PENN FOREST TOWNSHIP
CARBON COUNTY, PENNSYLVANIA

ORDINANCE NO. _____

AN ORDINANCE OF THE TOWNSHIP OF PENN FOREST, COUNTY OF CARBON, COMMONWEALTH OF PENNSYLVANIA, AMENDING CHAPTER 240 (ZONING) OF THE CODE OF THE TOWNSHIP OF PENN FOREST, AND AMENDING THE PENN FOREST ZONING MAP.

WHEREAS, Article VI of the Pennsylvania Municipalities Planning Code, 53 P.S. § 10601, *et seq.*, authorizes the Township of Penn Forest to enact, amend and repeal Zoning Ordinances and the Zoning Map within the Township; and

WHEREAS, the Board of Supervisors of the Township of Penn Forest deems it to be in the best interest and general welfare of the residents of the Township to update and amend provisions of the Penn Forest Township Zoning Ordinance to provide for Data Centers and Data Center Accessory Uses, woodland protection and replacement, performance standards, impact assessments and studies; to amend exceptions to height limits; and to amend the Penn Forest Township Zoning Map to add a DC Data Center Overlay District.

NOW, THEREFORE, BE IT ORDAINED AND ENACTED, by the Board of Supervisors of the Township of Penn Forest as follows:

PART 1. Zoning Map Amendment. The existing Penn Forest Township Zoning Map is hereby amended to add a new DC Data Center Overlay District in the location indicated on the map attached hereto as "Exhibit A," which is labeled "Appendix A: Penn Forest Township Zoning Map Amendment" and entitled "DC Data Center Overlay District."

PART 2. Article III, Terminology, §240-26, Definitions, is amended to add the following definitions:

DATA CENTER
A building or buildings which are occupied primarily by computers and/or telecommunications and related equipment where digital information is processed, transferred and/or stored, primarily to and from offsite locations. This use does not include computers or telecommunications related equipment that is secondary and customarily incidental to an otherwise permitted use on the property, such as servers associated with an office building. This use shall also include cryptocurrency mining, blockchain transaction processing, and server farms. A Data Center may include Data Center Accessory Uses.

DATA CENTER ACCESSORY USE
Ancillary uses or structures secondary and incidental to a Data Center use, including but not limited to: administrative, logistical, fiber optic, storage, and security buildings or structures; sources of electrical power such as generators used to provide temporary power when the main source of power is interrupted; electrical substations; utility lines; domestic and non-contact cooling water and wastewater treatment facilities; water holding facilities; pump stations; water towers; environmental controls (air conditioning or cooling towers, fire suppression, and related equipment); security features, provided such data center accessory

uses or structures are located on the same tract or assemblage of adjacent parcels developed as a unified development with a Data Center. The use may include energy generation systems used or intended to be used to supply power to the Data Center during normal operations.

FULLY SHIELDED

A source of light designed or shielded in such a manner that no light is emitted, either directly or indirectly, at or above a horizontal plane running through the lowest light-emitting part of the light source.

GROUNDWATER

The supply of water contained in interconnected pores located below the water table in an aquifer or geologic formation that forms the natural reservoir for potable water. Groundwater sources include: infiltration of precipitation, streams, lakes, or other water sources.

LIGHT TRESPASS

Light illuminating past any property line without permission.

LUMINAIRE

A complete lighting unit, including the light source, housing, optics, electronics, and other necessary components for the purpose of providing outdoor illumination.

NADIR

A downward vertical line directly beneath a luminaire, opposite to zenith.

RECHARGE, AQUIFER RECHARGE, OR GROUNDWATER RECHARGE

The replenishment of water by precipitation or connection from an overlying water body or watercourse. Recharge occurs as precipitation percolates through soils and unconsolidated overburden general moving downward until it reaches the upper saturated zone or water table. Recharge can also occur from a stream, lake, pond, etc. when the water body or watercourse is disconnected (lies above) the water table and therefore leaks or drains downward to connect to the upper saturated zone.

SENSITIVE RECEPTOR

Sensitive receptors shall include residential uses, schools, preschools, child day care, adult day-care centers, hospitals, assisted-living facilities, long term care facilities, nursing homes, personal care homes, retirement communities, treatment centers, community centers, places of worship, parks (excluding trails), campgrounds, and dormitories.

SPECIMEN TREE

Specimen trees shall include the following:

A. All healthy, non-invasive trees over 20 inches dbh.

B. All trees listed as a Species of Special Concern by the Commonwealth of Pennsylvania.

C. Any unique, rare, or otherwise specifically selected tree considered worthy of conservation by Penn Forest Township, because of its species, size, shape, form, historical importance, or any other significant characteristics.

WATER BODY An area of surface water such as a pond, lake, or reservoir.

WATERCOURSE
Any channel or conveyance of surface water having defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

PART 3. Article IV, Districts, §240-27, Designation of districts and purposes, is amended to add a new subsection C. and renumber current section C. as "D." as follows:

C. For the purpose of this chapter, the following overlay zoning districts shall be established:

(1) DC Data Center Overlay District. The DC Data Center Overlay District shall be an optional district that overlays the underlying zoning district. An applicant shall have the option of developing property in accordance with either the DC Overlay District standards or the underlying district standards.

D. See Chapter 110, Floodplain Management, of the Code, which regulates flood-prone areas.

PART 4. Article IV, Districts, §240-27., Purposes in each district, is amended to renumber current section D. as "E." and add subsection (8) to the end of the list of district purposes as follows:

E. Purposes of each district. In addition to serving the overall purposes and objectives of this chapter, each zoning district is intended to serve the following purposes:

(8) DC Data Center Overlay District. To provide for the orderly and efficient development of Data Centers and Data Center Accessory Uses. To protect the public health, safety, and welfare of residents by establishing environmental, performance, and other standards, including, but not limited to, standards for noise, vibration, water use, energy use, and natural resource protection.

PART 5. Article IV, Districts, §240-32, Table of allowed uses in each zoning district, is amended as follows and as show in Exhibit B:

- Add a "DC" column representing the Data Center Overlay District.
- Add two new rows for "Data Center (§240-40.2)" and "Data Center Accessory Uses (§240-40.2)" within the table's "Industrial Uses" category and underneath the row for "Building supplies and building materials, wholesale sales of," and for each new row, add a "C" in the column for the DC district and an "N" in the columns for all other districts.
- For all other rows in the Table, add an "N" to the DC column, such that the only uses permitted in the DC column are Data Center and Data Center Accessory Uses.

PART 6. Article IV, Districts, §240-33, Dimensional requirements in each district and site capacity, subsection A, is amended to add a reference to the Data Center Overlay District as follows:

A. The following area, yard and building requirements shall apply for the specified zoning district, unless a more restrictive requirement for a specific use is required by § 240-42 or 240-43 or another section of this chapter. For subdivisions on tracts with 10 acres of net

buildable site area or more involving Conservation Subdivision Design, the dimensional requirements in § 240-39G and setback requirements in § 240-39H shall apply. For Data Centers and Data Center Accessory Uses, the dimensional requirements of the Data Center Overlay District shall apply. All measurements shall be in feet unless otherwise stated. See definitions of terms (such as lot width) in § 240-26.

PART 7. Article IV, Districts, §240-33, Dimensional requirements in each district and site capacity, subsection A, references the "Table of Dimensional Requirements in Each District and Site Capacity," which is included in Chapter 240, Zoning, as Attachment 2. The "Table of Dimensional Requirements in Each District and Site Capacity" is hereby amended to add a row to the end of the Table for the Data Center Overlay District as follows:

Zoning District: Type of Use	Min. Lot Area (square feet) (Note E). See also density limits for new lots in § 240-33D	Min. Lot Width Measured at Min. Building Setback Line (feet)	Front Yard Setback (ft.) (Note D)	Min. Rear Yard Setback (feet)**	Min. Side Yard Setback** (each) (ft.) (See § 240-63B for corner lots)	Maximum Percent Building Coverage	Maximum Percent Impervious Coverage
Data Center Overlay District a) Data Center b) Data Center Accessory Uses	a) and b) See § 240-40.2						

PART 8. Article IV, Districts, add a new section numbered §240-40.2 entitled "DC Data Center Overlay District" as follows:

§240-40.2 **DC Data Center Overlay District.**

A. Applicability.

(1) The provisions of this §240-40.2 shall apply to the area within the boundaries of the Data Center Overlay District, which is shown in Appendix A.

(2) In the case of a Data Center or Data Center Accessory Use, for any lot or property, or portion thereof, within the DC Data Center Overlay District, the regulations of said overlay district shall supersede any regulations of the underlying zoning district which are in conflict with those of this §240-40.2.

(3) Except as provided for in §240-40.2 A(2) above, where there is a conflict between the standards of this §240-40.2 and ~~the~~ any other standard of this chapter or any other chapter of the Penn Forest Township Code, the more restrictive shall apply.

B. Use regulations. Data Centers or Data Center Accessory Uses shall be permitted by conditional use within the Data Center Overlay District when approved in compliance with the procedures, standards, and criteria contained in §240-23 and this section §240-40.2.

C. Dimensional standards. The dimensional standards of Data Centers and Data Center Accessory Uses shall be as follows:

(1) The minimum lot area shall be 30 acres.

(2) The minimum lot width at the building setback line 200 feet.

(3) The maximum building coverage shall be 40%.

(4) The maximum impervious coverage shall be 65%.

(5) The maximum building height for a Data Center shall be 45 feet, plus up to a maximum additional 15 feet for roof-mounted equipment such as cooling and ventilation systems, HVAC units, and cooling towers.

(6) The maximum height of Data Center Accessory Uses shall be no greater than the height of the principal building.

(7) Data Centers and Data Center Accessory Uses shall be set back a minimum of 1,000 feet from all adjoining property lines and road rights-of way.

D. Specific regulations.

(1) The applicant shall provide an affidavit or evidence of agreement between the landowner and Data Center owner and/or operator confirming the Data Center owner and/or operator has permission to apply for conditional use, necessary permits, and land development plan approval for construction and operation of the Data Center and Data Center Accessory Uses.

(2) Buffer Yard. A buffer yard shall be established and maintained along the property lines of any lot containing a Data Center or Data Center Accessory Use as follows:

(a) Where there is a conflict with the provisions of §240-63, the provision of this subsection (2) shall apply.

(b) A minimum buffer yard width of 100 feet shall be provided along all property lines or in the case of an assemblage of parcels, along all exterior property lines of the assemblage of parcels.

(c) The buffer yard shall be free of structures, dumpsters, storage or display areas, signs, materials, loading and unloading areas, or vehicle parking.

(d) The buffer yard shall include a landscaped screening buffer. Buffer plantings shall be arranged to achieve a dense, opaque, four-season buffer to the satisfaction of the Board of Supervisors and Township Engineer and/or Pennsylvania-certified Landscape Architect.

(e) If existing healthy trees with a trunk diameter of six inches dbh or greater exist within the buffer yard, they shall be preserved to the maximum extent feasible.

(f) The buffer yard vegetative visual screen shall extend the full length of the lot line, except for:

[1] Township-approved points of approximately perpendicular vehicle or pedestrian ingress and egress to the lot. In such case, the buffer yard may be interrupted to accommodate the minimum area required for ingress and egress.

[2] Locations necessary to comply with safe sight distance requirements where the plantings cannot feasibly be moved farther back; and

[3] Locations needed to meet other specific state, Township and utility requirements, such as stormwater swales. If a utility must cross the buffer yard, it shall be by the minimum required traversal distance and width, and then only if every precaution is used to replace any lost visual screen.

(g) Buffer yard plantings shall consist of native species planted as follows:

[1] One (1) large evergreen tree per 25 linear feet of buffer. The size of large evergreen trees shall be a minimum of eight (8) feet in height at the time of planting. Evergreen trees shall be planted at diagonal offsets so that there is room for future growth of the trees.

[2] One (1) deciduous canopy (shade) tree per 75 linear feet of buffer. Size of canopy (shade) trees shall be a minimum of 2½ inch caliper at the time of planting.

[3] One ornamental/flowering tree per 50 linear feet of buffer. The size of ornamental/flowering trees shall be a minimum of eight (8) feet in height for multi-stemmed varieties, or 2½ inch caliper at the time of planting for single-stemmed varieties.

