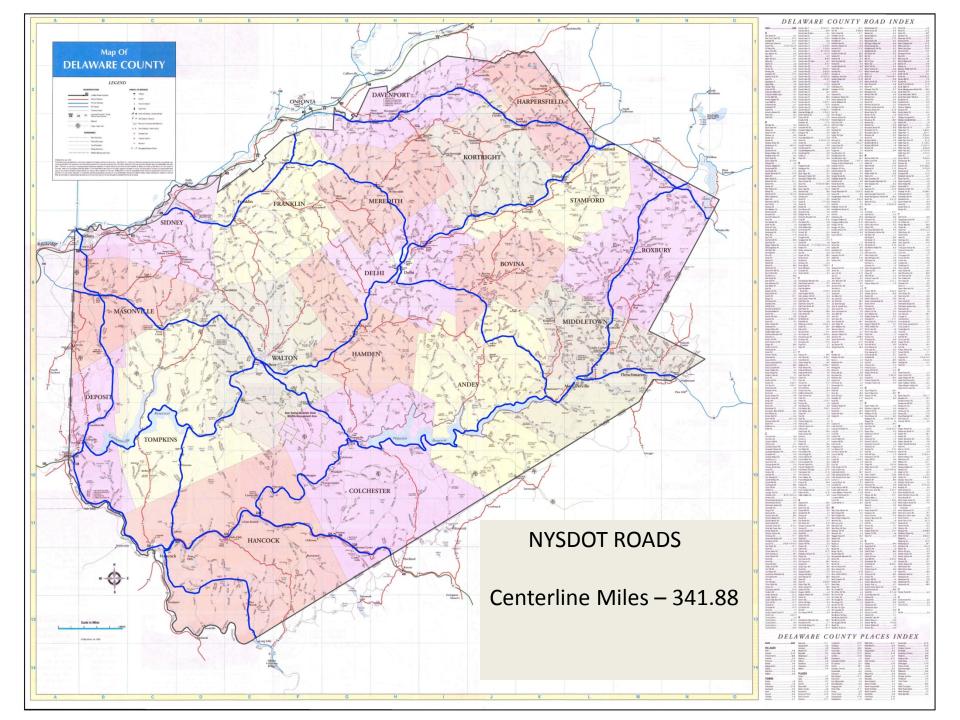
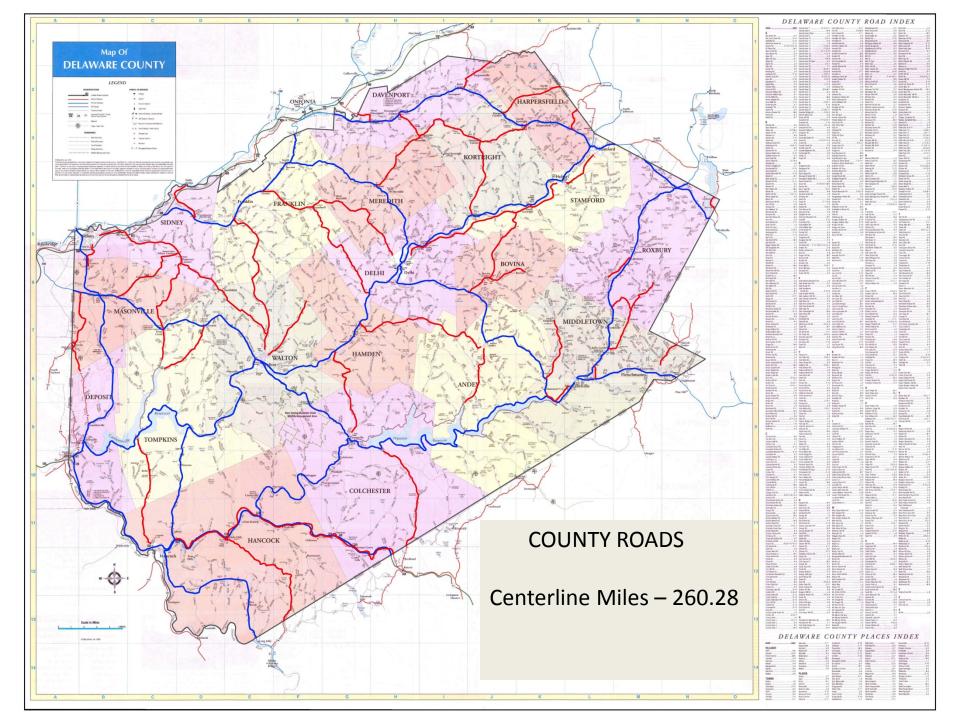
# JULY 12, 2017 PRESENTATION 7PM

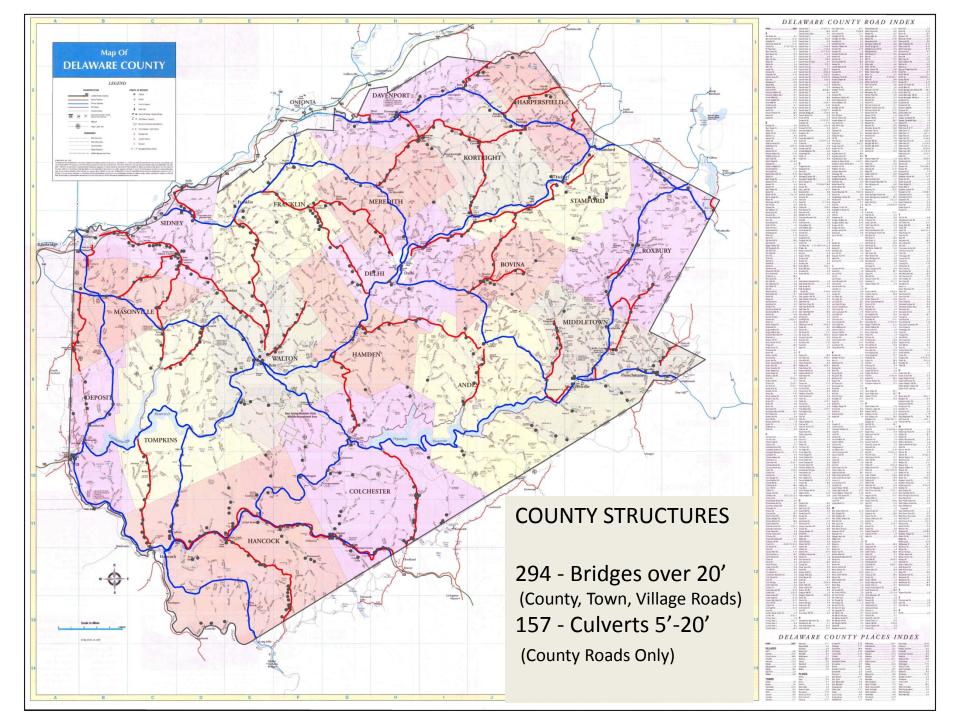
Public Informational Meeting Delaware Academy

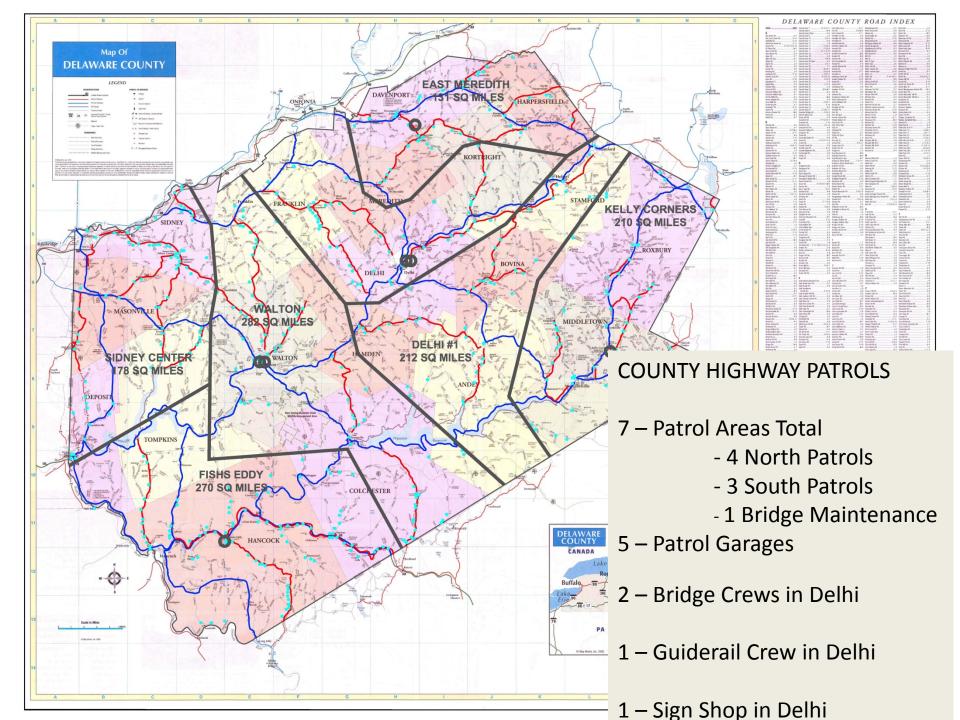
# Background of Delaware County and Delaware County DPW

- Total Area 1,467 Sq Mi
  - Larger than the state of Rhode Island 1,212 Sq Mi
- Population 47,980 (2010)
  - 32.7 People/Sq Mi









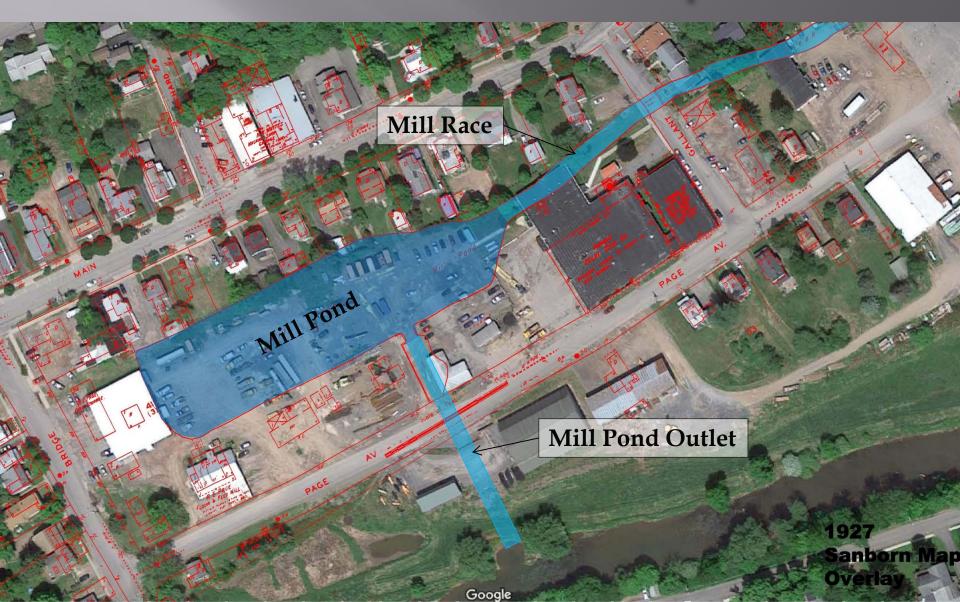
#### COUNTY OWNED EQUIPMENT

- PICKUPS 34
- SINGLE AXLES 18
- TANDEM AXLES 22
- TRACTOR AND TRAILERS 15
- SPECIALIZED TRUCKS/TRAILERS 12
- TRACTORS 5
- BACKHOES 8
- LOADERS 6
- ROLLERS 9
- GRADERS 3
- BULLDOZERS 2
- BROOMS 5
- WOOD CHIPPERS 4
- EXCAVATORS 9
- CRANES 3
- SPECIALIZED EQUIPMENT 16
- CARS AND VANS 11
  - TOTAL PIECES OF EQUIPMENT/TRUCKS 182
  - TOTAL EST. VALUE EQUIP \$6.9 MILLION
  - TOTAL EST. VALUE VEHICLES \$8.5 MILLION

## **Existing Facility**



## 1927 Sanborn Map





# History of the DPW





#### Roof Issues

- 1990 Leaks throughout garage & Annex
- August 8, 1990 Resolution #187 Authorization of Award for Proposal 29-90 Garage Roof Replacement Total Cost \$733,690
  - Contract 1 General Construction
  - Contract 2 Roofing
  - Contract 3 Mechanical

