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ENERGY CONSERVATION INITIATIVES

1. Elected to purchase 100 percent renewable electric supply beginning in December 2018.
2. The BOC voted to approve a contract with ESG on December 11, 2019 for a \$3.67 million energy savings project that will reduce the Township's carbon footprint by over 2,100 metric tons per year.

ENERGY CONSERVATION MEASURES (ECMs)

ECMs are focused on the reduction of energy consumption of buildings, thus reducing the carbon footprint.

Higher Efficiency HVAC Systems and Controls

3. County Line Road Complex – HVAC Split System; Condensing Boilers
4. Bala Public Library – Geothermal
5. County Line Road Complex – HVAC Split System; Condensing Boilers
6. Ardmore Community Center – HVAC Split System; Condensing Boilers
7. PALM – Condensing Boilers
8. Belmont Hills Community Center – HVAC Split System
9. Bryn Mawr Community Center – Chiller
10. Bala Gym – HVAC Split System
11. Gladwyne Fire Company – Condensing Boiler; Unit Heaters; Interlock unit heater with respective garage door to turn unit heater off when garage door is open
12. Belmont Hills Fire Company – Rooftop Units
13. Township Administration Building – Computer Server AC Split Systems; Rooftop Unit (scheduled for January)
14. Township Administration Building / Public Safety Building – Energy Recovery Unit
15. Parks and Highway Garages – Unit Heaters; Interlock unit heater with respective garage door to turn unit heater off when garage door is open
16. Refuse Garage – Unit Heaters (underway by staff); Interlock unit heater with respective garage door to turn unit heater off when garage door is open
17. Ardmore Public Library - Chiller
18. Penn Wynne Public Library – Various Equipment
19. Bala Public Library – Various Equipment
20. Ludington Library – Rooftop Unit

Currently in Bidding Phase

21. Ludington Public Library – HVAC Building Management System Replacement and Upgrade (Phase 1 completed; Phase 2 for the rest of the system is in Bidding Phase)

Higher Efficiency Lighting and Controls

22. County Line Road Complex
23. Ardmore Community Center
24. PALM
25. Bala Gym
26. Township Administration Building
27. Fleet Maintenance Building
28. Transfer Station

29. Refuse Vehicle Garage
30. Public Safety Building
31. Belmont Pump Station
32. Ardmore Pump Station
33. Penn Wynne Fire Station
34. Merion Fire Company of Ardmore
35. Bryn Mawr Fire Station
36. Union Fire Association
37. Gladwyne Fire Company
38. Belmont Hills Fire Company
39. Various Park Comfort Stations
40. Ardmore Public Library
41. Penn Wynne Public Library
42. Bala Public Library
43. Gladwyne Library
44. Staff has been retrofitting existing luminaires with LED retrofit lamps when the fluorescent lamps are burned out at various Township facilities.
45. Traffic Signal Conversion to LED

Currently in Bidding Phase

46. Ludington Public Library

Higher Efficiency Power Distribution Equipment

47. Ardmore Pump Station –Transformer
48. Cynwyd Pump Station – Transformer

Receptacle Load Control Devices

49. Township Administration Building

ENVELOPE IMPROVEMENTS

The building envelope (walls, doors, windows, roof) is the thermal barrier between outdoor and indoor environments and is a key role in affecting the levels of comfort, natural lighting, ventilation, and amount of energy required to heat and cool a building.

1. Ludington Public Library - Green Roof
2. Door, Frame, and Hardware Replacement at various facilities
3. Overhead Door Replacement at Koegel Complex (Phase 1 and 2 Completed; Phase 3 underway; Future phases to continue replacement)
4. Public Safety Building – Low Slope Roof Replacement
5. Township Administration Building - Exterior Wall Repairs and Low Slope Roof Replacement
6. Bala Library – Low Slope Roof Replacement
7. Ardmore Library – Masonry Wall Repairs
8. Wrenfield Pump Station – Exterior Wall Repairs

Currently in Bidding Phase

9. Ludington Public Library – Window Replacement

POLLUTION PREVENTION AND CONTROL

Measures and prevention practices to reduce, eliminate, or prevent pollution at its source for preserving wetlands, groundwater sources, and other critical ecosystems. Sustainable Water Management includes: passive measures to restore streambanks; re-establish floodplain connectivity; improve sediment and nutrient removal from existing Township stormwater basins; and use of Green stormwater management measures on Township Projects. Sustainable Wastewater Management includes: mitigating inflow and infiltration; reduce wastewater treatment load by preventing surface rainwater and groundwater from entering the sewer; and improve pump station operation efficiencies with higher efficiency equipment and controls.