[4] Five (5) shrubs per 25 linear feet of buffer. Shrubs shall be fully branched and minimum of three feet in height at the time of planting. Shrubs shall be a combination of evergreen and deciduous species, with a minimum of 50% being evergreen.

[5] All plantings shall conform to the standards of the Township's list of acceptable plant species, or shall be approved by the Board of Supervisors upon recommendation by the Township Engineer, and/or Pennsylvania-registered landscape architect, or certified arborist. A variety of species shall be used in order to prevent monocultural plantings. American arborvitae and similar weak-stem plants shall not be used to meet the buffer yard requirements. A monotonous straight row of the same species shall not be permitted. A more naturalistic form of planting with a mix of species shall be provided. If more than 20 evergreen plants are proposed, no more than 50% shall be of one species.

(i) In the event that existing vegetation is adequate to meet the intent of the required buffer yard to screen the Data Center and Data Center Accessory Uses from adjoining properties, the Board of Supervisors, upon recommendation by the Township Engineer and/or Pennsylvania-registered landscape architect, and Planning Commission, may determine that existing topography and/or vegetation constitutes all or part of the required buffer yard.

(j) The use of earth berms in combination with landscaping is encouraged within buffer yards to provide additional protection to residential zoning districts and sensitive receptors. An earth berm may be required as a condition of a conditional use approval.

(k) Buffer yard plans. The applicant shall submit plans showing:

[1] The location and arrangement of each buffer yard;

[2] The placement, general selection of species and initial size of all plant materials; and

[3] The placement, size, materials and type of all fences to be placed in such buffer yard.

(l) All buffer yard plantings shall be perpetually maintained by the property owner. Any plant material that dies, is removed, is diseased, or is severely damaged shall be replaced by the current property owner, on a one-to-one basis, as soon as is practical considering growing seasons, within a maximum of 150 days.

(m) All buffer yard screening shall be assured by a performance guarantee posted with the Board of Supervisors in an amount equal to the estimated cost of all such trees, shrubs, plantings, and installation. Such guarantee shall be released only after passage of the second growing season following planting.

(3) Equipment screening and fencing.

(a) To provide visual screening and reduce noise levels, ground-mounted and roof-mounted equipment used for cooling, ventilating, or otherwise operating the facility, including power generation or other power supply equipment shall be fully enclosed. If, based on the manufacturer's specifications, it is not mechanically feasible to fully enclose the equipment, it shall be fully screened from view using one or more of the following means:

[1] The landscape buffer yard required by subsection (2) above.

[2] By existing vegetation that will remain on the property.

[3] By the principal Data Center building or an accessory building.

[4] A berm averaging a minimum of five (5) feet in height above the adjacent average ground level with a maximum side slope of 3:1, provided that the berm shall be covered by a well-maintained all season natural ground cover and any required screening plantings shall be arranged on the outside and top of the berm.

[5] A visually solid fence, screen wall or panel, parapet wall, or other visually solid screen that shall be constructed of materials compatible with those used in the exterior construction of the principal building.

(b) Fencing of the Data Center and Data Center Accessory Uses shall be provided. All fencing shall be located within the setback specified in subsection C(7), above, and shall be fully screened from view.

(4) Noise and vibration.

(a) The noise and vibration standards of §240-67, as well as the sound and vibration study requirements of §240-68 shall apply.

(b) Noise producing/emitting equipment, such as HVAC, heat exchangers, and backup generators should be selected such that low noise units and effective engineering

noise control methods are used to minimize noise emissions to meet the sound and vibration limits established in §240-67.

(5) Water and sewer.

(a) If the use will be served by a publicly owned or other existing centralized water supply and/or sewage disposal system the applicant shall submit a letter from the operator of such utility indicating the utility owner's willingness to supply service to the development and including a verification that the necessary capacity is available to serve the proposed development. This letter shall be supplied with the conditional use application.

(b) On-lot water supply. If an approved public water supply is not accessible and water is to be furnished on a project basis, the applicant shall, upon submission of the conditional use application, submit written evidence that the they have complied with all Township and State regulations, and that the proposed system to be installed meets the requirements of the PA PUC, PA DEP, DRBC and any other applicable regulations.

(c) If the use is to rely upon a nonpublic source(s) of water, the applicant shall provide, with the conditional use application, a water feasibility study, in accordance with §240-68. However, the use of a closed-loop water circulation system for cooling equipment, or, in the alternative, such other technology and systems to minimize the use of water and sound emissions from cooling equipment, that is acceptable to the Township, is strongly encouraged. ~~Use of such system that results in less than 10,000 gallons per day of water supply demand from, or discharges to the watershed in which the Data Center is located.~~ Use of such system that results in an average water supply demand of less than 10,000 gallons per day (gpd) over any consecutive 30-day period and discharges of less than 10,000 gpd during any consecutive 30-day period to and from the watershed in which the Data Center is located, shall exempt the Data Center use from the water feasibility study requirements in §240-68C(4)(b)[7] through [23], except that the Board of Supervisors may require a well depletion agreement or other data or information as a condition of approval. The aforesaid 10,000 gpd threshold shall apply to all buildings and structures on a cumulative/aggregate basis, and shall not be construed to mean 10,000 gpd per building or per structure.

(d) The use of reclaimed or recycled wastewater for cooling and/or other mechanical operations is strongly encouraged.

(6) Power supply.

(a) The applicant shall provide with the conditional use application documentation prepared by a qualified professional, such as a Pennsylvania-licensed professional engineer, detailing at a minimum the following:

[1] The amount of power expected to be used by the Data Center and Data Center Accessory Uses, on average and at times of peak usage at maximum capacity upon completion of each Data Center building and at maximum capacity after full build-out of the Data Center property(s).

[2] Power supply sources that will be utilized.

[3] Energy storage capacity and type(s) of energy storage equipment or systems that will be utilized (if applicable).

[4] Estimated impacts on electric rates and on power availability for other uses directly attributable to the Data Center development.

[5] The professional credentials, training, and experience of the person that prepared the documentation required by this subsection (6)(a).

(b) If the applicant proposes to connect the Data Center to the electric grid, the applicant shall provide with the conditional use application documentation from the applicable electric service provider certifying that that the necessary capacity is available, and that the electric service provider will serve the Data Center. Known impacts on electric rates and on availability for other uses directly attributable to the Data Center project shall be noted.

(c) All new or upgraded power transmission lines serving a Data Center or Data Center Accessory Use shall be designed and constructed to minimize visual impact on surrounding properties and public rights-of-way. The Township may require the undergrounding of such lines where feasible and appropriate, at the applicant's expense. The applicant shall demonstrate that the proposed power transmission infrastructure will not place an undue burden on existing electrical supply infrastructure serving the community.

(d) If the Data Center operator intends to use backup power generators, the operator shall maintain a public website announcing the times when the generators will be in operation. Any routine operation of the backup generators, including for testing purposes, shall be announced on the website at least 24 hours in advance. The operator shall also notify the Township at least 24 hours in advance of a test. Unless the generators are supplying backup electrical supply during a power outage, backup generators shall only operate for a maximum total of 30 minutes on any day and only between the hours of 9:00 am and 5:00 pm, Monday through Friday, excluding holidays. Upon request by the Township, the Data Center operator shall provide the address of the website where the notices required by this subsection are published.

(e) All emissions from backup generators, and all fuel storage facilities associated with backup generators, shall comply with all applicable federal, state, and local regulations, including but not limited to those pertaining to air quality, hazardous materials, and environmental protection.

(f) Proof of compliance, necessary permits and renewals from relevant federal, state and local regulatory agencies shall be provided to the Township within 30 days of receipt.

(7) Emergency management.

(a) The applicant shall demonstrate that there is an adequate means of ingress and egress suitable for emergency access to the site. The Board of Supervisors may

require additional means of ingress and egress to provide adequate emergency access.

(b) The applicant shall ensure there is adequate radio coverage for emergency responders at and within the Data Center property(s) and within the interior of buildings, and shall install enhancement systems if needed to meet compliance.

(c) The applicant shall submit with the conditional use application an Emergency Response Plan (ERP) prepared by a qualified professional with Pennsylvania Emergency Management (PEMA) professional-level certification, Emergency Planning Professional (EPP) certification, or other recognized professional-level emergency planning certification. The ERP shall:

[1] Be reviewed by the local fire department and emergency management services as part of the conditional use process.

[2] Identify the location of all hydrants and other on-site and off-site firefighting equipment. ~~A Knox-type box shall be installed on all access gates for emergency access by the Township Fire Company and other emergency responders~~.

[3] A Knox-type box shall be installed on all access gates for emergency access by the Township Fire Company and other emergency responders.

[4] Identify all potential hazards on the site and their locations.

[5] Include contact information for facility representatives available 24 hours per day.

[6] Include notification protocols for local emergency services, municipal officials, and regulatory agencies.

[7] Include detailed procedures for fire suppression, containment, ventilation, and evacuation.

[8] Include an evaluation of the access roads and hydrant locations within the site to ensure suitable access for emergency equipment within the site.

[9] Ensure that all first responders receive adequate training specific to the installed system.

[10] Include provisions for annual fire safety inspections demonstrating compliance with fire safety standards to be performed by a qualified professional, such as a certified fire inspector, on behalf of the Data Center.

[11] Include provisions for an annual tour of the property(s) on which the Data Center and Data Center Accessory Uses are located, with Township officials and local fire department and emergency management personnel.

(d) Any Data Center use proposing battery storage or any other device or group of devices capable of storing energy in order to supply electrical energy at a later time, whether the energy is stored for use on-site or off-site, shall demonstrate compliance with National Fire Protection Association (NFPA) Standard 855,

Installation of Stationary Energy Storage Systems, or similar standards and must include fire suppression systems designed specifically for battery storage.

(e) No Data Center shall be approved unless the applicant demonstrates that procedures for fire suppression, containment, ventilation, and evacuation are sufficiently protective of public health, safety and welfare. This analysis may be performed by an outside expert hired by the Township with costs to be borne by the applicant.

(f) Prior to the issuance of a Certificate of Occupancy, the applicant shall provide and fund specialized training, and is strongly encourage to provide and fund necessary equipment, for the Township's fire department and other relevant emergency responders regarding the unique hazards and operational characteristics of the Data Center facility. This training shall cover, but not be limited to, emergency shutdown procedures, hazardous materials handling (if applicable), access points, and specific fire suppression system operations. Ongoing training shall be provided by the Data Center operator periodically thereafter as deemed necessary by the Board of Supervisors and authority(s) having jurisdiction to ensure continued preparedness.

(8) Architectural and design standards.

(a) Leadership in Energy & Environmental Design (LEED) Certification is strongly encouraged.

(b) A principal building facade shall include any Data Center or Data Center Accessory Use building facade that faces a road, residential zoning district, or sensitive receptor existing as of the effective date of this ordinance. When a building has more than one principal facade, such principal building facades shall be consistent in terms of design, materials, details, and treatment.

(c) All principal building facades shall incorporate a minimum of three of the following design elements:

[1] A building step-back of no less than 10 feet from the building wall at a height point that begins at the top of the second story of the building or 30 feet, whichever is lower.

[2] Fenestration (windows) on a minimum of 30% of the building façade surface area located in separated individual placements or clustered bays and distributed horizontally and vertically across the façade.

[3] A change in building material, pattern, texture, or color every 30 feet.

[4] Building recesses every 60 feet having a minimum depth of five (5) feet;

[5] A change in building height every 60 feet having a minimum width of 30 feet and a minimum vertical offset of 5 feet;

(d) External building materials shall be of colors that are low-reflective, subtle, or earth tone. Fluorescent and metallic colors shall be prohibited as exterior wall colors.

(e) The main entrance to the building shall either project or recess from the main building plane, and/or be differentiated from the remainder of the building façade

by a change in building material. Landscaping of the main entrance feature is encouraged.

(9) Parking and loading. In addition to the off-street parking and loading requirements in Article VII of this chapter, all Data Centers shall provide the following:

(a) A minimum of 1.5 parking spaces for every one employee, based upon the maximum number of employees on site during the largest shift.

(b) All facilities with gated entrances shall provide for an on-site queuing area for the stacking of a minimum of three tractor-trailers.