Resolution Failed - Noes 1187 to Ayes 312

#### Concerns

- Too much money to put into old building, recommended pressure treated lumber under membrane roof
- Building not suited for highway building, set up dedicated fund of \$100,000 per year to build a new facility in 10-12 years

#### Roof Issues Cont.

- 1991 –New Flat Roof
  - Cost: \$168,250
  - Life: 20 year warranty (12/10/1990)
  - Encapsulated asbestos in old roof
  - Little/no insulation
- 2000-2006 Excessive leaks in maintenance area
  - Needed new dry space for mechanics to work
  - Purchased Wickham's Property & Buildings in 2006
- Began research for new shop
  - Possibly between DPW office building and Wickham's building

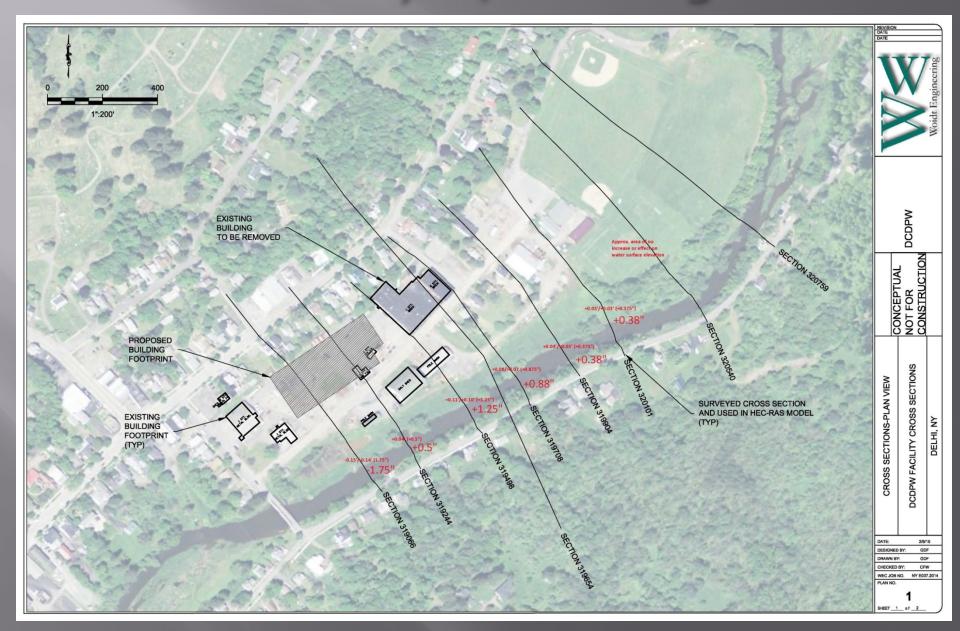
#### Roof Issues Cont.

- 2013 Consulted Delaware Engineering for new roof plan
  - Structural deficiencies in existing building
  - Costly structural changes to support new roof
- 2014 Wendel retained for conceptual design of new maintenance facility
  - Identify what size building would be needed to facilitate DPW needs
  - Establish what size building could be built with minimal effect to flood surface water elevations

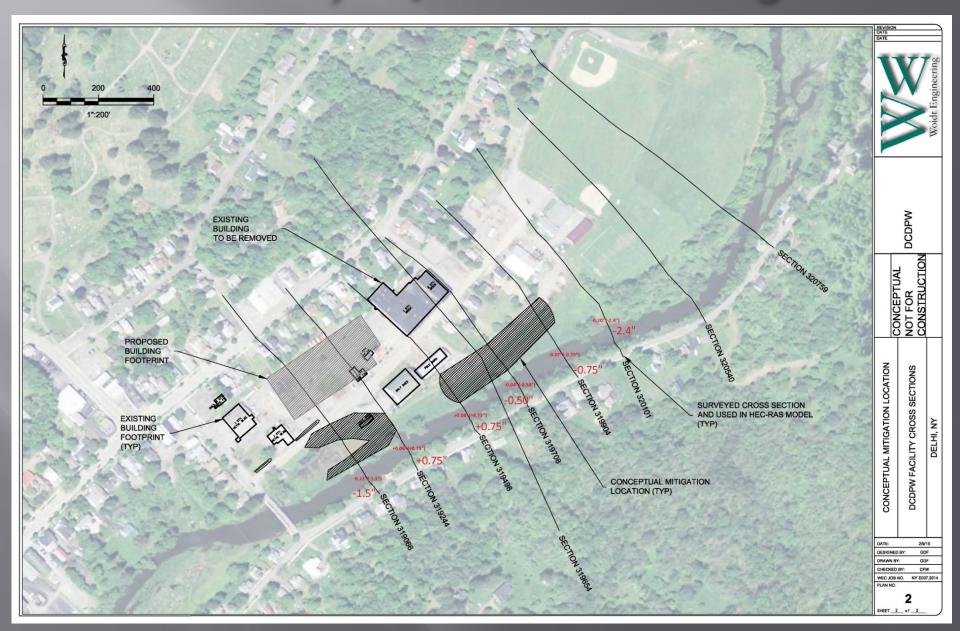
# Roof Leak



# Initial Study w/No Mitigation



## Initial Study w/Possible Mitigation



# Results of initial study

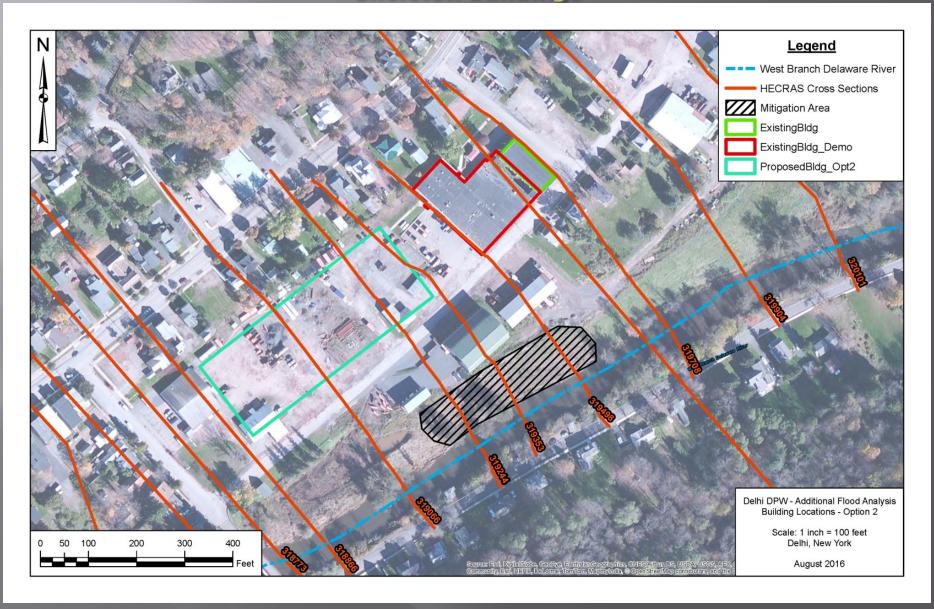
- New building could be constructed with compensating flood mitigation
- However, would still raise the 100 year water surface elevation
- Need for second study with a more strict design criteria

# Second Study Criteria

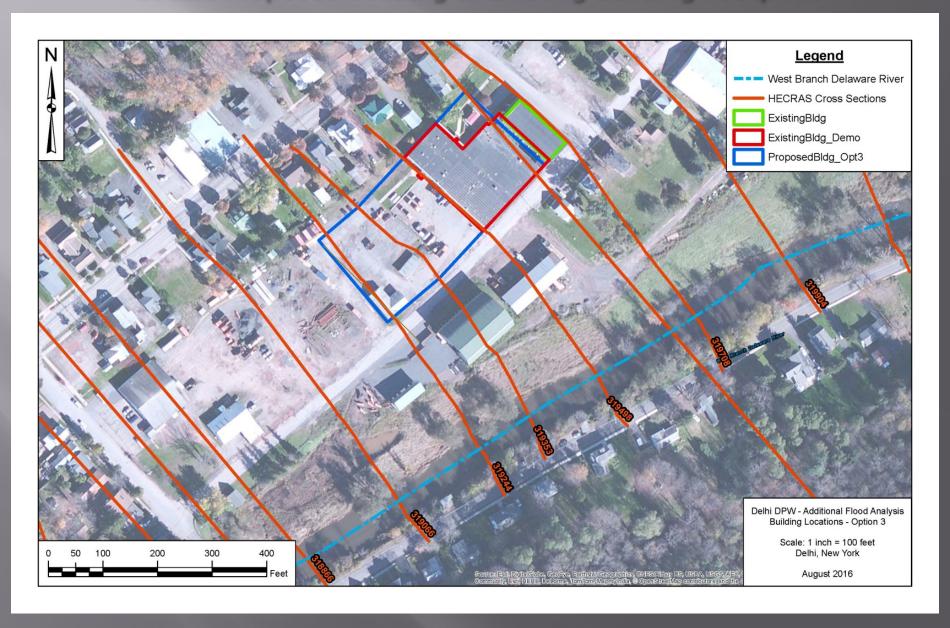
- Structure set above the 500 year flood elevation
- Zero impact on the 100 year flood elevation
- Option 1
  - Largest possible structure to fit on site with no rise of the 100 year flood elevation
- Option 2
  - Similar to option 1 with removal of salt shed and skeleton building for additional mitigation area
- Option 3
  - Assume proposed building will be placed in existing building footprint and existing structure demolished

#### Option 2

Similar to Option 1 with Mitigation and the removal of the Salt Shed and Skeleton Buildings



# Option 3 Locate Proposed Building in Existing Building Footprint



# Results of Second Study

#### Option 1

- Structure would need to be much smaller than existing building
- Not considered a feasible alternative

#### Option 2

- Initial increase of water surface elevation adjacent to mitigation area
- Decrease in water surface elevation upstream

#### Option 3

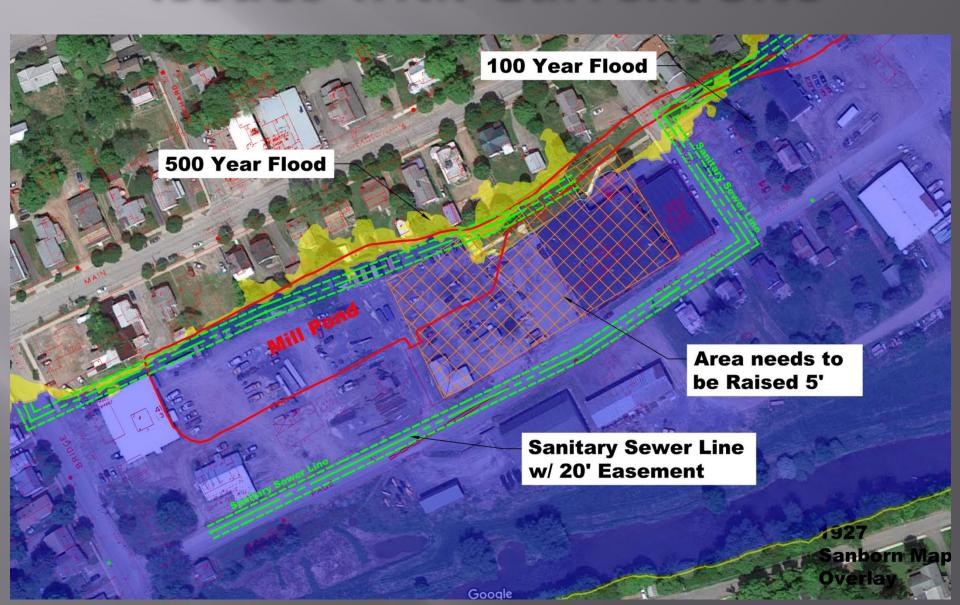
- Provides best results per design criteria
- More in depth model needs to be preformed
- Proposed floor elevation raised 5' from current floor elevation

#### OFF-SITE STORAGE

#### Minimize proposed building footprint and increase mitigation area

- Storing some equipment in an off-site fenced storage area
- Relocate salt shed, skeleton building, & hopper hanger off site
- Properties in Delhi Vicinity
  - Lack of suitable land
  - Unstaffed/unsecure locations
- Solid Waste Management Center (SWMC)
  - Minimal land suitable
  - Lost travel time
  - Walton patrol considerations

