trash
- Continue collaboration
 - Organize additional clean ups
 - Explore litter prevention initiatives











Resources

- •Keep PA Beautiful https://www.keeppabeautiful.org/
- •PennDOT:

https://www.penndot.pa.gov/aboutus/RoadsideBeautification/pages/adopt
-a-highway.aspx

- *Locate your county office
- •Litter Lifters of West Vincent: https://westvincenttwp.org/litter-lifters-of-west-vincent/*
- •Beth Intoccia
- •OneBeautifulPlanet.org*
- *Bucks County resident

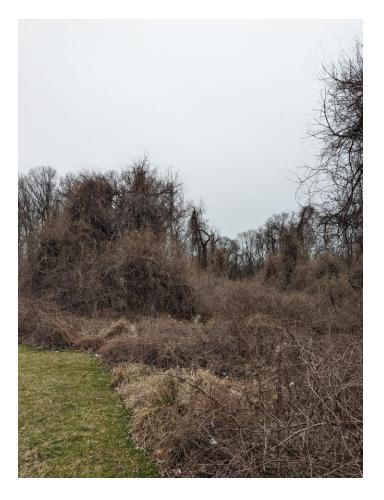


Derek Dureka/Colleen Kenny Upper Dublin Park & Rec

Twining Park / Tornado Recovery /
Tree Grant Program /
Open Space Plan

ddureka@upperdublin.net ckenny@upperdublin.net

Tree Planting Grant







Tornado Recovery





Volunteer with UD C.A.R.E.S.!

- Tree patrol
- Litter cleanups, tree planting, invasive removal

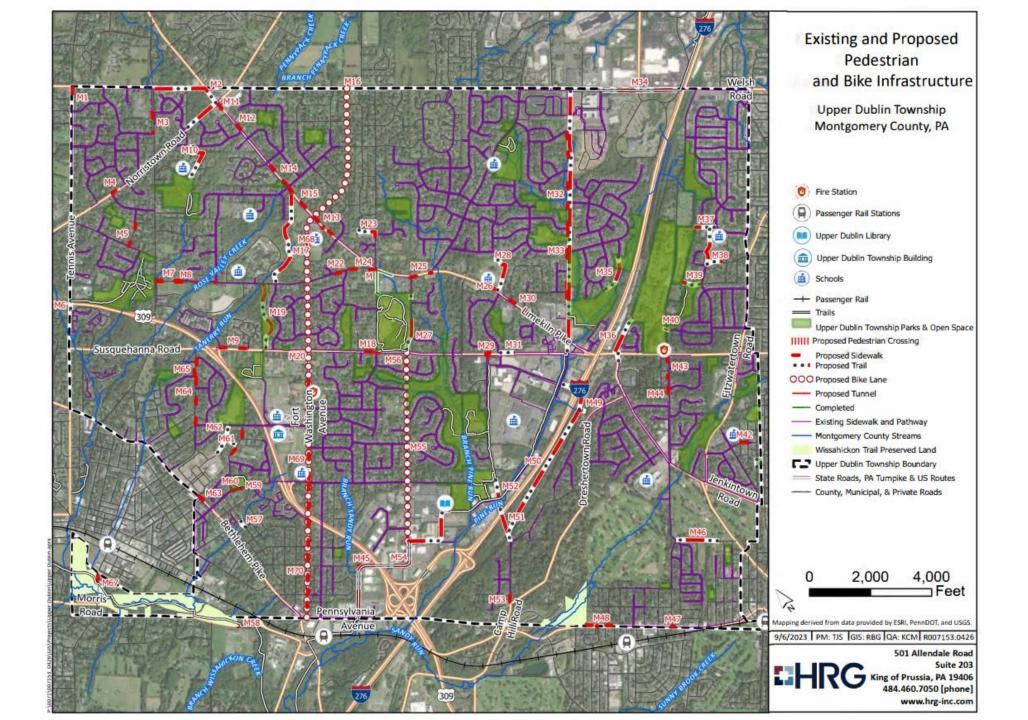
Contact ckenny@upperdublin.net or visit UD C.A.R.E.S. webpage:



TWINING VALLEY PARK

Map & Trail Distances





WHITPAIN TOWNSHIP SUSTAINABLE PROPERTY



CONTACT: WHITPAINEAC@GMAIL.COM

Environmental Open House March 9, 2024

Whitpain Township
Environmental Advisory Council
(EAC)

Sustainable Property Program

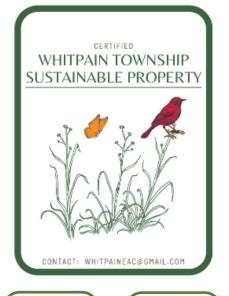
Paul Driscoll, member Email: pdriscoll865@gmail.com

SUSTAINABLE PROPERTY PROGRAM

WHITPAIN TOWNSHIP EAC











PUBLIC WORKSHOPS





EDUCATIONAL SPEAKERS

EDUCATIONAL INFORMATION AND TIPS FOR EACH KEY AREA AVAILABLE ON WEBSITE:



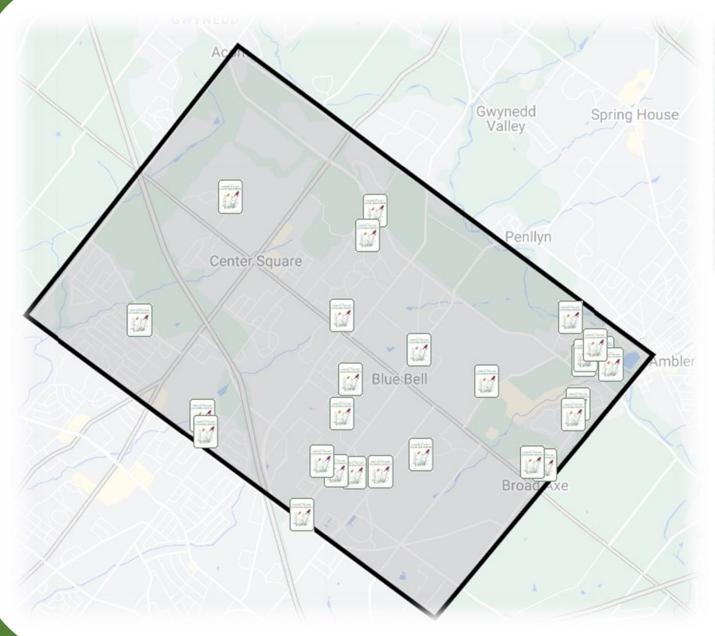
APPLICATION ALSO AVAILABLE AT QR CODE

Program Details:

Mission

- Components
- Focus Areas

- Outdoor Public Workshops
- Progress To Date





Thank You.

For more info, please email: WhitpainEAC@gmail.com



Eric Lindhult Upper Moreland-Hatboro Joint Sewer Authority

• Sewer Etiquette



Eric Lindhult Upper Dublin EPAB

- Thanks to speakers
- Please visit organizations in the lobby and sign up