(10) Electronic and other waste. Documentation shall be provided with the conditional use application outlining procedures for safe removal and recycling or disposal of electronic waste and other waste including but not limited to, computers, computer servers, server infrastructure, batteries, hazardous and extremely hazardous substances, and related materials.

(11) Environmental Impact Assessment (EIA). The applicant shall provide with the conditional use application an Environmental Impact Assessment in accordance with §240-68.

(12) Fiscal Impact Analysis. The applicant shall provide with the conditional use application a Fiscal Impact Analysis in accordance with §240-68.

(13) Woodland protection and replacement shall comply with the standards in §240-48.1.

(14) Lighting shall comply with the standards in §240-48.

(15) Decommissioning.

(a) Decommissioning. Decommissioning shall include the following:

[1] Decommissioning Agreement. The Data Center owner and/or operator shall execute a Decommissioning Agreement, to be approved by the Township pending the review of the Township Solicitor, prior to conditional use approval. Said agreement shall contain all terms and conditions for decommissioning requirements.

[2] Terms and conditions of the decommissioning agreement shall include, but not be limited to:

[a] If the Data Center owner or operator ceases operation of the facility, or begins, but does not complete, construction of the project, the Data Center owner and/or operator shall decommission and restore any affected area of the site to its condition prior to any disturbance related to the Data Center. The site shall be restored to a useful, non-hazardous condition without significant delay, including but not limited to the following:

[i] Removal of all computer servers and other computer equipment; hazardous or extremely hazardous substances; structures or

equipment which contain any hazardous or extremely hazardous substance; and all other structures, excluding principal buildings.

[ii] Restoration of the surface grade and soil after removal of structures and equipment.

[iii] Revegetation of restored soil areas with native seed mixes and native plant species suitable to the area under the direction of a Pennsylvania-registered landscape architect.

[iv] The decommissioning plan shall provide for the protection of public health and safety and for protection of the environment and natural resources during site restoration.

[v] The decommissioning plan shall include a schedule for completion of site restoration work.

[3] If a Data Center or any Data Center Accessory Use has not been in operation for a period of six consecutive months, the Data Center owner or operator shall notify the Township in writing with the reason(s) for inoperability and their intentions to re-establish operations or plans for decommissioning. The Data Center owner or operator shall notify the Township immediately upon cessation or abandonment of the operation. The Data Center or Data Center Accessory Use shall be presumed to be discontinued or abandoned if it has not been in use or operational for a period of 12 continuous months.

[4] The Data Center owner and/or operator shall, at its expense, have twelve months from cessation or abandonment in which to decommission the site and shall re-vegetate disturbed earth back to its predevelopment condition in accordance with subsection [2], above.

[5] Decommissioning Cost. An independent professional engineer licensed in Pennsylvania shall be retained by the Data Center owner or operator to estimate the total cost of decommissioning and revegetation without regard to salvage value of the Data Center related equipment. Said estimate shall be submitted to the Township prior to conditional use approval and shall be reviewed by the Township Engineer. Said estimate shall be updated and submitted to the Township after the first year of issuance of a certificate of occupancy, and every fifth year thereafter, and shall be reviewed by the Township Engineer. The Board of Supervisors, upon the recommendation of the Township Engineer, may accept such estimate or may refuse to accept such estimate for good cause shown. If the Data Center owner or operator and the Township are unable to agree upon an estimate, then the estimate shall be recalculated and re-certified by another professional engineer licensed in Pennsylvania and chosen mutually by the Township and the Data Center owner or operator. Whichever of the first two estimates is closest in value to the third estimate shall be the final estimate. In the event that a third engineer is so chosen, fees for the services of such engineer shall be paid

equally by the Township and the Data Center owner or operator.

[6] Decommissioning Financial Security. The Data Center owner or operator, prior to final land development plan approval, shall provide financial security with the Township as payee in an amount equal to 110% of the total cost estimate approved by the Board of Supervisors in Subsection [5], from a company and in a form and content acceptable to the Board of Supervisors, to insure decommissioning and re-vegetation as set forth herein. Such financial security shall be reset after the first year of issuance of a certificate of occupancy and every fifth year thereafter, to an amount equal to 110% of the cost estimate submitted at such interval in accordance with Subsection [5], above. The security shall remain in place for as long as the Data Center or Data Center Accessory Use(s) exist at the site and until restoration of the site is satisfactorily completed. The Data Center owner or operator shall be responsible to have the financial security certificate holder describe the status of the bond or letter of credit in an annual report submitted to the Township. The financial security shall not be subject to revocation, reduction or termination unless and until approved by the Board of Supervisors based upon the Township Engineer's and Solicitor's recommendation that decommissioning and re-vegetation have been satisfactorily completed.

[7] Landowner Responsibility. If the Data Center owner or operator fails to complete decommissioning and re-vegetation within the time period stated herein, then decommissioning and re-vegetation in accordance with this chapter shall become the responsibility of the landowner, and such landowner shall have 12 months to complete decommissioning and re-vegetation.

[8] Township Intervention. If neither the Data Center owner or operator, nor the landowner completes decommissioning and re-vegetation within the prescribed periods, then the Township may take such measures as necessary to complete decommissioning and re-vegetation. The submission of evidence of the landowner agreement and the decommissioning agreement in accordance with §240-40.2D(1) and §240-40.2D(15)(a)[1], respectively, to the Township shall constitute agreement and consent of the parties to the agreements, their respective heirs, successors and assigns that the Township may take such action as necessary to implement the decommissioning and re-vegetation plan.

PART 9. Article VI, Environmentally Sensitive Areas, is amended to delete section §240-48 entitled "Control of light and glare" in its entirety and replace it with a new section §240-48 as follows:

§240-48 Control of light and glare.

This §240-48 shall regulate exterior lighting in order to minimize glare, light trespass, and sky glow and to protect adjoining properties and public rights-of-way, and reduce lighting conflicts between property owners.

A. Applicability and exemptions.

(1) This §240-48 shall apply to all sources of outdoor lighting installed or replaced within the Township after the effective date of this chapter, including but not limited to, lighting utilized for residential, commercial, industrial, recreational, and institutional uses, and sign, billboard, architectural, hardscape, and landscape lighting. Existing outdoor lighting installed prior to the effective date of this chapter shall be considered a nonconformity in accordance with subsection X, below.

(2) Outdoor lighting shall be required for safety and personal security in areas of public assembly and traverse and for loading, ingress and egress, and parking areas for uses including, but not limited to, multifamily residential, commercial, industrial, and institutional uses.

(3) The Board of Supervisors may require lighting be incorporated for other uses or locations, as they deem necessary.

(4) Lighting systems regulated by the Federal Aviation Administration, U.S. Department of Transportation, PennDOT, or the Occupational Safety and Health Administration shall be exempted from this §240-48 to the extent that the provisions of this §240-48 are preempted by such regulations.

B. Prohibitions.

(1) Flashing, flickering, or strobe lighting is prohibited, except for nonadvertising seasonal decorative lighting between October 25 and January 10 on residential properties only.

(2) Any lighting that distracts or disables the vision of a motor vehicle operator (e.g., excessively bright or rapid blinking, flashing, and/or motion video) or contributes to traffic control confusion (e.g., sources resembling or imitating traffic or railroad signals) is prohibited.

C. Height of lights. No luminaire, spotlight, or other light source located within 200 feet of a lot line of an existing dwelling or approved residential lot shall be placed at a height exceeding 35 feet above the average grade within a 10-foot radius of the base of the fixture. This limitation shall not apply to lighting of outdoor public recreation facilities or ski resorts, provided such lighting is equipped with shielding and beam control to minimize glare, light trespass, and skyward projection.

D. Diffusion. All luminaires or other light sources, including signs, shall be fully shielded and/or fitted with opaque or translucent covers as necessary to prevent exposed bulbs or light sources from being directly visible from streets, public sidewalks, dwellings, or adjacent lots.

E. Shielding, direction, and spillover. All luminaires or other light sources, including signs, shall be fully shielded, carefully directed, and placed to prevent glare, prevent light from shining into the eyes of passing motorists thereby creating a hazard, and prevent light from projecting skyward or beyond the area intended to be illuminated.

(1) No luminaire or other outdoor light source shall emit more than 5% of its total lumen output above 80 degrees from nadir, except as follows:

(a) Directional lighting used for façade illumination which are shielded and aimed to hit their target such that the light is contained by architectural elements.

(b) Festoon string lighting where no individual lamp emits more than 50 lumens, and the lumen density of the string is no greater than 25 lumens per foot.

(2) Light trespass shall not exceed 0.1 foot-candles at any adjoining property line, except for illumination of public rights-of-way or where otherwise permitted by this chapter, or any other chapter of the Penn Forest township Code. The light trespass limit shall be measured with a calibrated light meter along all property lines both horizontally at the ground plane facing upward and vertically at five feet above grade with the meter aimed toward the light source in question.

F. Outdoor canopies. Lighting fixtures used to light the area under outdoor canopies, including but not limited to those used at automotive fuel dispensing facilities, bank and fast-food drive-thru lanes, theater and hotel marques, and building entrances shall be flat-lens full-cutoff fixtures aimed straight down and shielded in such a manner that the lowest opaque edge of the fixture shall be below the light source and its light-directing surfaces, at all lateral angles around the fixture. Alternatively, light fixtures shall be recessed into the canopy or screened by an extension around the bottom of the canopy so that lighting elements are not visible from another lot or public street. The average maintained illumination in the area directly below the canopy shall not exceed 20 initial footcandles, with no value exceeding 30 initial footcandles.

G. Lighting of horizontal surfaces. For the lighting of predominantly horizontal surfaces, including but not limited to parking areas and vehicle sales areas, lighting fixtures shall be aimed downward and shall meet Illuminating Engineering Society (IES) "full cutoff" criteria to direct light and prevent glare or spillover onto streets and adjoining properties.

H. Lighting of nonhorizontal surfaces. For lighting of predominantly nonhorizontal surfaces, including but not limited to building walls and signs, lighting fixtures shall be fully shielded and aimed so as not to project light toward neighboring properties, beyond the object being illuminated, onto a public roadway, or into the sky. Lighting of flags shall use a beam no wider than necessary to illuminate the flag. Lighting of billboards shall be attached to the top of the billboard and project downward. Lighting of the United States flag from dusk to dawn shall be permitted, provided the light source is shielded and limited to the minimum illumination necessary.

I. Architectural lighting. Architectural lighting, including illumination of building facades and other architectural features, fountains, statuary, hardscaping and landscaping, for decorative, advertising or aesthetic purposes is prohibited between 10:00 p.m. and sunrise, except that such lighting situated on the premises of a commercial establishment may remain illuminated while the establishment is actually open for business, and until no more than one-half hour after closing.

J. Spotlights and lasers. Spotlights shall not be directed upward into the sky. Laser lights shall not be directed into the sky for any purpose including but not limited to attracting attention to a business, activity, or location.

K. No floodlighting, spotlights, or high-intensity lighting shall be permitted in any residential district after 10:00 p.m. prevailing time, except for surveillance, security, or safety lighting which shall comply with subsection O, below.

L. Illumination levels. Lighting intensities and uniformity ratios shall be in accordance with the latest edition of the Illuminating Engineering Society Lighting Handbook or current Recommended Practices of the IES. Future amendments to said Lighting Handbook and Recommended Practices shall become part of this chapter without future action of the Township.

M. Color temperature. All exterior lighting subject to this §240-48 shall have a correlated color temperature (CCT) of 3,000 Kelvin or less, unless a higher temperature is demonstrated as necessary for safety or operational need and is approved by the Township.

N. Automatic control. Unless otherwise permitted by the Board of Supervisors for reasons such as safety and security, lighting shall be controlled by automatic switching devices, such as time clocks or combination motion detectors and photocells, to enable extinguishing of light sources between 10:00 p.m. and dawn to mitigate nuisance glare and sky-lighting consequences. Light sources activated by motion detection shall automatically turn off or return to their dimmed state no more than five minutes after activity is no longer detected.