## Issues with Current Site

















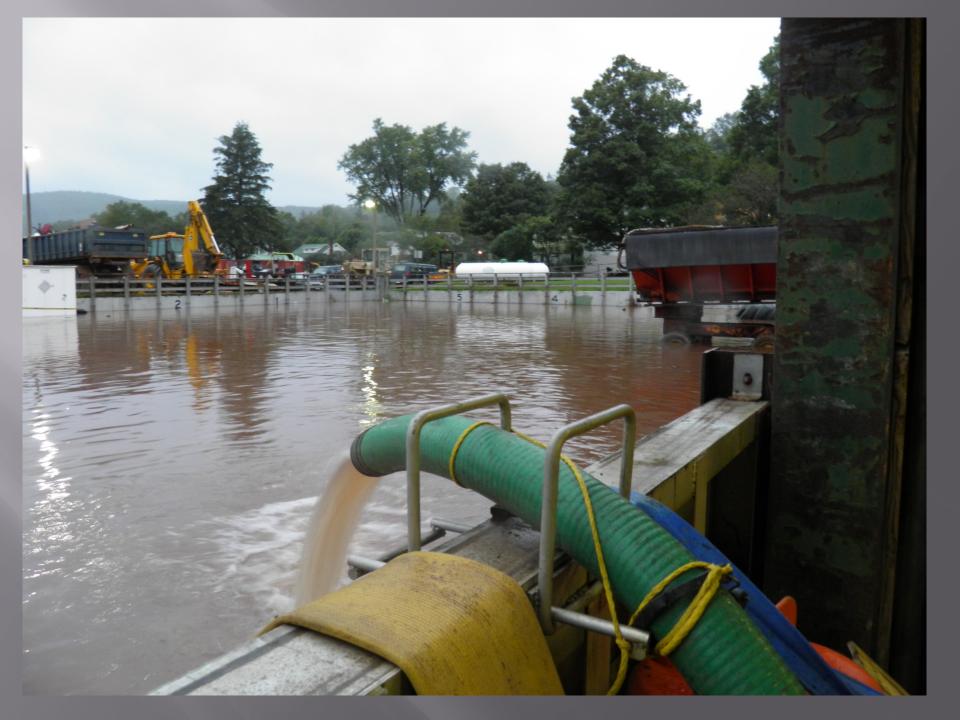




















- In the 100 year flood zone
  - New building will impact flooding
- Old Mill pond
  - Needs to be excavated and filled with suitable material
- Sewer easement
  - Limits our area of expansion
- Large area needs to be raised
  - Flood restriction, building accessibility problems
- Off site storage
  - Costly, will affect the logistics of DPW activities

- 2013 County All Hazard Mitigation Plan Update
  - Implement mitigation activities to protect people and infrastructure from flooding hazards
  - Prioritize and implementation of mitigation strategies or projects designed to benefit essential facilities
  - Relocate the County DPW Main Shop out of the floodplain

- Delaware County Soil and Water working diligently with local Flood Commissions to make the communities more flood resilient
- County Bridge standards increased to make the County system more flood resilient
- Executive Order 13690 prevents federal funding from being used for siting of facilities in floodplains wherever there is a practicable alternative

After evaluation of various building options & current site restrictions, the present site was deemed unpractical and uneconomical for future development



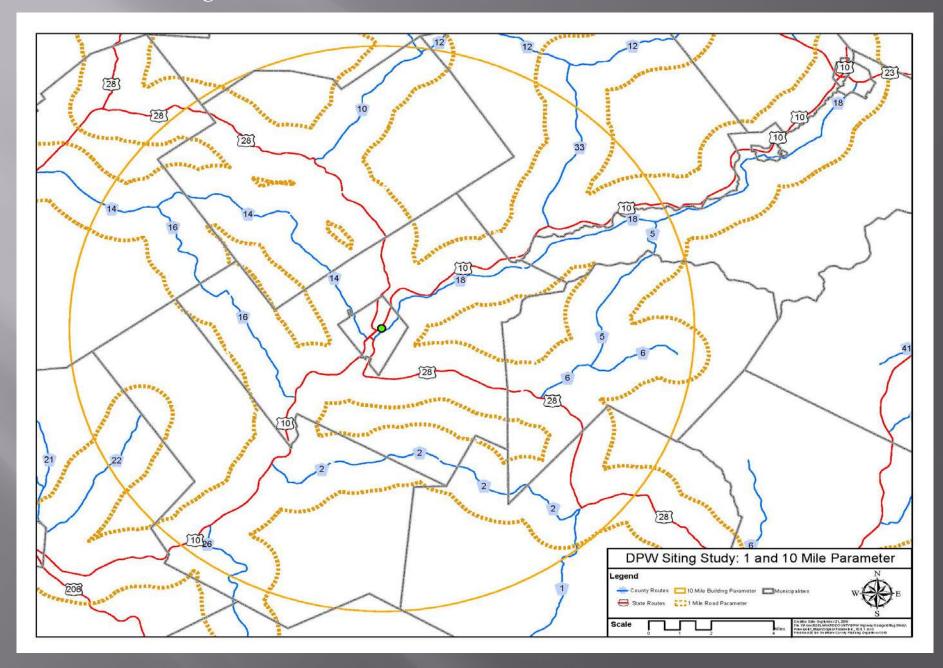
# Benefits to Facility Relocation

- Possible floodplain development
- Reduced high-water constrictions
- Community green space
- Extension of river walk
- Wickham's back on the tax rolls
- Possible location for community park

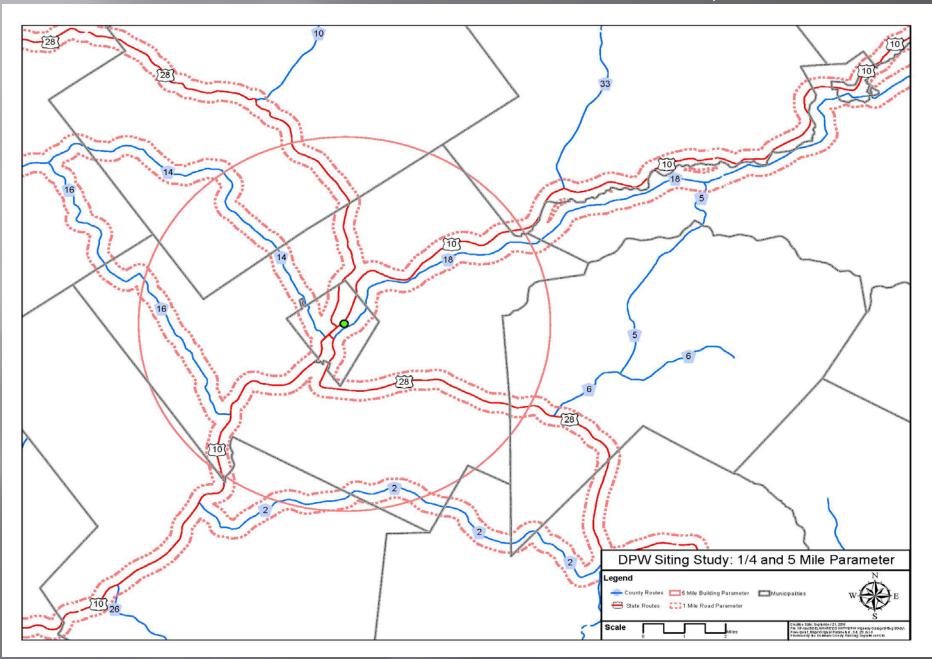
# Search for a New Site

- Delaware County Highway Committee asked the Planning department to establish a search criteria to find suitable sites in the local area.
- Original siting study criteria
  - 10 mile radius from Delhi
  - 1 mile from State or County Highway
  - 25 Acre lot size minimum
- The search criteria was then modified to:
  - 5 Mile Radius from Delhi
  - ¼ Mile from State/County Rd
  - Include 15-25 Acre lots along with 25 Acres and greater.
- A field visit was than performed on the top 3 sites

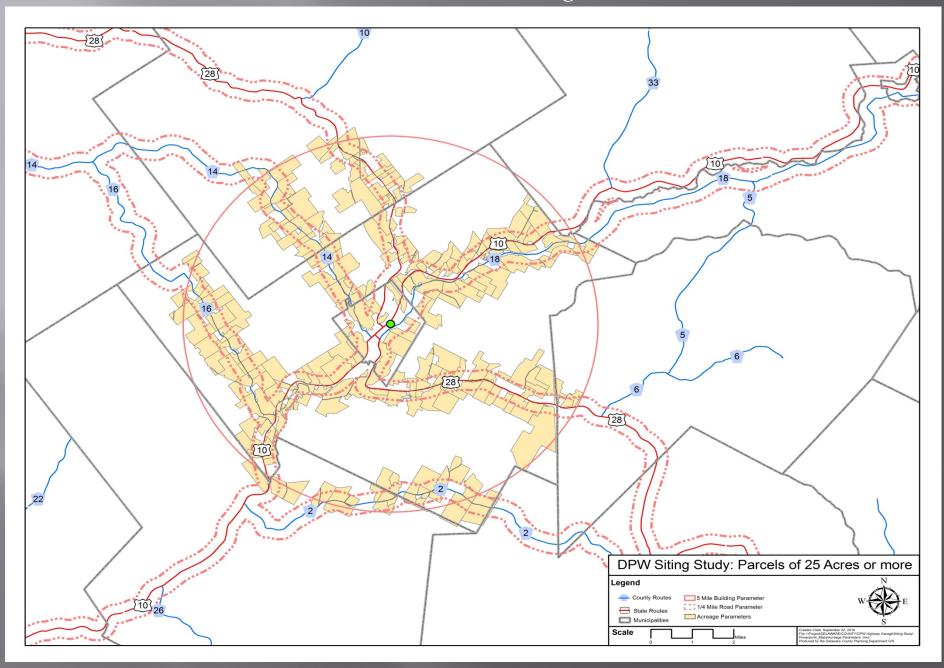
#### Original Parcel Selection Parameters: 10 miles and 1 mile



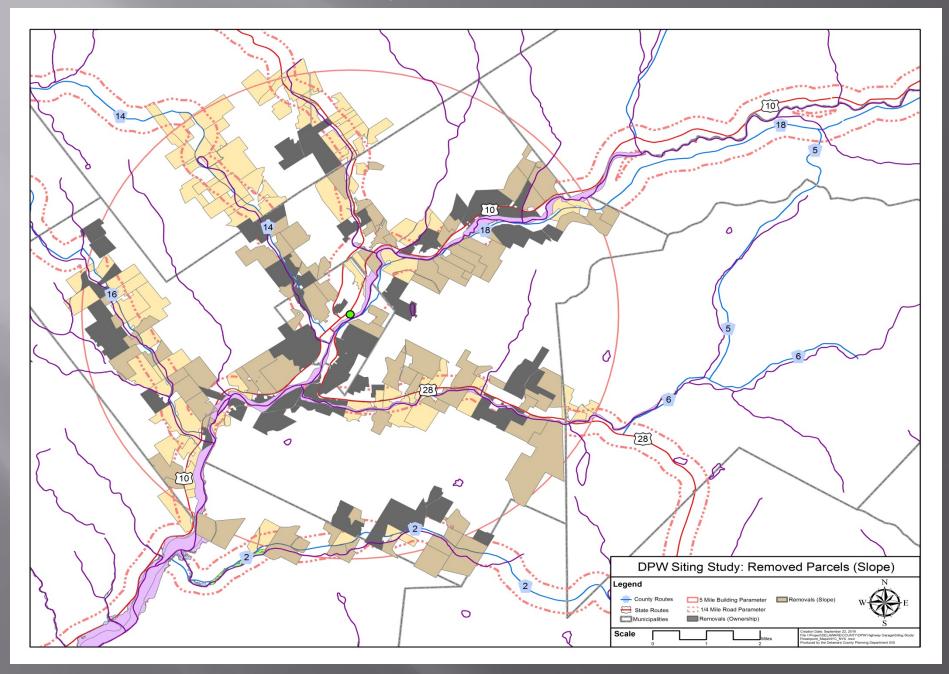
#### Revised Parcel Selection Parameters: 5 miles and 1/4 mile