Sustainable Water Management

1. Glanraffon Creek Iron Contaminated Groundwater Treatment – Passive System
2. Richie Ashburn Park – Bioswale
3. Warner Playground – Rain Garden
4. Bala Cynwyd Park – Rain Garden
5. South Ardmore Park – Rain Garden; Permeable Paved Walking Path
6. General Wayne Park – Permeable Paved Plaza
7. Ashbridge Memorial Park – Rain Garden, Bioswale, and Stormwater Management System
8. MS4 – Education and Outreach Program
9. Shortridge Memorial Park Stream Restoration and Bank Stabilization - Pollution Reduction Project
10. Knox Basin Improvements - Pollution Reduction Project
11. Public Safety Building – Low-flow lavatory faucets
12. Various Park Comfort Stations – Low-flow lavatory faucets
13. Various Libraries - Low-flow lavatory faucets

Currently in Bidding Phase

14. Wynnewood Stream Restoration and Bank Stabilization - Pollution Reduction Project
15. Harriton Stream Restoration and Bank Stabilization - Pollution Reduction Project

Sustainable Wastewater Management

16. Sewer lining and manhole reconstruction at various locations
17. Cynwyd Pump Station – Soft starts for sewage pumps
18. Gulph Creek Pump Station – Soft starts for sewage pumps
19. Wrenfield Pump Station – Soft starts for sewage pumps
20. Spring Mill Pump Station – VFDs for sewage pumps
21. Hollow Pump Station – VFDs for sewage pumps
22. Mill Creek Pump Station – VFDs for sewage pumps
23. Glanraffon Pump Station – VFDs for sewage pumps
24. Belmont Pump Station – VFDs for sewage pumps; Replacement of Motor Control Center
25. Ardmore Pump Station – VFDs for sewage pumps; Replacement of Motor Control Center
26. Spring Mill Pump Station – Replacement of Sewage Pumps
27. Public Safety Building – Low-Flow Water Closets and Urinals
28. Various Park Comfort Stations – Low-Flow Water Closets
29. Various Libraries - Low-Flow Water Closets

Clean Air

30. Replacement of 3 traditional police vehicles with hybrids
31. Institution of a restricted vehicle idle policy
32. Replacement of old pre-emissions diesel vehicles with new Certified clean diesels
33. Conversion of gasoline powered salt spreaders to hydraulic spreaders
34. Paint with Low Volatile organic compounds (VOCs)
 - a. Building
 - b. Roadway Striping
35. Cleaning products with Low Volatile organic compounds (VOCs)
36. Fuel System Vapor Recovery of gasoline or diesel, so it does not escape into the atmosphere
37. Various Traffic Congestion Mitigation Projects
 - a. Bryn Mawr and County Line Road (5-Points)
 - b. Ardmore Avenue Corridor
 - c. St Asaphs Road Corridor
 - d. Lancaster Avenue Corridor
 - e. Montgomery Avenue Corridor
 - f. City Avenue Corridor

SUSTAINABLE MANAGEMENT OF RESOURCES

Measures and practices to use resources in a way and at a rate that maintains and enhances the resilience of the ecosystems and the benefits they provide to meet the needs of present generations of people without compromising the ability of future generations to meet their needs.

Repurpose existing asset

1. Recycling Program
 - a. Paper
 - b. Metal
 - c. Glass
2. Renovation of Former Cynwyd Pump Station to Comfort Station

Use of Natural Materials

3. Ashbridge Memorial Park - Gravel walking paths