O. All-night safety or security lighting. Where all-night safety or security lighting is to be provided, the lighting intensity levels shall not exceed 25% of the levels permitted by this chapter, but in no case shall they be less than the minimum levels for safety or security as set forth by IES. The use of greater than 25% of the permitted lighting intensity for all-night safety or security lighting shall require approval by the Board of Supervisors, based on the unique nature of the use or elevated area crime or safety or security risk. Alternatively, where there is reduced but continued onsite activity throughout the night that requires site-wide even illumination, the use of dimming circuitry to lower illumination levels by at least 50% after 10:00 p.m. or after normal business hours, or the use of motion-sensor control, may be permitted.

P. Installation.

(5) Electrical feeds for lighting standards shall be run underground, not overhead and shall be in accordance with the National Electric Code Handbook.

(6) Lighting in parking areas shall be placed a minimum of five feet outside of the paved area, or on concrete foundations at least 30 inches high above the pavement, or suitably protected by other approved means.

(7) Pole mounted lighting fixtures for lighting horizontal surfaces shall be aimed straight down and poles shall be plumb.

(8) Poles and brackets for supporting lighting fixtures shall be those specifically manufactured for that purpose and shall be designed and rated for the fixture and mounting accessory weights and wind loads involved.

(9) Pole foundations shall be designed consistent with manufacturer's wind load requirements and local soil conditions involved and shall be approved by the Township

Engineer.

(10) Any employed shielding elements shall be permanently affixed to lighting fixture.

Q. Maintenance. Lighting fixtures and ancillary equipment shall be maintained so as to always meet the requirements of this chapter.

R. Recreational Uses. The nighttime illumination of outdoor recreational facilities for such sports as baseball, basketball, soccer, tennis, track and field, and football typically necessitate higher than permitted lighting fixture heights and aiming angles, utilize very high-wattage lamps and potentially produce unacceptable levels of light trespass and glare when located near residential properties. Permission to illuminate such facilities shall be granted only when the Township is satisfied that the health, safety and welfare rights of nearby property owners and the Township as a whole have been properly protected. When recreational uses are permitted by the Township for operation during hours of darkness, the following additional requirements shall apply:

(1) Recreational uses such as golf driving ranges that necessitate the horizontal or near horizontal aiming of light fixtures and projection of illumination shall not be permitted to be artificially illuminated.

(2) Recreational facilities located within a residential district or sited on a nonresidential property located within 1,000 feet of a property containing a residential use shall submit a visual impact analysis. Lighting shall be extinguished by 10 p.m.

(3) Sporting events shall be timed to end at such time that all lighting in the sports facility, other than lighting for safe exit of patrons, shall be extinguished by 10:00 p.m., except in the occurrence of extra innings, overtime, or make-up games.

(4) The Township reserves the right to limit the number of illuminated sporting events per week or season.

(5) Maximum mounting heights for recreational lighting shall be in accordance with the following:

(a) Basketball: 20 feet

(b) Football: 70 feet

(c) Soccer: 70 feet

(d) Lacrosse: 70 feet

(e) Little League Baseball 200-foot radius: 60 feet

(f) Little League Baseball 300-foot radius: 70 feet

(g) Miniature Golf: 20 feet

(h) Swimming Pool Aprons: 20 feet

(i) Tennis: 20 feet

(j) Track: 20 feet

(6) To assist the Township in determining whether the potential impacts of proposed lighting have been suitably managed, applications for illuminating recreational facilities shall be accompanied by a visual impact plan in accordance with subsection T, below, and the lighting plan information required under subsection U, below.

S. Illumination of Signs. The illumination of signs shall comply with the applicable standards of this §240-48 and Article VIII, Signs.

T. Visual impact plan. A visual impact plan shall be required for recreational uses and industrial uses, including but not limited to data centers, data center accessory uses, and warehouses, and when requested by the Board of Supervisors in accordance with subsection U, below. The visual impact plan shall contain the following:

(1) Plan views containing a layout of the recreational facility or use and showing pole locations and the location of residences on adjoining properties.

(2) Elevations containing pole and light fixture mounting heights, horizontal and vertical aiming angles and fixture arrays for each pole location.

(3) Elevations containing initial vertical illuminance plots at the boundary of the site, taken at a height of 5 feet line-of-sight.

(4) Elevations containing initial vertical illuminance plots on the windowed facades of all residences facing and adjacent to the recreational facility or use. Such plots shall demonstrate compliance with the light trespass and glare control requirements of this §240-48.

(5) Proposed frequency of use of the facility or use during hours of darkness on a month-by-month basis and proposed time when the lighting will be extinguished.

(6) A narrative describing the measures proposed to achieve minimum off-site disturbance.

U. Lighting plan submission.

(1) Lighting plans shall be submitted to the Township for review and approval and shall include:

(a) A plan or plans of the site, complete with all structures, parking spaces, building entrances, traffic areas (both vehicular and pedestrian), existing and proposed trees, and adjacent uses that might be adversely impacted by the lighting. The lighting plan shall contain a layout of all proposed and existing light fixtures, including but not limited to area, architectural, building entrance, canopy, soffit, landscape, flag, and sign, by location, orientation, aiming direction, mounting height, lamp, photometry, and type.

(b) A ten-foot by ten-foot illuminance grid (point-by-point) plot of maintained

horizontal footcandles overlaid on the site plan, plotted out to 0.0 footcandles, which demonstrates compliance with the light trespass, illuminance and uniformity requirements as set forth in this chapter or as otherwise required by the Township. When the scale of the plan, as determined by the Township, makes a ten-foot by ten-foot grid plot illegible, a more legible grid spacing may be permitted.

(c) Light-loss factors, IES candela test-filename, BUG rating, initial lamp-lumen ratings and specific lamp manufacturer's lamp ordering nomenclature, used in calculating the plotted illuminance levels.

(d) Description of the equipment, including fixture catalog cuts, photometrics, glare reduction devices, lamps, lamp color temperature, control devices, mounting heights, pole foundation details, pole protection means, and mounting methods proposed.

(e) Landscaping plans shall contain light fixture locations, demonstrating that the site lighting and landscaping have been coordinated to minimize conflict between vegetation and intended light distribution, both initially and at vegetation maturity.

(2) When requested by the Board of Supervisors, the applicant shall submit a visual impact plan in accordance with Subsection T, above, that demonstrates appropriate steps have been taken to mitigate on-site and off-site glare.

(3) Post-approval alterations to lighting plans or intended substitutions for approved lighting equipment shall be submitted to the Township for review and approval. Requests for substitutions shall be accompanied by catalog cuts of the proposed equipment that demonstrate the proposed substitution is equal to or exceeds the optical quality and maintainability of the specified light fixtures, and by a lighting plan, including a point-by-point plot, which demonstrates that proposed substitutions will result in a lighting design that equals or exceeds the quality of the lighting on the approved plan.

V. Post installation inspection. The Township reserves the right to conduct a post-installation nighttime inspection to verify compliance with the requirements of this chapter, and if appropriate, to require remedial action at no expense to the Township.

W. Compliance monitoring.

(1) Safety hazards.

(a) If the Township determines that a lighting installation creates a safety or personal security hazard, the person(s) responsible for the lighting shall be notified and required to take remedial action.

(b) If appropriate corrective action has not been effected within five days of notification, the Township may exercise the remedies as provided in by this chapter to enforce compliance as long as the hazard continues to exist.

(2) Nuisance glare and inadequate illumination levels.

(a) When the Township determines that an installation produces unacceptable levels of nuisance glare, skyward light, excessive or insufficient illumination levels or otherwise varies from this chapter, the Township may cause notification of the person(s) responsible for the lighting and require appropriate remedial action.

(b) If the infraction so warrants, the Township may act to have the problem corrected as in Subsection W(1)(b) above.

X. Nonconforming lighting. Any lighting fixture or lighting installation existing on the effective date of this chapter that does not conform with the requirements of this chapter, shall be considered as a lawful nonconformance and shall be made to conform with the requirements of this chapter when:

(1) The nonconformance is deemed by the Board of Supervisors to create a safety hazard or nuisance.

(2) The nonconforming lighting fixture or lighting installation is replaced or relocated.

(3) There is a change in use.

Y. Streetlighting dedication.

(1) When streetlighting is to be dedicated to the Township, the applicant shall be responsible for all costs involved in the lighting of streets and street intersections until the street is accepted for dedication.

(2) Prior to dedication and in the event of the formation of a community association, and/or property management declaration, the Township shall require said agency to enter into an agreement guaranteeing payment of all costs associated with dedicated streetlighting.

(3) Assumption of costs of dedicated streetlighting. Upon dedication of public streets, the Township shall assess the community association, individual property owners, corporations, or other applicable entities as may be necessary to collect all revenues required that are directly or indirectly associated with all costs of each specific streetlighting fixture. These costs shall include:

(a) Administration;

(b) Collection;

(c) Pro-ration of nonpayables;

(d) Actual utility electrical charges;

(e) Maintenance and maintenance contracts for fixtures and associated equipment.

PART 10. Article VI, Environmentally Sensitive Areas, is amended to add a new section §240-48.1 entitled "Woodland protection and replacement," as follows:

§240-48.1 **Woodland protection and replacement**.

A. Specimen trees shall not be removed from any lot or tract except where the landowner demonstrates to the satisfaction of the Township that such removal is essential to eliminate a hazardous condition or otherwise permit lawful use of the lot or tract. Where permitted, removal of specimen trees shall be minimized.

B. The following woodland protection and replacement standards shall apply to all lots that are one acre or larger. Where there is a conflict between the disturbance limits or other standards of this subsection B and any other provision of this chapter 240 or the Penn Forest Township Code, the more restrictive disturbance limit or standard shall apply.

(1) For residential uses, no more than 35% of woodlands shall be disturbed.

(2) For non-residential uses, no more than 50% of woodlands shall be disturbed.

(3) Any disturbance in excess of the limitations specified this subsection B shall be subject to the tree, woodland, and shrub replacement requirements in subsection B(11), below.

(4) Disturbance limitations shall be measured based on the extent of the woodland at the time of first submission of applicable application(s) after the adoption of this section, and shall be indicated on applicable plan(s). The extent of any area of woodland disturbance shall be measured to include the entire area within the drip line of any tree where any part of the area within the drip line of said tree is subject to woodland disturbance. Any disturbance limitation shall run with the land. Subsequent applications shall be subject to the initial determination of disturbance limitations, regardless of intervening disturbance which may have occurred. If, at any time within three years prior to an applicable application, there had existed a greater extent of woodland, such greater area shall be utilized to calculate the extent of woodland disturbance and the limitations set forth herein.

(5) Each building or structure shall be laid out and constructed in such a manner as to provide the least alteration or disturbance necessary of the existing woodlands and other vegetation. Clear-cutting shall be minimized and trees shall be selectively removed. There shall be no clearing-cutting along adjoining property lines, especially where the development site adjoins the property line of a sensitive receptor or residential zoning district boundary, except as needed to accommodate the minimum width required for ingress and egress to/from the site.

(6) Remaining undisturbed woodlands and other vegetation shall interconnect with woodlands or wooded areas on adjacent properties to preserve continuous woodland corridors and allow for the normal movement, dispersion, and migration of wildlife.

(7) In determining where necessary woodland disturbance shall occur, the following factors shall be considered by the applicant and the Township:

(a) The impacts on any interior forest area; riparian buffer area; steep slope area; rare, threatened, or endangered species habitat area; and scenic views.

(b) The location(s) of healthy mature woodland stands and the benefit(s) of their conservation, including but not limited to environmental or ecological benefits, and benefits of buffering and screening of the proposed use or development.

(c) The impacts of separating, dividing, or encroaching on wildlife travel corridors or extensive habitat areas.

(d) Balancing the benefits of woodland preservation with other valuable resources on the site, including scenic views. The Township should not unreasonably restrict woodland disturbance where limited disturbance may permit siting of buildings in less visually obtrusive areas of the tract.

(9) Woodlands, individual trees, and other vegetation that are to be removed shall be designated on the landscape plan as "TO BE REMOVED." Woodlands, individual trees, and other vegetation that are to remain on the site shall be designated on the landscape plan as "TO REMAIN." ~~The plan shall further specify the percentage of critical and non-critical woodlands to be removed or disturbed and show such calculations~~.