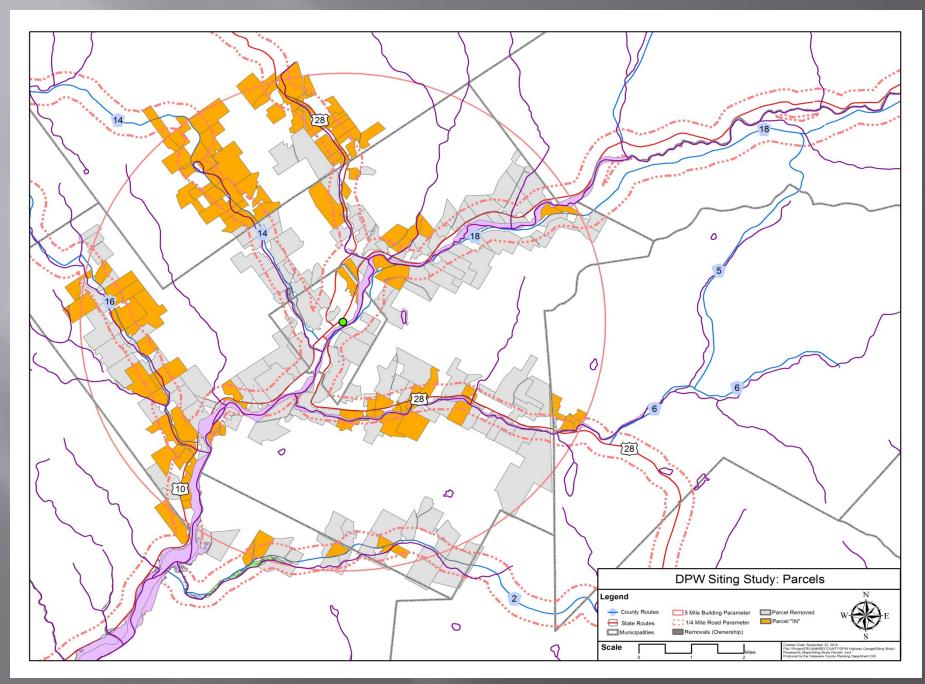
#### Parcel Identified with Acreage Parameter



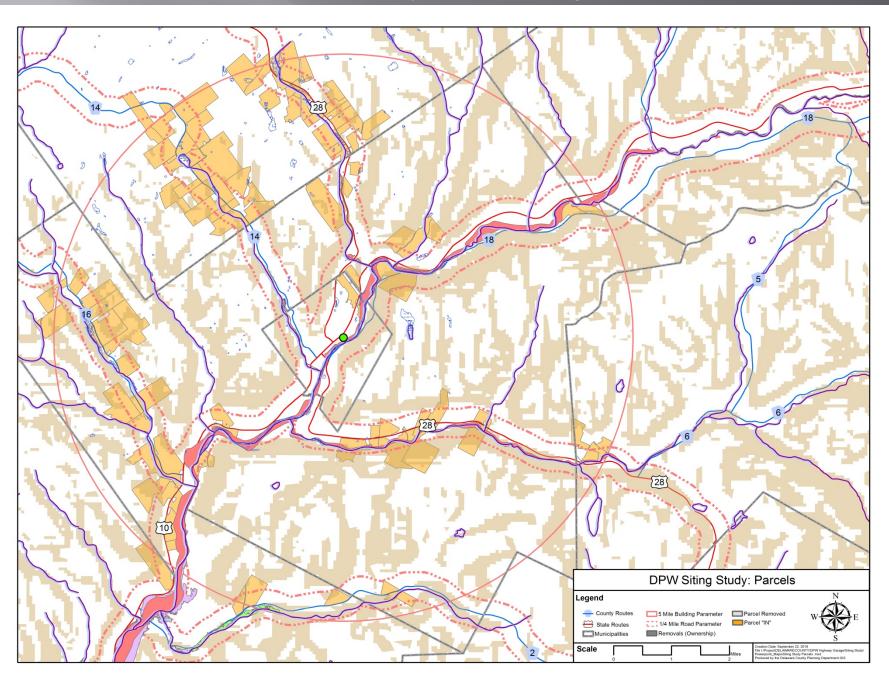
#### Parcel Removed by Ownership and Slope Limitations



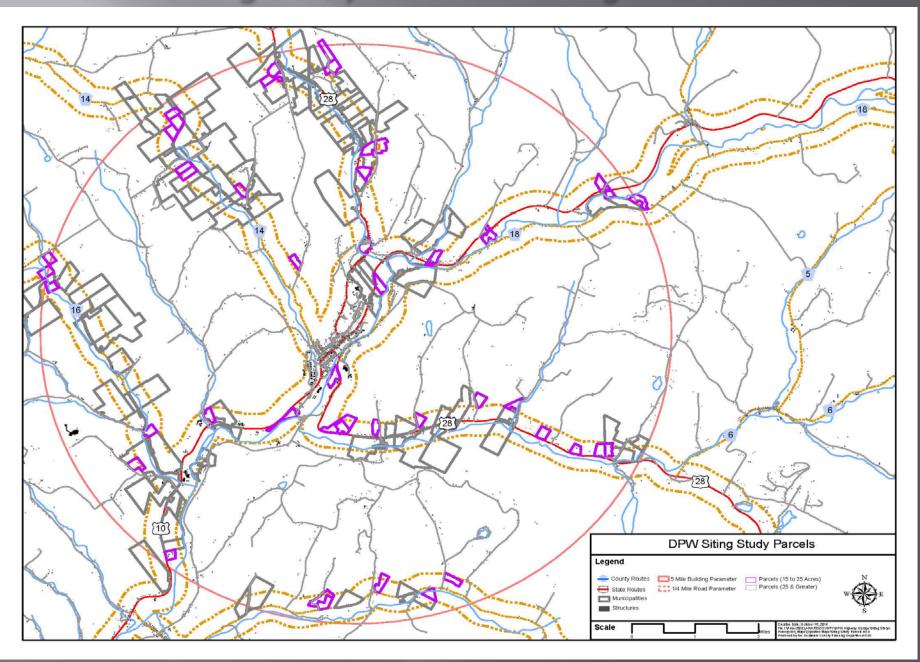
#### Parcels IN & Removed Results



#### Preliminary Parcel Findings



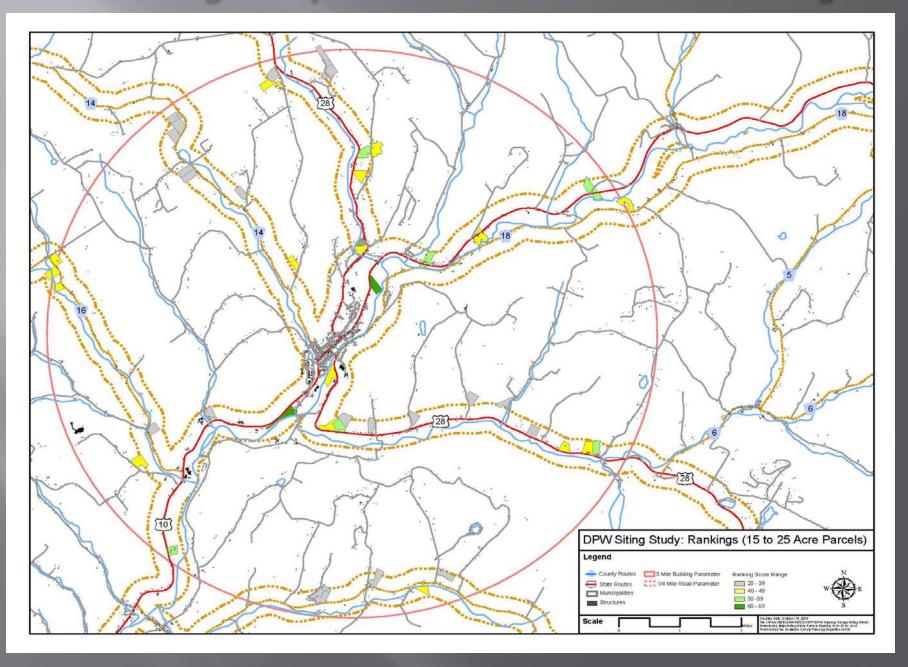
## DPW Siting Study Parcels: Acreage Parameters



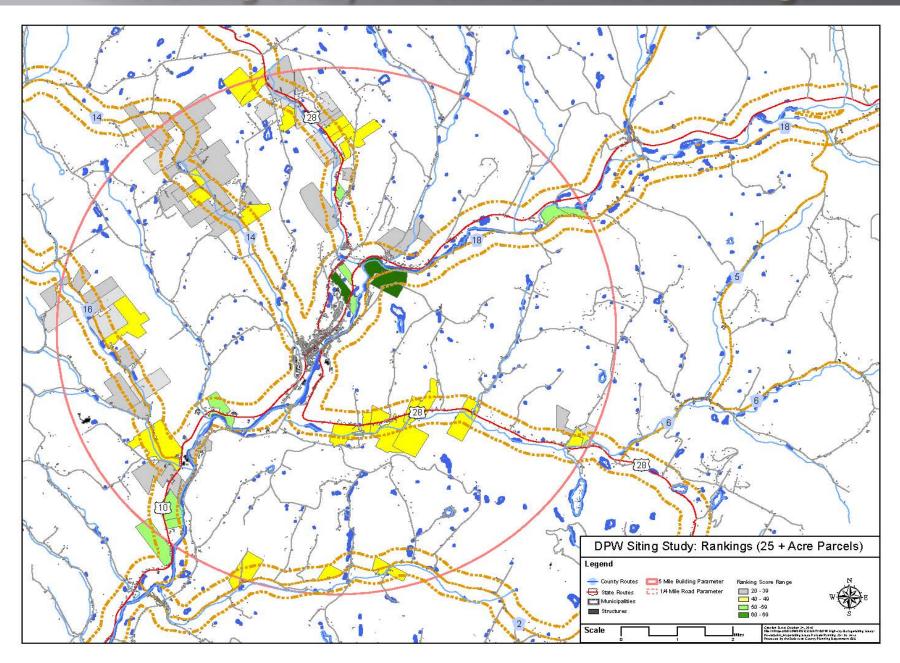
# Ranking Matrix Parameters

Description	Weight
Access - Directly to Site	10
3 Phase Power	10
Soils - Construction and Sanitary System	8
	10
Access - During Flood Events	
Access - Along Routes to Site for Tractor Trailers	10
Municipal Water	5
Municipal Sewer	5
Aquifer Possibilities	7
On-Site Grades	6
Existing Site Use - Occupied/Unoccupied	5
Existing Buildings On-Site - Demo/Usable	5
Benefits to Community	6
Proximity to Existing facility during Transition	5
Fiber for Computers/Phone	9

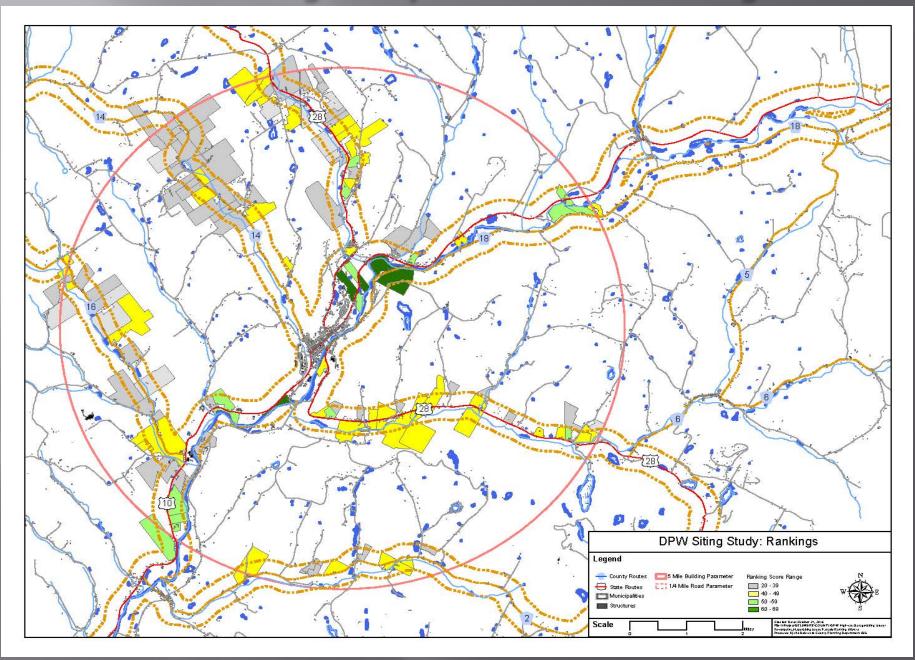
## DPW Siting Study Parcels: 15 to 25 Acre Rankings



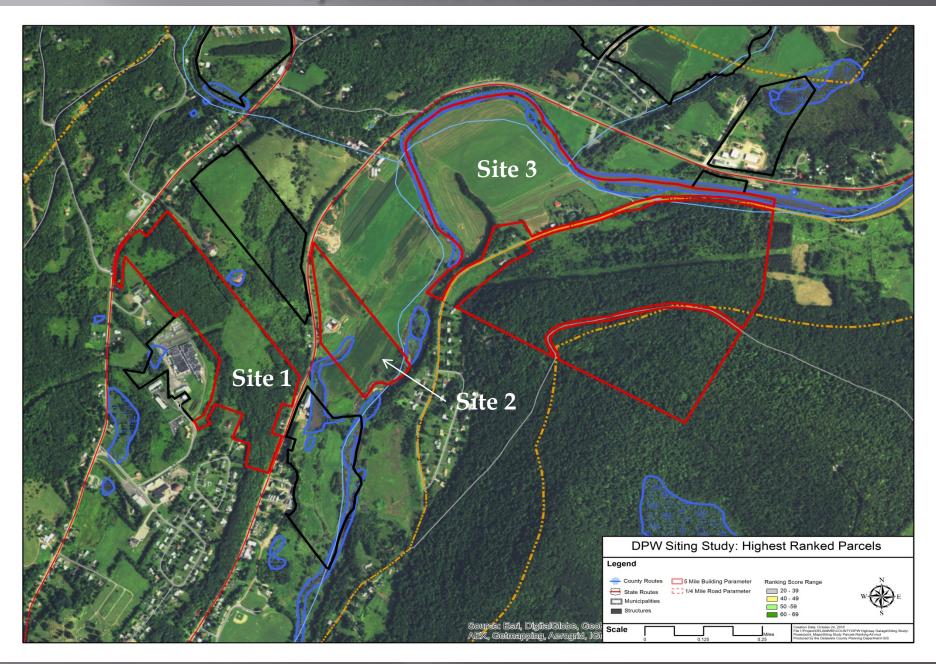
### DPW Siting Study Parcels: 25+ Acre Rankings



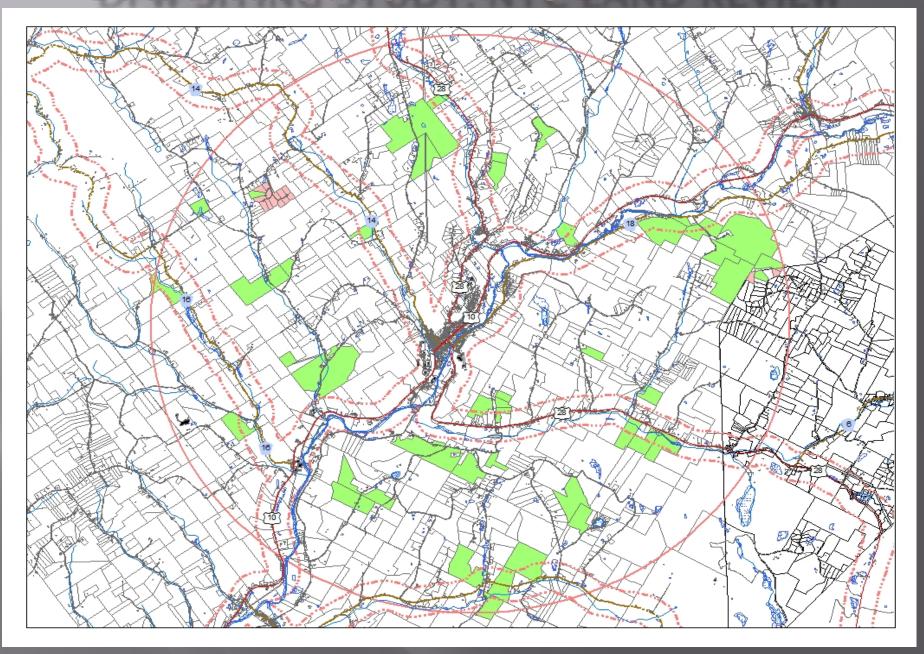
## DPW Siting Study Parcels: All Rankings



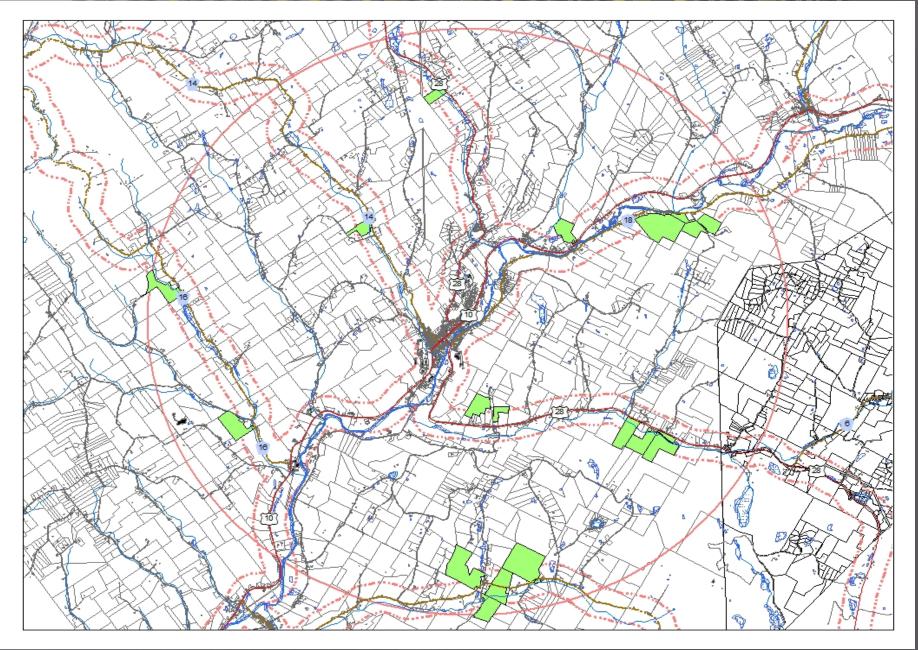
## Top Ranked Sites: Aerial



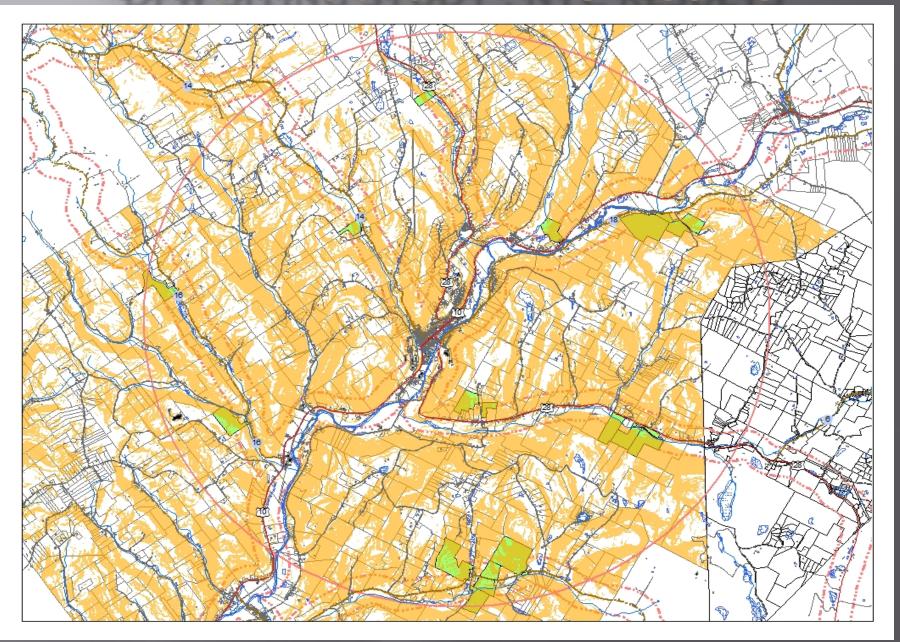
#### DPW SITING STUDY: NYC LAND REVIEW



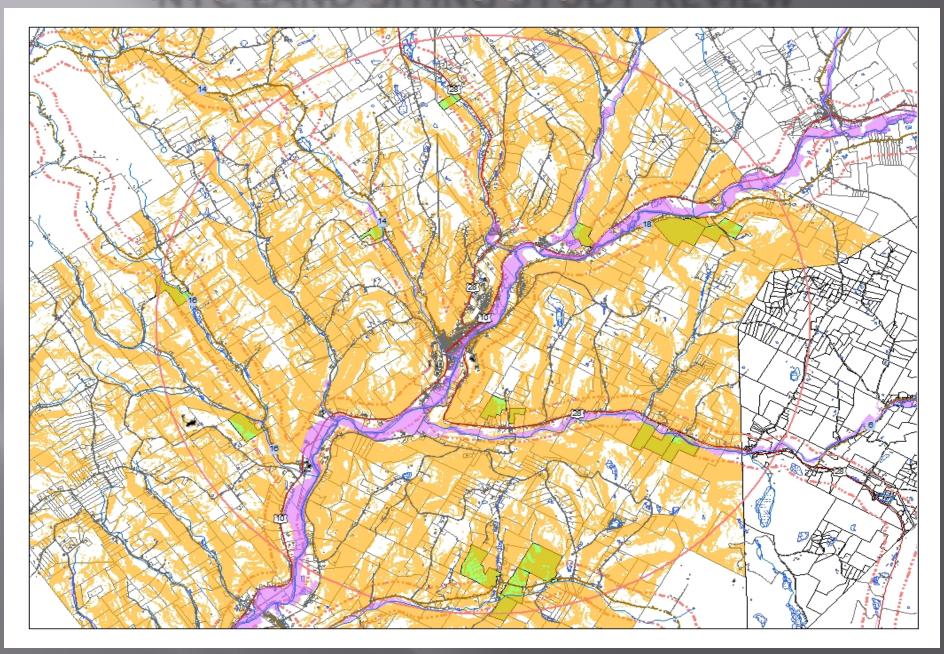
#### DPW SITING STUDY: DISTANCE CRITERIA



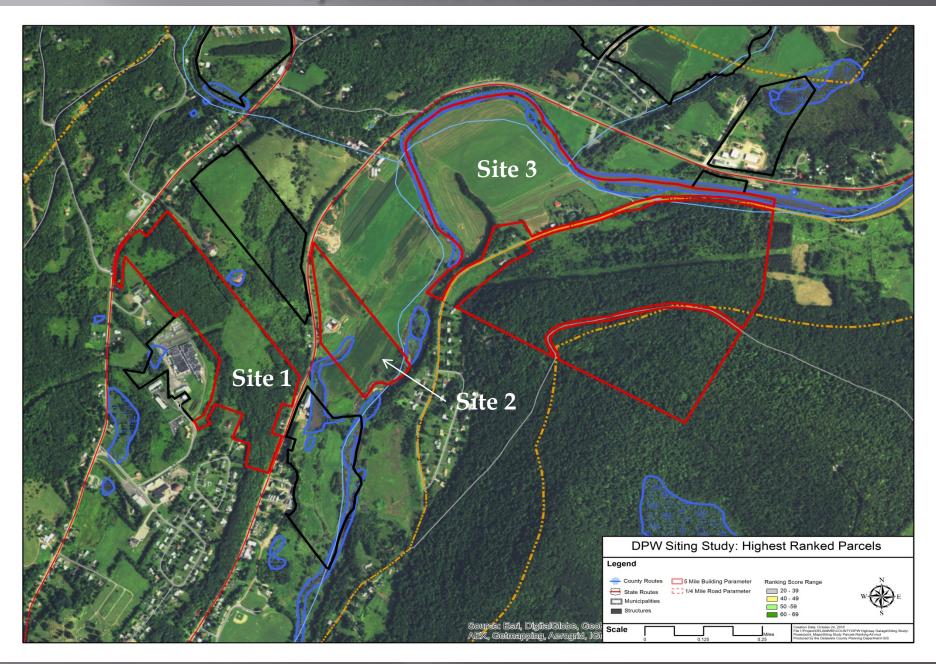
### DPW SITING STUDY: NYC RESULTS



### NYC LAND SITING STUDY REVIEW



## Top Ranked Sites: Aerial



## Site 1 Phoebe Lane (PSB)

- Excessive Earth work required to grade site
- Excessive Roadway improvements to Phoebe
   Lane
- Lot Size Limitation
- Electric easement though center of property