(10) Woodlands, individual trees, and other vegetation that are to remain on the site shall be protected in accordance with the following:

(a) A tree protection zone (TPZ), which is an area radial to the trunk of the tree or to the woodland area to be preserved, shall be established. The TPZ shall extend to the edge of the critical root zone (CRZ) of the woodland area to be protected, or in the case of an individual tree, to the critical root zone of the tree. The critical root zone is the distance from the tree trunk that equals one foot for every one inch of the tree's diameter at breast height (dbh).

(b) Prior to construction, trees or woodlands to be preserved that are within 50 feet of any proposed construction, grading, clearing, or related activity shall have their TPZ demarcated by minimum 4-foot high, orange construction fencing or approved equivalent. The fencing shall be installed along the outer edge of the delineated TPZ, shall be maintained until all construction activities have been completed, and shall be inspected by the Township prior to initial disturbance and, thereafter, at its discretion.

(c) No disturbance, earth compaction, vehicular or foot traffic, construction of proposed improvements or utilities, or other disturbance shall occur within the TPZ.

(d) Construction materials, equipment, soil and/or debris shall not be stored nor disposed of within the TPZ.

(e) No toxic materials shall be stored within 100 feet of a TPZ.

(f) Sediment, retention, and detention basins shall not be located within the TPZ, nor shall they discharge into the TPZ.

(11) Tree, woodland, and shrub replacement.

(a) Replacement of trees and woodlands removed in excess of the disturbance limits set forth in subsection B(1) and (2), above, shall be required as follows:

[1] For each tree greater than 12 inches dbh to be removed, required replacement trees shall be planted and shall be calculated in accordance with the table below. For each evergreen tree to be removed, a minimum of one of the required replacement trees shall be an evergreen tree of eight feet minimum height.

For Each Tree to be Removed	Minimum Number and Caliper of Replacement Trees
One, 12 to 18 inch dbh	Two, 2 inch dbh
One, 18 to 24 inch dbh	Three, 2 inch dbh
One, 24 to 36 inch dbh	Four, 2 inch dbh
One, greater than 36 inch dbh	Six, 2 inch dbh

[2] Deciduous replacement trees shall be eight feet minimum height if multi-stem trees.

[3] Where the area of proposed woodland disturbance is one acre or less, the applicant shall determine the number and dbh of trees to be removed and replaced based on a 100% inventory of trees within the area of disturbance. Where the area of proposed woodland disturbance is greater than one acre, the applicant shall determine the number and dbh of trees to be removed and replaced based on an inventory of trees within sample plots. Such sample plots shall conform to the following:

[a] Each sample plot shall be one-quarter acre in size.

[b] For disturbance of less than 30 acres, there shall be one sample plot per acre.

[c] For disturbance of 30 acres or more, there shall be 24 sample plots plus one sample plot per five acres.

[d] Sample plots shall be evenly spaced in a grid pattern across the area of proposed disturbance.

[e] The number of trees to be removed within each size category specified in the table in subsection (11)(a)[1], above, shall be tallied for each sample plot and totaled across all sample plots. For the purpose of determining evergreen tree removal and replacement, evergreen trees shall be enumerated.

[f] The following formula shall be used to calculate the total number of trees within each category to be removed from the proposed area of disturbance (the formula must be applied separately to each category).

V = v x [4 x (A/n)]

Where:

V = Estimated total number of trees to be removed from the proposed area of disturbance

v = Sum of trees in individual category from sample plots

A = Total number of acres of proposed disturbance

n = Number of sample plots

For example, on 10 acres of proposed disturbance with 10 sample plots each ¼ acre in size, and two 12-inch dbh trees tallied in each sample plot for a total of twenty 12-inch dbh trees across all plots, the total number of 12-inch dbh trees to be removed is 80, as follows:.

V = 20 x [4 x (10/10)]

V = 20 x (4 x 1)

V = 80 (12-inch trees to be removed from the proposed area of disturbance)

The number of replacement trees would be 160 2-inch dbh trees

This formula is repeated for sampled trees in each category

[4] The applicant may utilize an alternative method of sampling trees and/or calculating tree removal and replacement, subject to approval by the Township.

(b) Required replacement shrubs. For each 100 square feet of proposed woodland area removed, or fraction thereof, in excess of the disturbance limits set forth in subsections B(1) and (2), above, and regardless of the character and sizes of the disturbed vegetation, a minimum of one shrub at least 24 inches to 30 inches in height shall be planted in addition to any required tree replacement.

(c) The applicant shall provide documentation showing sample plot locations and tree and shrub removal and replacement calculations. In the case of an alternative method approved in accordance with subsection (11)(a)[4], above, the applicant shall provide documentation detailing such method and calculations.

(d) Required replacement plantings may count toward any required street trees or any other landscape material required under the provisions of this chapter or Chapter 210, Subdivision and Land Development.

(e) Where required number of replacement trees and shrubs is not suitable for the site due to the size of the site or other limitations, the Board of Supervisors may allow the following as an alternative planting mitigation:

[1] Some or all of the required replacement plantings may be installed at a site other than that subject to required replacement planting. In such cases and to the extent possible, the plantings shall be installed within the same watershed from which they were removed.

[2] The applicant may provide a fee to the Township equal to the estimated installed value of the plantings, to be deposited into a special fund established for that purpose. Such fund shall be utilized at the discretion of the Township for the purchase and installation of plantings elsewhere in the Township. Installation of such plantings on private lands shall be dependent upon the establishment of conservation easement(s) or other restriction(s) acceptable to the Township that will reasonably guarantee the permanent protection of such plantings.

[3] The Board of Supervisors may permit a reduction in the number of required replacement plantings.

(f) The removal of declining, damaged, diseased or invasive trees, or those which present a hazard are exempt from the tree replacement requirement.

(g) The locations, selected species and sizes of all replacement plantings, along with a planting schedule tied to the timing and/or phasing of the development, shall be indicated on the final land development plan.

(h) Required replacement vegetation and their measurement shall conform to the standards of the publications "American or U.S.A. Standard for Nursery Stock", ANSI or U.S.A.S. Z60.1 of the American Association of Nurserymen, as amended. All plant material used on the site shall have been grown so as to have a high likelihood of survival on the site (e.g., grown specifically for planting in the applicable USDA hardiness zone) and shall be nursery grown.

(i) Because of the many benefits of native plants (ease of maintenance, longevity, wildlife habitat, etc.), the use of nursery-grown free-fruiting native trees and shrubs shall be required. Species selection shall reflect species diversity characteristic of the native woodland.

(j) Invasive species, as identified on the most recent version of the Pennsylvania Invasive Plant Species List, shall not be planted under any circumstances for any Township permitted activity, and where present their eradication or management shall be implemented to the maximum extent possible.

(k) All replacement plantings shall be guaranteed and maintained in a healthy and/or sound condition for at least 18 months. If a replacement planting dies or is dying within the guarantee period, the landowner shall replace the dead or dying planting. In addition, the applicant may be required to escrow sufficient additional funds for the maintenance and/or replacement of the proposed vegetation during the 18 month replacement period, and to provide for the removal and replacement of vegetation damaged during construction, based upon the recommendation of the Township Engineer or Pennsylvania-registered landscape architect.

PART 11. Article IX, General Regulations, §240-62, Height exceptions, is amended to delete “water towers,” “electrical transmission lines and towers,” and “heating/ventilation/air-conditioning equipment” as follows whereby text to be delete is indicated with a strike through:

The maximum structure height specified for each district shall not apply to: antenna that meet the requirements of this chapter, clock or bell towers, steeples of places of worship,

electrical transmission lines and towers, elevator shafts, stair towers, flag poles, windmills, skylights, chimneys, smoke stacks, parapet walls of up to four feet in height, and other appurtenances of up to four feet in height usually required to be and customarily placed above the roof level and not intended for human occupancy. See also definition of "height" in § 240-26 and provisions in § 240-33B.

PART 12. Article IX, General Regulations, is amended to add a new §240-67, entitled "Performance standards," as follows:

§240-67 Performance standards.

The following standards regulate the impact of uses upon other and adjacent uses in the Township and Township residents, and shall apply to all uses in all zoning districts. Where there is a conflict between this §240-67 and any other provision of this chapter 240 or other Township Code, the more restrictive standards shall apply. Where applicable, an impact study(s) shall be required in accordance with §240-68.

A. Air quality: emission of dust, dirt, fumes, vapors, and gases.

(1) The emission of dust, dirt, fly ash, fumes, vapors, or gases which can cause damage to human health, to animal, or vegetation or to other forms of property, or which can cause any soiling or staining of persons or property at any point beyond the lot lines of the use creating the emission is prohibited.

(2) There shall be no emission of smoke, ash, dust, fumes, vapors, gases or other matter toxic or noxious to air which violates the Pennsylvania air pollution control laws, including the standards set forth in 25 Pa Code Chapter 123, Standards for Contaminants, Chapter 131, Ambient Air Quality Standards, and PaDEP rules and regulations.

(3) Visible air contaminants shall comply with the PaDEP rules and regulations.

(4) No user shall operate or maintain or be permitted to operate or maintain any equipment, or device which will discharge contaminants to the air of quality or quantity which will violate the limits prescribed herein and by the Pennsylvania air pollution control laws, unless the user shall install and maintain in conjunction therewith such control as will prevent the emission into the open air of any air contaminant in a quantity that will violate any provision of this chapter.

(5) No user shall cause, allow, permit, or maintain any bonfire, junk fire, refuse fire, salvage operations fire, or any other open fire within the Township, except by Township permit.

(6) The ambient air quality standards for the Commonwealth of Pennsylvania shall be the guide to the release of airborne toxic materials across lot lines.

(7) Applicable federal regulations governing air quality shall be met.

B. Fire and explosion hazards.

(1) The most restrictive of the following regulations shall apply:

(a) All buildings and structures and activities within such buildings and structures shall follow applicable Township codes and ordinances.

(b) Rules and regulations of the National Fire Protection Act shall be met, and proof of meeting these regulations shall be submitted to the Township upon subdivision or land development plan submittal.

(c) All associated activities and all storage of flammable and explosive material shall:

[1] Be provided with adequate safety devices against the hazard of fire and explosion, and adequate fire fighting and fire suppression equipment, and devices as detailed and specified by the laws of the Commonwealth of Pennsylvania.

[2] Conform to the requirements of PaDEP rules and regulations, for storing, handling and use of explosives.

(2) Details of the potential hazards and details of planned safety and accident response actions shall be provided by the applicant to the Township for review by the local fire company.

(3) In the case of conditional uses and special exceptions, larger setbacks, additional buffer areas, fencing, or any other measure may be required by the Township if the nature of the proposed use as determined by the Township so requires.

C. Glare and heat.

(1) Control of light and glare shall comply the requirements of §240-48.

(2) No direct or sky-reflected glare from high temperature processes, such as combustion or welding, ~~or from other sources~~ shall be visible beyond the lot line on which the activity is situated. ~~These regulations shall not apply to signs or floodlighting of parking areas or surveillance, security, or safety lighting otherwise in compliance with §240-48 or other applicable standards in the Township Code~~.

~~(3) No floodlighting, spotlights, or high-intensity lighting, except for surveillance, security, or safety lighting shall be permitted in any residential district after 10:00 p.m. prevailing time.~~ Moved to 240-48 Lighting

(4) There shall be no emission or transmission of heat or heated air discernible beyond the lot line on which the activity is situated.

D. Waste disposal. There shall be no discharge at any point into any public, community, or private sewerage system, stormwater management system, body of water, or watercourses, or into the ground, of any liquid or solid waste materials in such a way or of such a nature, as will contaminate or otherwise cause the emission of hazardous materials in violation of the laws of Township and PaDEP rules and regulations. Applications for any use which results in waste materials regulated by the state or federal government shall include a list of all such wastes and the method of temporary storage, handling and disposal.

E. Noise. Sound levels shall be maintained at a level that does not exceed the standards established by this section. Where there is a conflict between this section E and any other section of this chapter, the provision of this section E shall apply.