# Site 1 Phoebe Lane (PSB)



# Site 2 (Delhi Telephone)



#### Site 3 County Route 18 Property





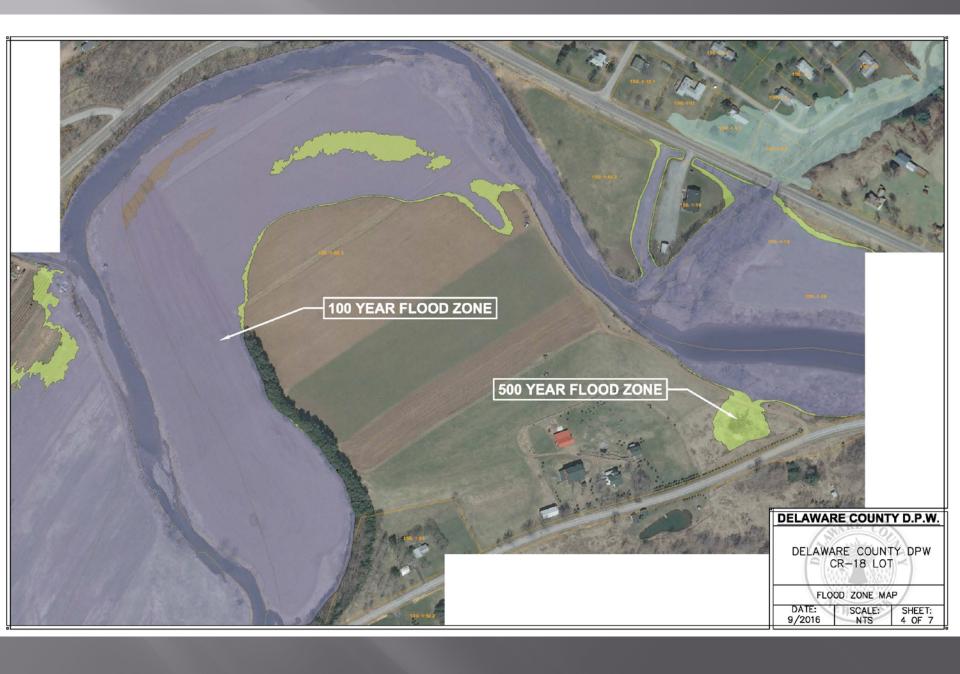
TOTAL PARCEL AREA 213.506 ACRES

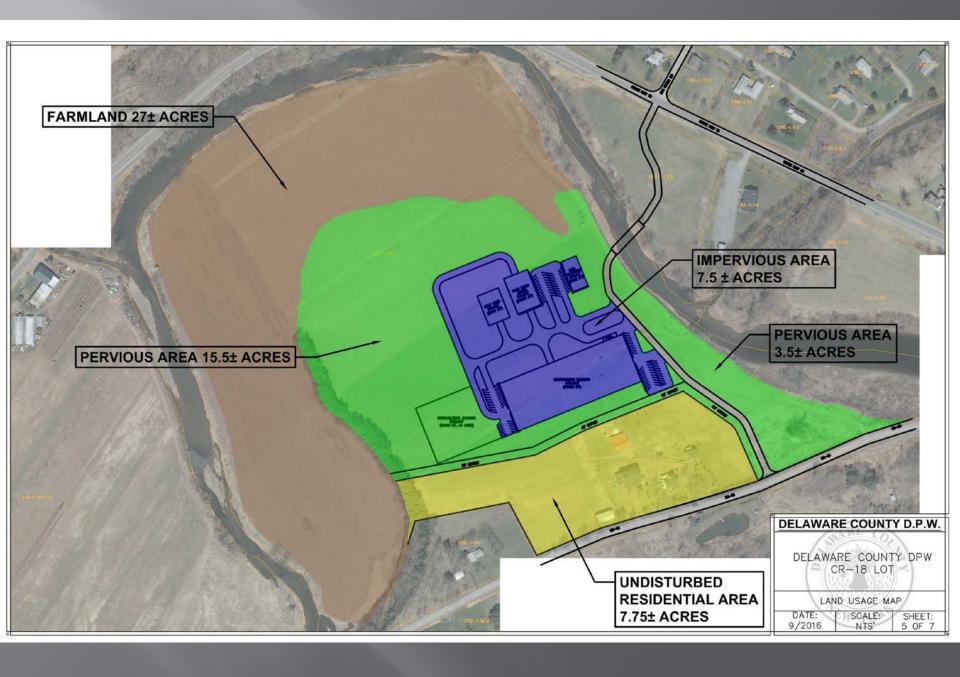
#### DELAWARE COUNTY D.P.W.

DELAWARE COUNTY DPW CR-18 LOT

AERIAL MAP

DATE: SCALE: SHEET: 9/2016 NTS 2 OF 7







# Advantages of site 3

- Minimal Earth work required
- Good gravel soils for construction
- Close to the County Seat
- Out of 100 & 500 Year flood zones
- Lot Size sufficient for entire facility
  - Room for expansion
- Bridge crossing the West Branch of the Delaware River (Community Benefit)
- Increase Floodplain Storage on Page Ave
  - Reduce flooding impacts on the Village
- Potential economic development



# FUNDING

#### Contributions to Project

- Machinery \$2,000,000
- Road \$3,500,000
- □ Capital \$6,000,000Sub-Total \$11,500,000

#### CHIPS

- Rollover \$ 962,608
- **2**017/2018 \$2,120,468

Sub-Total \$3,083,076

TOTAL CONTRIBUTIONS \$14,583,076

# Estimated Costs

- Property 213 acres \$1,395,000 (listed) = \$6550/acre
- Road connecting CR 18 to SR 10 \$510,000
- Bridge across W.Br. Del. River \$4,000,000
- Salt Shed \$400,000 (later date)
- Admin/Engineering/Planning Bldg (later date)
- Pole Barn/Lewis Bldg (later date)
- Maintenance Building \$12,500,000
- Septic \$135,000
- Well \$205,000
- Stormwater \$55,000
- Site Development \$750,000
- Fuel Depot (later date)
- Soft Costs \$3,678,000
- TOTAL ESTIMATED COST \$23,228,000

# Totals

FUNDING CONTRIBUTION \$14,583,076

TOTAL COST OF PROJECT

\$23,228,000

TOTAL AMOUNT REMAINING \$8,644,924

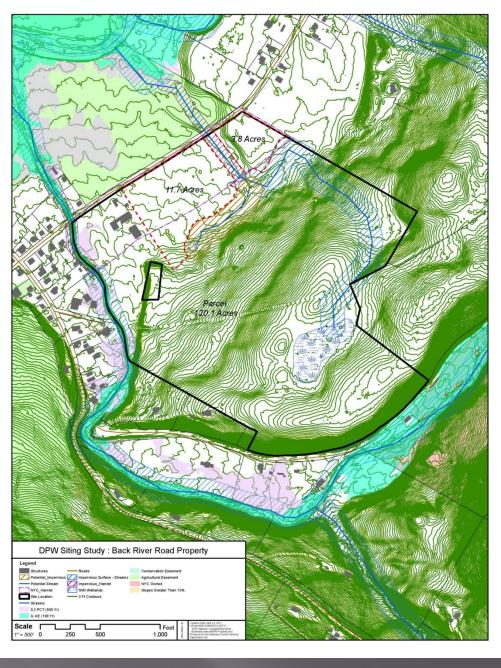
(Assumes NO Outside Funding for Project)

# DPW Siting Study Expanded Parcel Search

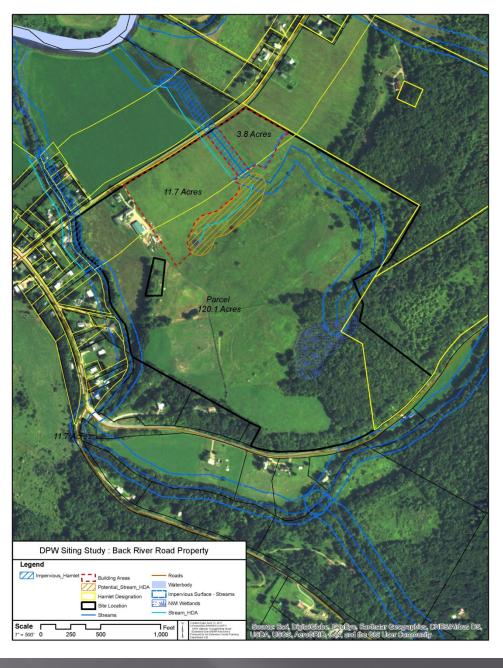
(Volunteered Parcels)

April 26, 2017

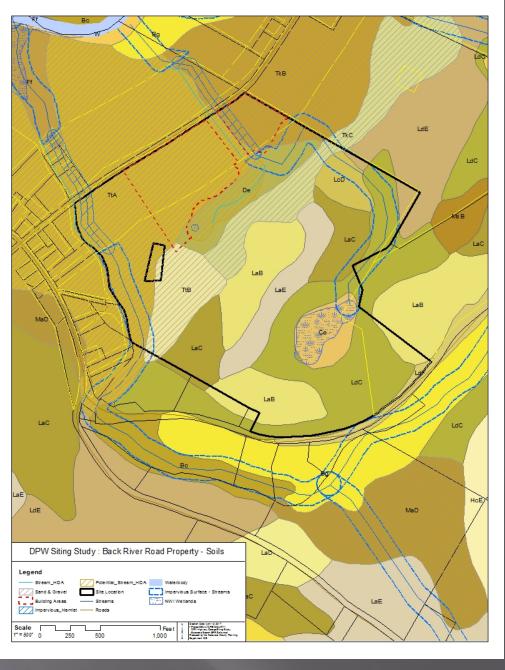
#### Back River Road Property



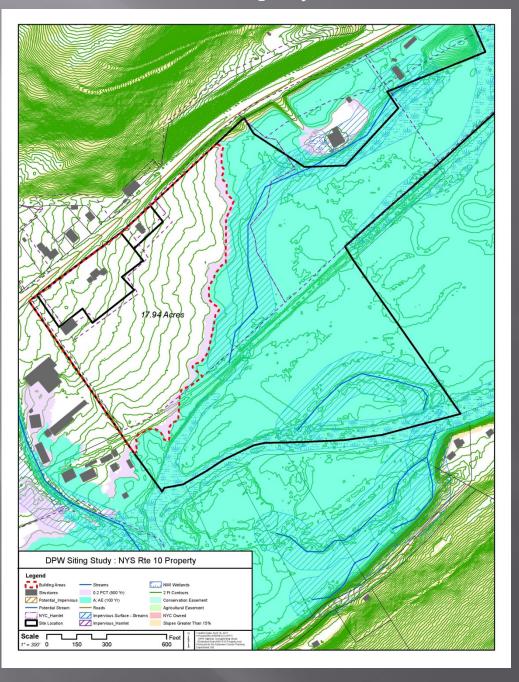
## Back River Road Property - Aerial



# Back River Road Property - Soils



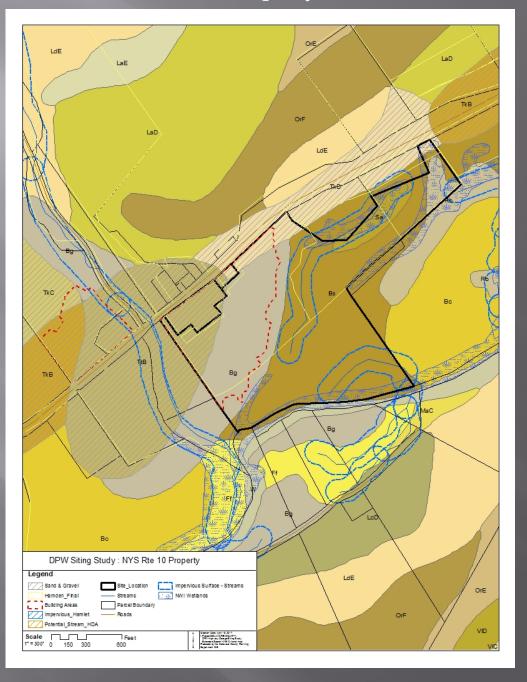
# NYS Route 10 Property - Soil



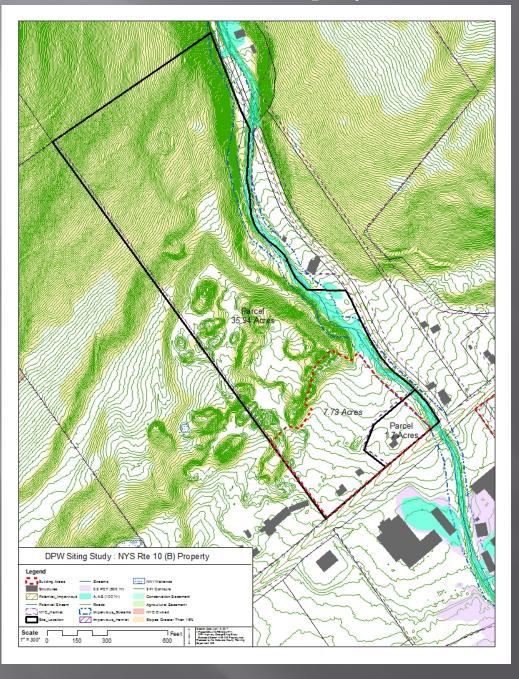
# NYS Route 10 Property - Aerial



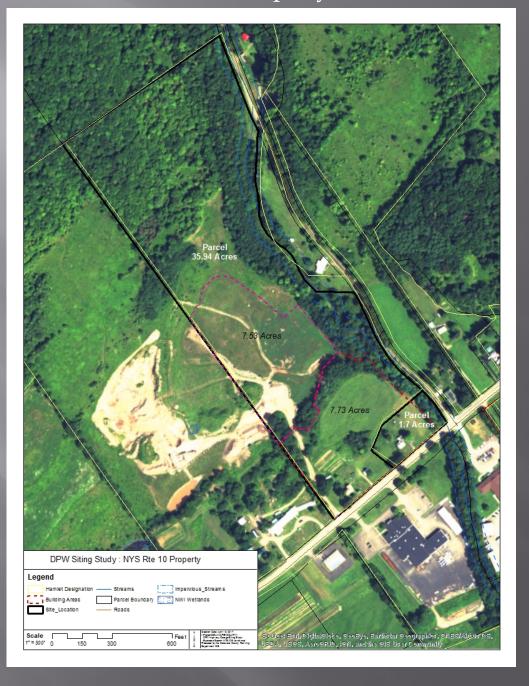
# NYS Route 10 Property - Soil



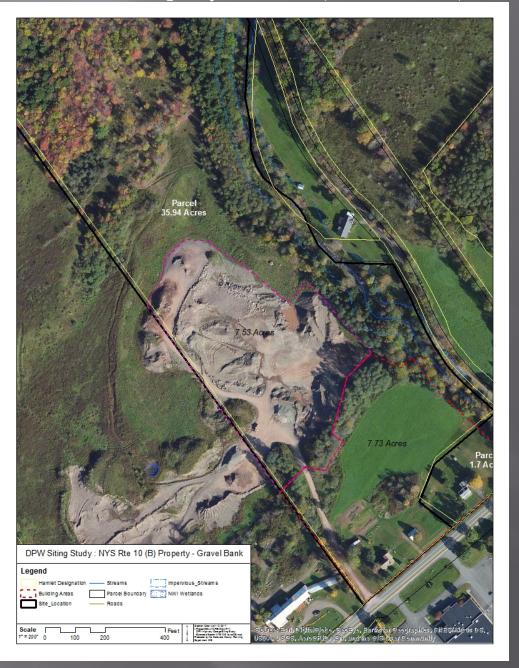
# NYS Route 10 B Property



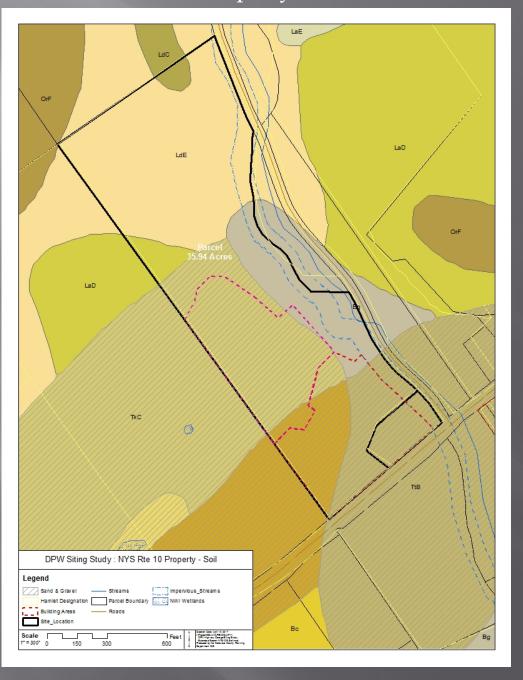
# NYS Route 10 B Property - Aerial



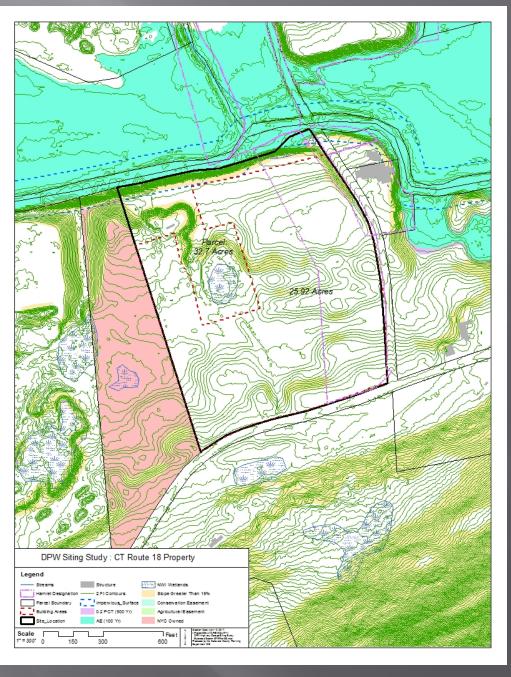
# NYS Route 10 B Property - Aerial (Gravel Bank)



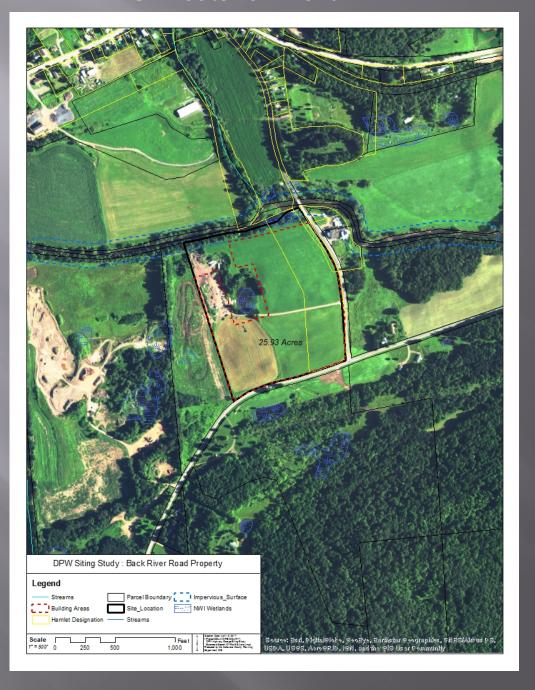
# NYS Route 10 B Property - Soil



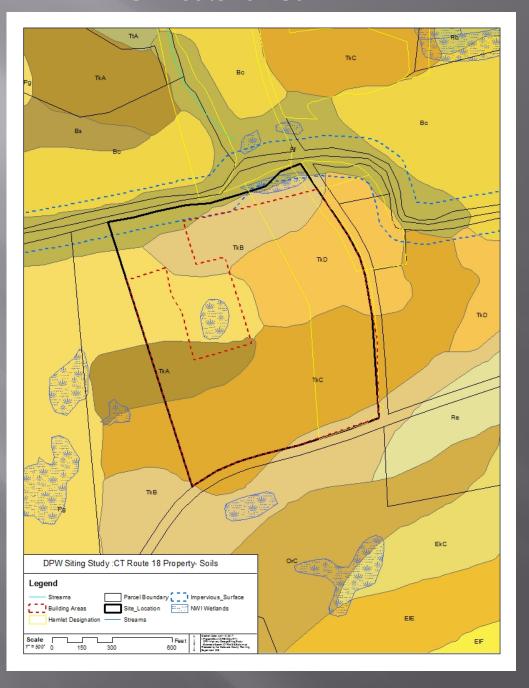
## CT Route 18 - Stamford



#### CT Route 18 - Aerial



#### CT Route 18 - Soil



# Site Rankings

Site Name	ADS	3PP	S_Septic	AFE	ATT	MW	MSR	AP	OSG	ESU_Occ	Ebldg	B_Comm	PEF	Wetlands	Fiber	Score	
Back River Rd	10	6	8	2 /				)	0 6	5 2	-	,		1	2		58
NYS Rte 10	10	8		, ,	10	) )			5 6		2			1	7		61
N 15 Kte 10	10	0		,	) 10	0	'	J	3 (	2	J	,		1	<b>'</b>		01
NYS Rte 10 B	10	8	8	3 5	5 10	0		)	0 2	2 2	C	) 1	1	1	8		55
CT Rte 18 S	10	8	8	3 2	2	2 2		1	5 3	3 5	C	) 2	2	1	7		56
																	- 7
																	- 7
																	- 7
																	-7
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Site Location	<u>Score</u>
Back River Road	58
NYS Route 10	61
NYS Route 10 B	55
CT Route 18	56

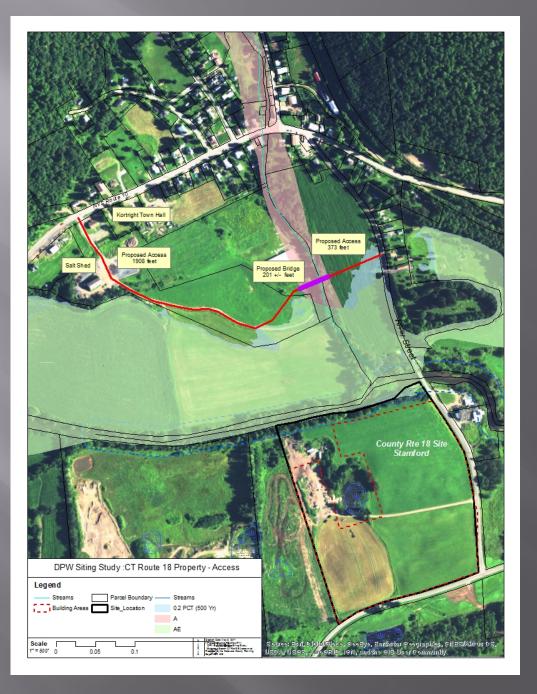
# DPW Siting Study Expanded Parcel Search