(1) Equivalent Continuous Sound Level Limits (5-minute L_{Aeq} and L_{Ceq}). The sound levels (5-minute, A and C weighted equivalent continuous sound levels, L_{Aeq} and L_{Ceq}) as measured at any location on a receiving property, shall not exceed the limits in the following table, as measured with a Type 1 sound level meter, and measured according to ANSI/ASA S1.13-2020 and ANSI/ASA S12.18-1994 (R2009) methodologies (or the most recent revisions). Sound levels shall be measured by an acoustical engineer.

Equivalent Continuous Sound Level Limits (5-minute L_{Aeq} and L_{Ceq})		
Zoning District of Receiving Land Use	**Day (7:00 a.m. to 7:00 p.m.)**	**Night 7:00 p.m. to 7:00 a.m., Sundays and Holidays**
R-1, R-2, R-3	50 dB(A) / 60 dB(C)	45 dB(A) / 55 dB(C)
C-1, C-1A, C2	60 dB(A)	55 dB(A)
I-1	65 dB(A)	60 dB(A)

(2) Maximum Sound Level Limits (Slow Response L_{ASmax} and L_{CSmax}). The Maximum Sound Levels (Slow Response, A and C weighted maxima) as measured at any location on a receiving property, shall not exceed the limits in the following table, as measured with a Type 1 sound level meter, and measured according to ANSI/ASA S1.13-2020 and ANSI/ASA S12.18-1994 (R2009) methodologies (or the most recent revisions). Sound levels shall be measured by an acoustical engineer.

Maximum Sound Level Limits (Slow Response L_{ASmax} and L_{CSmax})		
Zoning District of Receiving Land Use	**Day (7:00 a.m. to 7:00 p.m.)**	**Night 7:00 p.m. to 7:00 a.m., Sundays and Holidays**
R-1, R-2, R-3	60 dB(A) / 70 dB(C)	55 dB(A) / 65 dB(C)
C-1, C-1A, C2	70 dB(A)	65 dB(A)
I-1	75 dB(A)	70 dB(A)

(3) When required in accordance with this chapter or any other chapter of the Township Code, a sound study(s) shall be ~~required~~ conducted in accordance with §240-68.

(4) The sound limits contained in this subsection E shall not apply to the following noise sources:

(a) Sounds for emergency preparedness and response, or sounds created by emergency backup power supply during times of power outage; however, compliance with the sound limits specified herein shall be re-established within three hours of the cessation of such event or restoration of power.

(b) Work to provide, repair, or replace electricity, water or other public utilities involving public health or safety.

(c) Normal and legally permitted residential activities customarily associated with residential use.

(d) Domestic power tools.

(e) Temporary activities involving construction and demolition activities.

(f) Agriculture.

(g) Motor vehicle operations on public streets. Such noise shall be regulated by Pennsylvania Transportation Regulations governing established sound levels.

(h) Public celebrations or activities authorized by the Township.

(i) The unamplified human voice.

(j) Bells, chimes or carillons, which may include electronic devices that imitate the sounds of bells, chimes or carillons, while being used in conjunction with religious services.

F. Vibration.

(1) Except in agricultural operations, no source of mechanical vibration or acoustically induced vibration shall cause or induce vibration on any property (ground-borne vibration) or in any structure that exceeds the ISO Residential Day Vibration curve (defined as an amplitude in any one-third octave frequency band of 200 um/s).

(2) When required in accordance with this chapter or any other chapter of the Township Code, a vibration study(s) shall be ~~required~~ conducted in accordance with §240-68.

G. Odor. No uses, except agricultural operations, shall emit odorous gases, or other odorous matter in such quantities to be offensive at any point on or beyond its lot lines. Any process which may involve the creation or emission of any odors shall be provided with a secondary safeguard system or shall make corrective arrangements in order that control will be maintained if the primary safeguard system should fail. Immediate corrective action shall be taken should either system fail.

H. Electrical, radio, and electromagnetic disturbance. There shall be no radio or electrical disturbance, except from domestic household appliances and agricultural operations, adversely affecting the operation of any equipment at any point other than equipment belonging to the creator of such disturbance. No use, activity, or process shall be conducted which produces electromagnetic interference with normal radio, television, or broadband reception, or other wired or wireless communication systems from off the lot on which the activity is conducted.

I. Radioactivity. There shall be no activities that emit dangerous levels of radioactivity at any point. No operation involving radiation hazards shall be conducted which violates state or federal statues, rules, regulations, and standards. In addition, any proposed use which incorporates the use of radioactive material, equipment or supplies, shall be in strict conformity with PaDEP rules and regulations, and rules, regulations, and standards of the U.S. Nuclear Regulatory Commission.

J. Electrical, diesel, gas or other power. All uses requiring power shall be operated so that the service lines, substation, or other structures and equipment shall conform to the most acceptable safety requirements recognized by the Pennsylvania Bureau of Labor and Industry, and shall be constructed to be an integral part of the buildings with which it is associated. If visible from adjacent lots, it shall be screened in accordance with the applicable standards of this chapter 240.

K. Water Supply. All uses shall be provided with an adequate and safe water supply, as demonstrated by evidence to be provided by the applicant, documenting that the siting, density, and design of all proposed residential, commercial, industrial and other developments or uses will assure the availability of reliable, safe and adequate water supplies to support the proposed land use(s) within the capacity of available water resources. When required in accordance with this chapter or any other chapter of the Township Code, a water feasibility study shall be ~~required~~ conducted in accordance with Article IX.

L. Ground and water contamination. To the extent not pre-empted by state right-to-farm laws, no materials or wastes shall be deposited upon a lot in such form or manner that they may be transferred off the lot by natural causes or forces, nor shall any substance which can contaminate a water body or watercourse or otherwise render such water body or watercourse undesirable as a source of water supply or recreation, or which will destroy aquatic life, be allowed to enter any water body or watercourse.

M. General public health and safety. No use shall create any other objectionable condition in an adjoining area which will endanger public health and safety, or be detrimental to the proper use of the surrounding area.

PART 13. Article IX, General Regulations, is amended to add a new §240-68, entitled "Impact assessments and studies" as follows:

§240-68 Impact assessments and studies.

A. The intent of this §240-68 is to provide for the identification of environmental and community impacts and means of mitigation of impacts of development projects in the Township. Impact assessments and studies shall be submitted by the applicant where specifically required by this chapter or any other chapter of the Penn Forest Township Code. In addition, the Board of Supervisors, Planning Commission, or Zoning Hearing Board, as applicable, may, based upon the nature of a project and potential impacts on the Township, require an applicant to prepare and submit to the Township impact assessments and studies for the ~~following~~ types of developments and uses listed in subsections (1) through (14) below. All impact assessment and studies shall be submitted prior to any tree removal, earth disturbance activities, or initiation of construction activities.

(1) Industrial parks.

(2) Industrial uses.

(3) Data centers or data center accessory uses.

(4) Junkyards.

(5) Mineral extraction including oil and gas wells.

(6) Mineral processing.

(7) Solid waste landfills and facilities.

(8) Warehouses, distribution centers, and trucking terminals.

(9) Concentrated animal feeding operations.

(10) Transmission pipelines and hazardous liquid pipelines.

(11) Pipeline compressor stations, metering stations or operation/maintenance facilities.

(12) Any use involving the initial or cumulative disturbance of two (2) acres or more of soil surface areas.

(13) Any use involving the initial or cumulative construction, installation and/or placement of one (1) acre or more of buildings, structures or other impervious surface areas.

(14) Any use which proposes to use a nonpublic source(s) of water supply shall submit a water feasibility study in accordance with §240-68C(4). ~~If the use proposes less than 10,000 gpd of water withdrawals from or discharges to the watershed,~~ If the use proposes an average water supply demand of less than 10,000 gpd over any consecutive 30-day period and discharges of less than 10,000 gpd during any consecutive 30-day period to and from the watershed in which the use is located, then it shall be exempt from the water feasibility study requirements in §240-68C(4)(b)[7] through [23], except that the Board of Supervisors may require a well depletion agreement or other data or information as a condition of approval.

B. The requirements of this §240-68 may be applied to any other proposed conditional use or special exception, which for reasons of location, design, existing traffic or other community or environmental considerations, as determined by the Township, warrants the application of the required study contained herein in order to determine what conditions shall be required to mitigate any adverse effects of the proposed use.

C. Where required, impact assessments and studies shall comply with the following:

(1) Environmental Impact Assessment (EIA). The applicant shall provide an Environmental Impact Assessment prepared by a professional environmental engineer, ecologist, environmental planner, or other qualified individual licensed to do business in the Commonwealth of Pennsylvania, which shall include the following.

(a) Identification of potential impacts to environmentally sensitive areas on the development property and within 3,000 feet of the property boundary or in the case of an assemblage of parcels, within 3,000 feet of all exterior property lines of the assemblage of parcels, including, but not limited to headwater setting features (springs, wetlands, perennial streams heads), critical recharge areas, groundwater resources, stormwater impacts, thermal degradations, floodplains, watercourses, water bodies, wetlands, hydric soils, riparian buffers, steep slopes 15% or greater, and woodlands.

(b) Identification of potential environmental impacts that are likely to be generated, including but not limited to noise, odor, smoke, vapor, dust, litter, glare, heat islands, vibration, electrical disturbance, etc.

(c) An assessment of potential impacts of operation, maintenance, and/or repair of the use (including, but not limited to, during periods of emergency power, fire, and fire suppression and control) on groundwater, creeks and streams, the air and the grounds of the property and within 3,000 feet of the property boundary or in the case of an assemblage of parcels, within 3,000 feet of all exterior property lines of the assemblage of parcels; storage of oil-based or other combustible materials (if any); and release of gasses and/or other contaminants into the air, ground, surface water or groundwater.

(d) Identification of all potential sources of fine particulate matter (PM2.5), volatile organic compounds, and nitrogen oxides to be located on the development property(s).

(e) Proposed measures to prevent or, as the case may be, mitigate, negative environmental impacts identified by the EIA.

(2) Fiscal Impact Analysis. The applicant shall provide a Fiscal Impact Analysis prepared by a qualified professional with demonstrated expertise in fiscal impact analysis which shall include the following:

(a) An estimate of the costs that may be incurred by the Township related to infrastructure, emergency preparedness, administrative costs, and police and fire protection.

(b) An estimate of the revenues generated by the development, including revenues generated from real estate sales, real estate taxes and income taxes for the Township, school district in which the Township is located and Carbon County.

(c) The educational and professional credentials and experience of the person that conducted the Fiscal Impact Analysis.

(3) Sound and vibration studies.

(a) A sound and/or a vibration study may be required for any use, except that residential uses shall be exempt from any vibration study.

(b) Where required, a sound study and/or a vibration study shall be conducted at the following phases:

[1] ~~A preliminary sound/vibration study shall be conducted as part of the zoning permit, conditional use or special exception process and shall establish baseline ambient sound/vibration levels and predicted sound/vibration levels resulting from the proposed use. The preliminary sound/vibration study shall include recommended sound/ vibration reducing materials or systems as needed to meet the sound/vibration limits specified in §240-67~~. A sound modeling study shall be conducted to demonstrate that the proposed development will comply with applicable noise requirements of the Penn Forest Township Code and that the cumulative/aggregate noise emission from the proposed development, including all noise emitting sources, will not emit noise beyond the development boundaries or any property line of the proposed use that is in

excess of the limits specified in §240-67. Sound modeling shall be performed according to ISO 9613 series standards.

~~[2] An interim sound study/vibration study shall be conducted during the building permit approval process based upon the proposed user or users of the use depicted on the building plans. The interim sound study/vibration study shall include recommended sound/vibration reducing materials or systems as needed to meet the sound/vibration limits. Any sound/vibration reducing materials or systems recommended by the interim sound study shall be incorporated into the construction plans for the use.~~

[3] An as-built sound/vibration study shall be conducted six months after issuance of the certificate of occupancy and prior to the final escrow release for any land development phase to demonstrate that the sound/vibration level requirements are being met.

~~[4] A sound/vibration study shall be conducted annually after completion of the as-built study. The annual sound study/vibration study shall be conducted during peak operation of the use and its mechanical equipment in winter, when the leaves are off the trees and the ground is frozen, to more accurately demonstrate that the sound/vibration level requirements are being met. Results of the sound study/vibration study shall be provided to the Township within thirty days of the study completion and every year thereafter until such time as the Township determines such sound or vibration studies are no longer required.~~

[5] For any required sound or vibration study, the Township may select an entity to conduct a study to verify that the sound or vibration does not exceed the aforesaid sound limits. The cost of such study shall be borne solely by the applicant or Data Center owner or operator, as applicable.

[6] In addition to the required sound or vibration studies, at any time when the Zoning Officer has reasonable cause to believe that the sound or vibration limits are being violated, the Zoning Officer may request that the Township or its authorized agent(s) conduct its own study to ascertain compliance with such limits. If the study finds a violation, then the cost of such study shall be borne solely by the applicant or owner or operator of the use, as applicable. If the study does not find a violation, then the Township shall be responsible to pay for the costs of such Township-sponsored study.

[7] If it is determined by the as-built study, annual study, or other sound or vibration study required by the Township that there is a violation of the aforesaid sound or vibration limits, it shall be considered a violation of this chapter. The owner or operator of the use shall promptly remediate the violation and shall provide a study showing that the sound or vibration, as applicable, does not exceed the applicable limits. If the non-compliance is not remedied within thirty (30) days, the zoning permit may be rescinded until compliance is achieved.

[8] If the Township institutes an enforcement action because of a violation of the sound or vibration limits, and if the owner is found liable for the violation in a

civil enforcement proceeding, then in addition to any other rights or remedies available to the Township, the judgment shall require the owner of the project to pay all of the Township's reasonable costs and expenses to prove noncompliance with the sound and/or vibration requirements, including the tests to determine the sound and/or vibration levels. Such costs shall be paid within 30 days by the owner of the project after the final judgment. In the event the owner does not pay such costs within 30 days, the Township may pursue appropriate remedies at law or equity to recover such costs and expenses from the owner, including placing a municipal lien against the property upon which the project is located.

[9] Maximum sound and vibration levels specified in §240-67 shall not apply to emergency preparedness and response or during times of power outage; however, the sound and vibration studies shall also evaluate and report anticipated sound and vibration levels when all emergency power generation equipment is running, including backup generators, and noise- reduction and vibration-reduction measures shall be taken.

(4) Water and sewer, and water feasibility study.

(a) If the use is to rely upon nonpublic sources of water, the applicant shall provide a water feasibility study in accordance with this §240-68C(4). The purpose of the study is to determine if there is an adequate supply of water and the sustainability of the withdrawal for the proposed use, and to estimate the impact of the use on existing wells, groundwater resources, surface water resources, and ~~the environment~~ other environmental features in the vicinity of the proposed use. No use shall be approved unless the water feasibility study demonstrates that the anticipated water supply yield (and associated storage) is adequate for the project during a one-in-ten year drought recurrence and that the proposed water withdrawals and discharges will not endanger or adversely affect other users or the environment. ~~existing wells or the quantity or quality of groundwater supplies or surface waters on or beneath the subject property or within 3,000 feet of the property boundary or, in the case of an assemblage of parcels, within 3,000 feet of all exterior property lines of the assemblage of parcels. All elements of the constant rate aquifer test well and water quality analysis shall be completed prior to submission of the water feasibility study. A well construction permit is required for the constant rate aquifer production well(s) and monitoring well(s) for preparation of the water feasibility study.~~ A ~~project~~ use proposing to utilize groundwater as its primary water source shall proceed through three important steps, as follows and which are described in more detail in subsection (b) below:

Step 1: The applicant shall develop and submit a pre-drilling plan which shall provide a project description, a hydrogeologic setting description, and a groundwater availability analysis. Following approval of the pre-drilling plan the applicant shall move forward with the drilling plan and once the well(s) is completed the project shall proceed to Step 2.

Step 2: The applicant shall submit a Constant Rate Aquifer Testing Plan. Following approval of the Constant Rate Aquifer Testing Plan the applicant shall perform the testing as approved.

Step 3: Upon completion of the Constant Rate Aquifer Test, the applicant shall submit the results. These results shall include hydrographs of all monitoring locations, a revised groundwater availability analysis and hydrogeologic setting, and details of any observed impacts.

(b) The water feasibility study, pre-drilling plan, and aquifer testing plan, as applicable, shall be conducted and shall include information as follows:

[1] The projected water demands of the use, including both average and peak daily consumption, and including any additional flow required to comply with National Fire Protection Association specifications for sprinkler systems and using the criteria set forth in the Guide for Determination of Required Fire Flow by the Insurance Services Office (ISO), as amended.

[2] The source of water to be used.

[3] A description of how water will be used, including the amount or proportion of water to be used for each purpose (e.g. cooling, humidity control, fire suppression, and domestic usage).

[4] The long-term safe yield of the water source. For groundwater sources, this shall be determined by the completion of a hydrogeologic setting analysis which includes a hydrogeologic cross section, potential Area of Influence (AOI), target aquifer and type, potential recharge area, sensitive features within the identified AOI, and a groundwater availability analysis providing potential availability in a one-in-ten year drought. For surface water withdrawal, the analysis shall provide the volume of water available during a one-in-ten year drought without interruption (no passby conditions during the "JASON" months: July, August, September, October and November). These analyses shall confirm that there shall be no potential negative impacts to other users, the environment or sensitive species.

[5] A description of the amount or portion of water withdrawn that will be recycled or discharged and by what means and at what temperature.

[6] A description of how the recycling or discharge of water will impact the surrounding areas of the Township.

[7] A topographic and geologic map of the area with a radius of at least one mile from the site.

[8] The location of all existing and proposed wells within 3,000 feet of the property boundary or, in the case of an assemblage of parcels, within 3,000 feet of all exterior property lines of the assemblage of parcels, with a notation of the capacity of all high-yield wells. Based on the provided hydrogeologic setting model which shall include a potential AOI, the aforementioned 3,000 feet distances may be insufficient and monitoring along the maximum hydraulic

conductivity direction or "K max," may need to be extended beyond 3,000 feet to match the potential Area of Influence of the proposed well. The K Max direction is typically along bedrock strike and can be significantly elongated in semi-confined bedding plane driven aquifers with significant "structure" (dip) and in confined aquifers. If the potential AOI extends beyond the aforementioned distances of 3,000 feet, then the location of all existing and proposed wells shall be provided for the area within the entire potential AOI. The applicant shall notify each property owner within such area of the proposed project and shall offer to test the owner's well for baseline water quality, total depth of the well, static water level and operating pumping water level. If the property owner grants permission to allow for water quality and well testing, the applicant shall hire and pay the full cost of a certified lab and professional geologist with a focus on hydrogeology to collect the laboratory samples and well information and shall include all test results in the water feasibility study. Alternatively, the property owner may elect to hire a certified lab and professional geologist of his own choosing to collect the laboratory samples and well information, in which case the applicant shall pay the full cost of such services and shall include all such test results in the water feasibility study. Notifications to property owners shall be sent via certified mail and shall allow sufficient lead time for property owners to respond and for testing to be conducted. The notification shall include the name and contact information of the person to whom to respond.

[9] Regional map. The following information shall be provided on a regional topographic map for the area within 3,000 feet of the property boundary or, in the case of an assemblage of parcels, within 3,000 feet of all exterior property lines of the assemblage of parcels, unless the hydrogeologic setting indicates that the potential AOI extends beyond the aforementioned distances of 3,000 feet, in which case the distances shall be extended to include the entire potential AOI. If any existing wells withdrawing an average of over 10,000 gpd during any consecutive 30-day period are located within one mile of the site, the mapping distance shall be extended to one mile or to the entire potential AOI, whichever is greater. Said map shall be up to date by using recent aerial photographs and/or a driving survey.

[a] The location of all existing and proposed wells, including the test well(s) and monitoring wells.

[b] The location of any potential hydrogeologic boundaries, recharge areas, discharge areas, dominant flow paths and the theoretical AOI.

[c] The location of any high quality (HQ) or exceptional value (EV) wetlands; any associated springs, seeps, and headwaters that feed such wetlands; and any known or potential habitats of rare, threatened or endangered species.

[d] The location of all existing and proposed on-lot sewage disposal systems as well as all sewage treatment system surface water discharges.

[e] The location of facilities storing or handling residual, hazardous, or extremely hazardous substances or petroleum products.

[f] The location of all perennial and intermittent watercourses.

[10] Site Plan. A site plan shall be provided, showing existing and proposed lot lines. The following features shall be presented on an up-to-date plan for the site and area within 3,000 feet of the property boundary or, in the case of an assemblage of parcels, within 3,000 feet of all exterior property lines of the assemblage of parcels, unless the hydrogeologic setting indicates that the potential AOI extends beyond the aforementioned distances of 3,000 feet, in which case the distances shall be extended to include the entire potential AOI.

[a] Flagged wetland boundaries.

[b] All springs, seeps and ephemeral pools.

[c] All watercourses with a statement as to whether they are perennial or intermittent and the classification of any such watercourse (exceptional value, Class A, Class B, etc.).

[d] All lakes, ponds, and reservoirs.

[e] Existing and proposed wells.

[f] Existing and proposed septic systems.

[g] Test well(s) and monitoring wells.

[h] Topography.

[i] Piezometer wells, if applicable.

[11] Aquifer Test Wells. The proposed production well to be used to meet the project's water demand shall be the focus of the Constant Rate Aquifer Testing. Any backup wells that may be used for production shall be tested separately. If the plan of the project is to operate a well field, then individual constant rate aquifer tests shall be performed followed by a test that is performed with all the wells operating simultaneously as they intend to be used in the future. This test shall allow for potential impacts to be observed and provide the ability for analysis of the combined effect of operating multiple wells to meet the water demands of the project.

[12] Monitoring wells.

[a] Aquifer testing plans shall include a proposed monitoring network that includes, as appropriate, other groundwater wells and surface waters, including water bodies, watercourses, ~~including ponds,~~ wetlands, ~~streams,~~ springs and seeps to assess the proposed withdrawal for sustainability, potential impacts to other users and impacts to the environment. The monitoring network shall be focused on the expected ~~area of influence~~ AOI during the testing to adequately characterize drawdown in the direction of the maximum and minimum hydraulic conductivity (k-max and k-min) and

where potentially significant impacts are most likely to occur. The monitoring network will also be used to assess the contributing groundwater basin, refine the groundwater availability analysis that shall be required with any groundwater withdrawal application required by the DRBC and/or PADEP. If ideally located monitoring wells aren't in existence via local residential wells or test wells drilled during water resource exploration work, then additional monitoring wells may be required to be drilled to provide optimal aquifer testing procedures. These monitoring wells shall be sited based again on the hydrogeologic setting in a manner that allows for proper evaluation of the test results. Any additional monitoring wells that are drilled shall be constructed in a manner that is similar/identical to the production well(s), meaning casing depth and total depth shall be similar and the target aquifer shall be contacted in the open borehole portion of the monitoring well. Borehole size does not have to match the production well(s) which are typically drilled out at larger diameters to maximize well efficiency and allow for proper pump and plumbing to be installed. Information regarding monitoring well casing depth, total depth and water producing zones shall be provided in the final report.

[b] The applicant shall secure written permission from the property owner for any off-site well to be used for monitoring, that grants the Township permission for a period not to exceed 18 months after completion of the project, to obtain water level measurements and samples of the water for laboratory analysis as required to verify compliance with this chapter.

[c] To ensure accurate and frequent collection of aquifer testing data, all monitoring locations shall be equipped with data logging pressure transducers (data loggers), where possible, during all phases of testing. The data logger in the production well being tested shall be reprogrammed at the start of the test to collect logarithmically and then at a maximum collection interval of every one minute through the pumping and recovery phases. Prior to the start of the constant rate testing the production well and all monitoring points shall be set to record at 10-minute intervals. All wells used for monitoring purposes shall be programmed to record water levels during background monitoring and throughout the testing at a minimum of once every ten minutes and synchronized to collect data on even ten-minute increments. For example, all equipment should be programmed to collect a water level measurement at the same exact time across the project site at 12:00, 12:10, 12:20 etc. Background monitoring with automated transducers actively recording the entire monitoring network (wells, springs, surface water features, etc.) shall begin at least one week prior to the constant rate pumping of the test well.

[d] Ground elevation adjacent to the well(s) in addition to the static water level shall be based on USGS vertical datum.