May 4, 2017

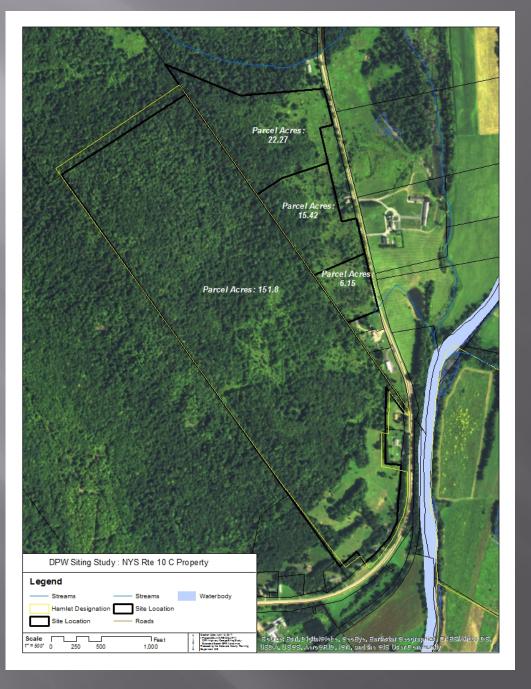
## CT Route 18 - Aerial : Stamford



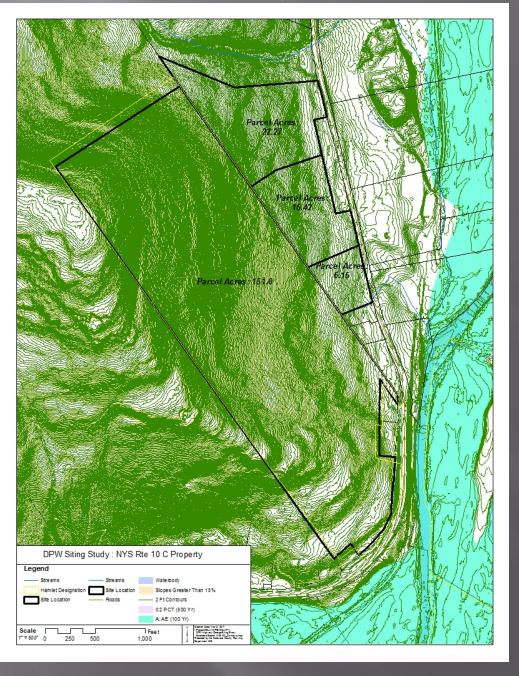
#### CT Route 18 - Access : Stamford



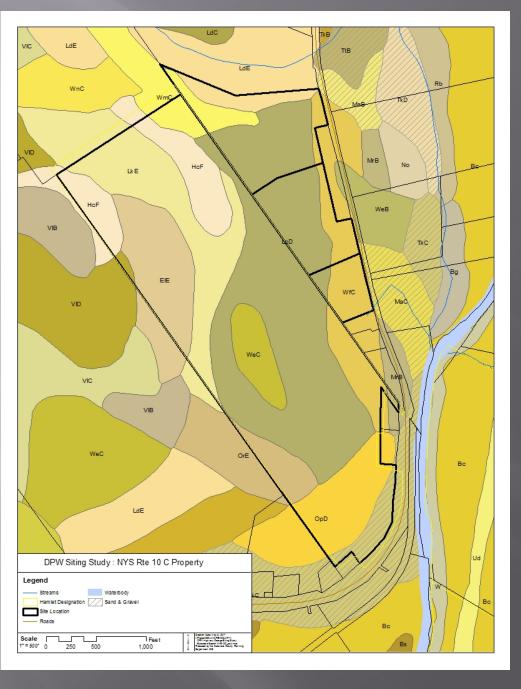
## NYS Route 10 C - Aerial : Hamden



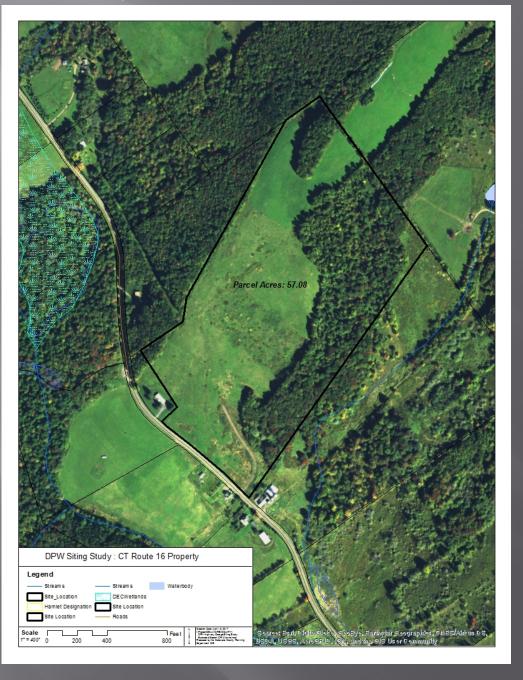
# NYS Route 10 C Property: Hamden



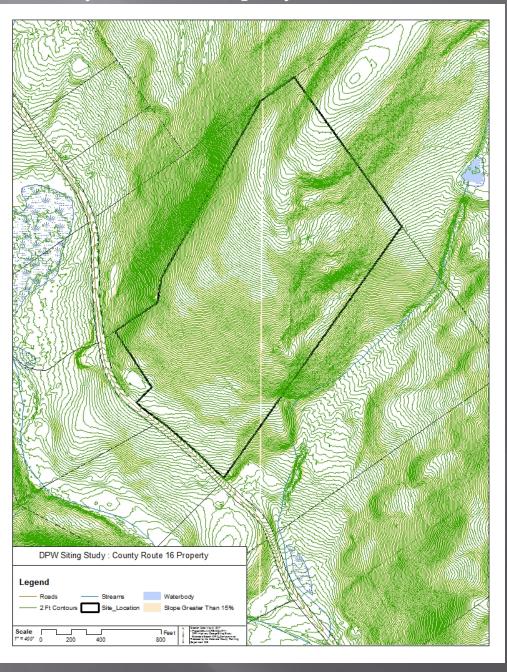
#### NYS Route 10 C - Soils : Hamden



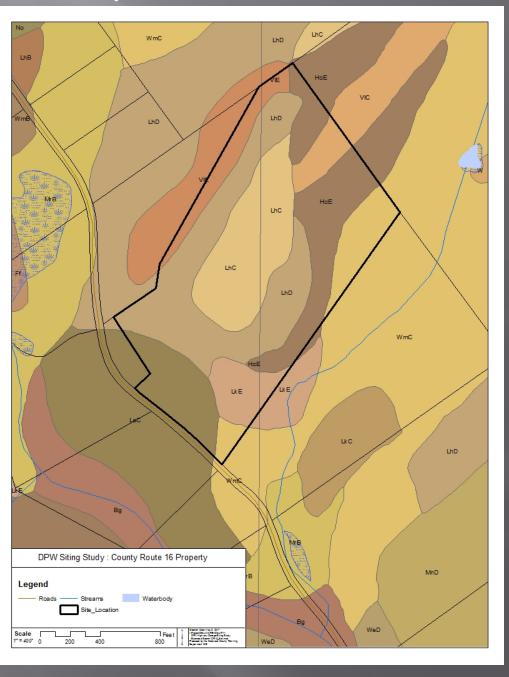
# County Route 16- Aerial : Delhi



# County Route 16 Property: Delhi



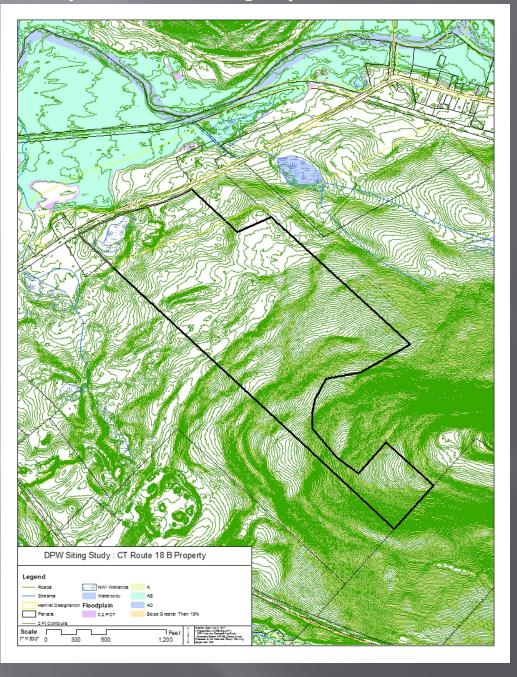
# County Route 16 - Soils : Delhi



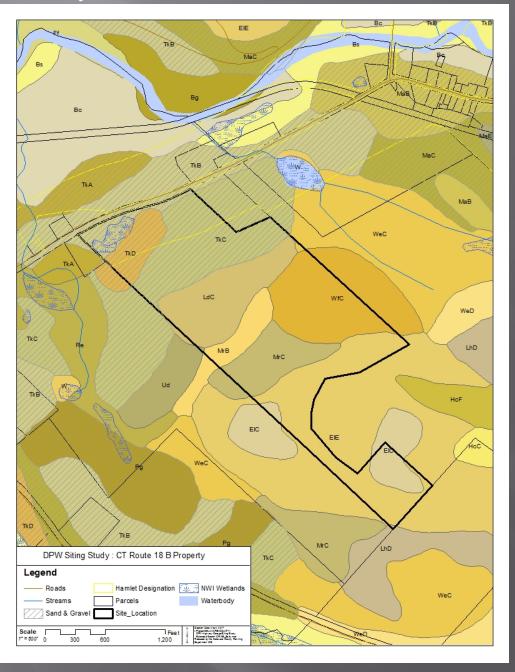
## County Route 18 B - Aerial : Stamford



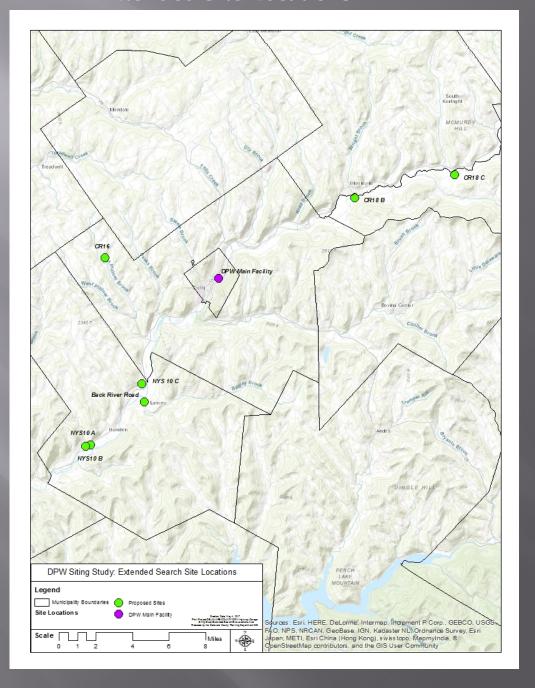
# County Route 18 B Property: Stamford



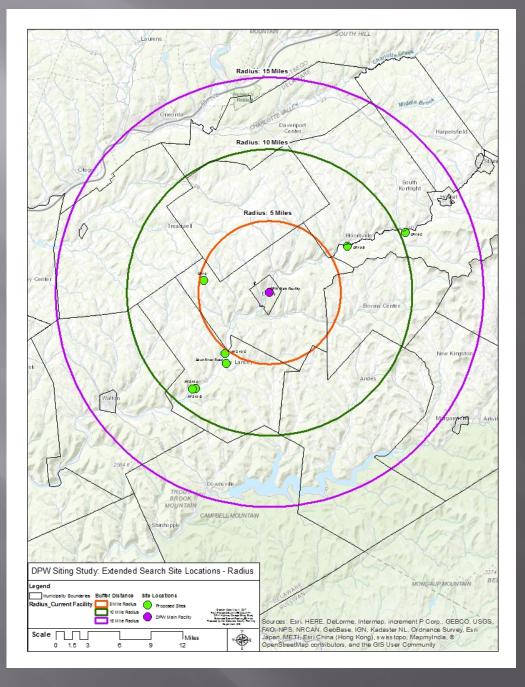
## County Route 18 B – Soils : Stamford



#### **Extended Site Locations**



#### Extended Site Locations - Radius



# TIMELINE OF IN-HOUSE SITING STUDY

- 8-30-2016 Woidt Engineer H&H Study Draft 3 Options for Page Ave
- 9-14-2016 Possible Location Presented to DPW Committee
- 9-28-2016 Siting Study Presented to DPW Committee
- 11-9-2016 Siting Study Rankings Presented to DPW Committee
- 12-14-2016 Site Visit Top 3 Ranked Presented to DPW Committee
- 1-4-2017 Siting Study Presented to County Board (Executive Session)
- 3-22-2017 DPW Chairman Presented to Public at Committee/Board
- 4-26-2017 Extended Search Study Presented to County Board
- 5-4-2017 Extended Search II Study Presented to DPW Committee
- 5-19-2017 Presentation to Ag Farmland Protection Board
- 6-28-2017 Wendel Siting Study Presentation to County Board
- Today's Public Informational Meeting with County and Wendel