[13] Testing Locations and Details. Prior to drilling and/or testing, the Township Engineer shall be provided with the Pennsylvania State Plane Coordinates for

the monitoring and test well locations and a map of said locations of the test well(s) and monitoring wells. Prior to drilling and/or testing, the Township Engineer shall be provided with the anticipated pumping rate and monitoring frequency program, which shall be subject to approval by the Township Engineer prior to the test. Dates of drilling and testing shall be made available to the Township Engineer so that they may witness field operations as necessary. All correspondence with any regulatory authorities (PADEP, DRBC, Fish and Boat Commission, etc.) shall be copied to the Township, to allow for proper coordination

[14] Geologic Log. An accurate geologic log shall be maintained during drilling of the constant rate aquifer test well(s) and monitoring well(s) if applicable, to provide a detailed description of the type and thickness of rocks and overburden encountered. Additionally, the log shall contain information on the depth of all water bearing zones (WBZs) encountered and the yield from each zone. The total yield from the well shall be measured using a quantitative method. Samples shall be collected every 20 feet during drilling, or at each change in rock type, whichever occurs first.

[15] Constant Rate Aquifer Tests. Forty-eight-hour constant rate aquifer test(s) shall be conducted on the proposed production well(s) at a rate that is determined by performing a Step Testing of the well. The selected rate shall be the maximum rate at which the production well can be applied for a withdrawal. The test shall include the monitoring of background water levels in all wells for a period not less than one week prior to start of pumping and one week after pumping (recovery monitoring). The aquifer test shall be conducted during a period of groundwater recession, when there is no measurable precipitation for at least 48 hours prior to pumping and throughout the test. If precipitation is encountered during the constant rate aquifer test, an evaluation of the data shall be performed while the testing is still active to determine if the test should be extended or stopped and restarted at a later date. If the test proceeds with precipitation causing some recovery of monitoring points, then the data shall be evaluated using an acceptable method to account for the effects of any recharge upon water levels in the wells, and upon all calculations of the constant rate aquifer test data. Significant recharge during the test may cause the results to be considered invalid. The constant rate aquifer test shall be followed by a recovery test, with monitoring of water levels in the test well being conducted until at least 95% recovery of draw down is observed in the test well, or until 48 hours after termination of pumping, whichever is first.

[16] Pumping Rate. The constant rate aquifer test shall be conducted at a constant pumping rate that shall not deviate greater than plus or minus two percent (+/- 2%) during the test. The rate of flow shall be monitored by a water meter that tallies total flow volumes as well as reveals pumping rate. The rate of flow from the meter shall be verified periodically through the test by channeling the discharge flow through a 90-degree V-Notched weir, and such confirmation measurements shall be recorded and reported.

[17] Constant Rate Aquifer Test Discharge. Discharge from the proposed production well shall be routed such that recirculation doesn't impact water levels in the production well or any monitoring features by artificially recharging the production well, monitoring wells or other feature (wetland, spring, stream, etc.) being measured and recorded during testing. Thus, the discharge location must be located outside the agreed upon ~~area of influence~~ AOI of the production well, downgradient from any surface water features within the monitoring network and outside of the likely recharge areas to any monitoring wells.

[18] Required Data. The report shall include precipitation data, static water levels immediately prior to yield testing, ~~hydrograph of depth to water surface during test pumping and recovery period of the test well, graphs of depth to water surface at monitoring wells during the test pumping period,~~ linear hydrographs of water levels and test responses of all monitoring points through background, testing and recovery monitoring periods, residual drawdown graphs (t/t') and logarithmic hydrographs of the production well and any monitoring points that had observable drawdown as a result of operating the production well. Typed and raw field notes showing original observations, water levels and flow readings, and the time readings were taken.

[19] Water Quality. Water quality samples shall be obtained from the test well at both the commencement and termination of the constant rate aquifer testing to demonstrate that drinking water quality conforms to this section.

[a] All samples shall be collected, transported and analyzed in accordance with US EPA and PA DEP protocol for drinking water. Sample testing shall be performed by a laboratory certified by the commonwealth to perform drinking water analysis. Laboratory reports shall contain sufficient quality assurance and quality control data to explain any analysis and reporting conditions or deficiencies. Water quality must comply with currently published US EPA National Primary and Secondary Drinking Water Standards and Health Advisories.

[b] Water quality testing shall include, at a minimum, the following parameters: total and fecal coliform, nitrate/nitrite, pH, iron, manganese, sulfate, lead, chloride, hardness, turbidity, odor, total dissolved solids, surfactants (detergents), volatile organic compounds - Group 1 (VOC1) + 10 unknowns, mtbe, herbicides - Group 1 (Hl) and pesticides - Group 3 (P3). A library search for tentatively identified compounds (TICs). Additional analysis shall be required if TICs are discovered. Group 1 (VOC1), etc., refers to PA DEP categories of contaminants.

[c] The applicant shall perform a survey to identify and evaluate potential sources of contamination that may impact water quality in the proposed well(s) and shall perform additional sampling and analysis as may be required to assure water quality is satisfactory for the protection of human health and the environment.

[d] A well that does not meet the above standards shall be required to meet them through adequate treatment facilities. Installation and annual maintenance cost estimates to adequately treat the water shall be provided in the report.

[e] The laboratory report shall be include and shall contain the name, license number and address of the state drinking water certified laboratory.

[20] Sustainable Yield of Groundwater Source - Aquifer Capacity. Documentation shall be provided to support the sustainable yield of the well, which shall include a revised groundwater availability analysis (post-test so that the collected ~~test~~ data can be used to revise the theoretical model provided in advance of testing). This information shall include determinations of the ~~Area of Influence~~ AOI and potential Recharge Area of the production well. It shall also include determinations of any potential impacts to other groundwater or surface water users and the environment. Supportive evidence shall consist of wells drilled on-site, neighboring well information, and data available for wells within 3,000 feet of the property boundary or, in the case of an assemblage of parcels, within 3,000 feet of all exterior property lines of the assemblage of parcels, or if the AOI extends beyond the aforementioned distances of 3,000 feet, within the entire AOI, using the Pennsylvania Groundwater Information System (PA GWIS).

[21] Hydrogeologic Budget. A hydrogeologic budget shall be calculated, on an annual basis, for the site based upon the drought recharge capacity of the underlying aquifer and the projected peak water demand of the proposed well(s). The budget shall use groundwater recharge values from published references and a drought of at least one- in-ten-year severity. The recharge area for the budget shall consist only of the proposed development project, less impervious surface unless infiltration system considerations are made, if on-site septic systems are proposed, sand mounds, subsurface and at grade systems may allow for contribution of 90% return of water to the aquifer system. Aquifer contribution from spray, drip and stream discharge shall be determined on a case by case basis. A determination shall be made on whether or not the potential exists for adverse effects on hydrogeology of the project vicinity, including adjacent wells, springs, ~~surface~~ water bodies, watercourses, and wetlands, based upon the results of the hydrogeologic budget.

[22] Effects on Waters. If wetlands, seeps, springs, ephemeral pools, ~~streams, lakes, ponds, and/or reservoirs~~ watercourses and/or water bodies exist on or within 3,000 feet of the property boundary or, in the case of an assemblage of parcels, within 3,000 feet of all exterior property lines of the assemblage of parcels, or if the AOI extends beyond the aforementioned distances of 3,000 feet, within the entire AOI, the report shall address the potential to affect these features as a result of drilling and pumping of the proposed supply wells. Circumstantial evidence to support conclusions regarding this issue shall be considered limited in value. Thus, direct monitoring of water levels and direct measurement of flows during constant rate aquifer tests shall be required when said surface water features are deemed at potential risk. If staff gauges are used, measured

stream and seep flow rates must be provided to quantify flows at various gauge levels. Analysis shall include evaluation of the potential effect from proposed underground utility lines that may penetrate the shallow groundwater system.

[23] A statement of the qualifications and the signature(s) of the person(s) preparing the study. The water resource impact study shall be prepared by a professional geologist and/or professional engineer, licensed in the Commonwealth, experienced in the performance of groundwater investigations for water supply wells.

(c) The applicant shall provide proof of review and approval from the Delaware River Basin Commission for projects proposing the following:

[1] An average water withdrawal of more than 100,000 gallons per day (gpd) over any consecutive 30-day period from any source or combination of sources within the Delaware River Basin; or

[2] Discharge of pollutants, including heat/thermal discharges, over 10,000 gallons per day (gpd) during any consecutive 30-day period within the Delaware River Basin Special Protection Waters or 50,000 gallons per day (gpd) during any consecutive 30-day period within the Delaware River Basin.

(d) The owner or operator of the use shall submit a monthly report to the Township to confirm that the actual water usage is at or below the projected water demand stated in the water feasibility study. Exceeding the projected water demand stated in the water feasibility study shall be deemed a violation of this chapter under the standards of Article II of this chapter and immediate action shall be taken by the owner or operator of the use to remedy the violation.

(e) If it is determined that the proposed or approved use or the testing caused a well to ~~go dry~~ experience loss of flow or well efficiency or to become contaminated, the applicant or the owner or operator of the use, as applicable, shall be responsible for restoring water supply to the impacted property and remediating any contamination.

[1] The applicant shall be required to enter into a well depletion agreement with Penn Forest Township.

[2] The agreement applies to all existing wells within 3,000 feet of the subject property boundary, or in the case of an assemblage of parcels, within 3,000 feet of all exterior property lines of the assemblage of parcels, or if the AOI extends beyond the aforementioned distances of 3,000 feet, within the entire AOI, that experience loss of flow or efficiency or become contaminated to such an extent that the supply is no longer adequate for its owner's needs. If it can be shown that such loss of flow or efficiency or contamination is caused by the well(s) servicing the applicant's development or property, it shall be the applicant's responsibility to restore an adequate supply. At the sole discretion and direction of Penn Forest Township, the applicant shall deepen the impacted well, drill a new well, or connect the affected property to a public water supply, so as to provide an adequate supply of potable water, as defined by the PA DEP, to the

affected property owner. The initial determination shall be made by the Board of Supervisors based on the recommendation of a qualified professional geologist with a focus in hydrogeology.

[3] Any expense associated with providing the affected property owner with a potable water supply shall be borne by the applicant and approved by the Board of Supervisors based on the recommendation of a qualified professional geologist with a focus in hydrogeology.

[4] The applicant shall remain responsible for providing the affected property owner with a suitable supply of potable water for the life of the operation of the applicant's use.

[5] Any dispute concerning the responsibility or cause of loss of flow or efficiency or contamination of the well shall be determined by an arbitration panel consisting of a qualified professional geologist with a focus in hydogeology selected by the applicant, a qualified professional geologist with a focus in hydogeology selected by the Township and a qualified professional geologist with a focus in hydogeology selected by the unanimous agreement with the first two arbitrators. The arbitrators shall render a decision within 60 days from the selection of a third arbitrator, and the arbitrator shall assess the cost of the arbitration proceeding.

[6] In addition to the requirements set forth in this subsection (h), the well depletion agreement shall include an indemnification provision whereby the applicant shall indemnify and hold harmless the Township from any and all claims, including claims by third parties, resulting from the applicant's activities, including but not limited to, well drilling, hydrofacturing, aquifer testing and use of the permitted well, as well as requiring an escrow, in an amount to be determined by the Township based on recommendation of a qualified professional geologist with a focus in hydrogeology, to secure the applicant's responsibilities and obligations under this subsection (h).

[7] The well depletion agreement shall be in the form and substance, and include the substantive provisions of the well depletion agreement attached hereto as Exhibit B.

(f) The applicant shall demonstrate that adequate means of wastewater disposal, including domestic wastewater and wastewater used for cooling or industrial purposes, have been provided and have been approved by the Pennsylvania Department of Environmental Protection. In addition, the provisions of §240-35 shall apply.

(g) On-lot sewage system effects. The applicant shall submit a narrative with the conditional use application describing the design of all on-lot sewage disposal systems and their effect upon groundwater recharge and quality with respect to all proposed and existing water supplies. A nitrate study shall be performed following PA DEP mass balance policy guidelines which include average year recharge from the development site alone, less impervious surface, sewer system design flow rates

and a 45 mg/I effluent. Available existing groundwater quality nitrate data shall be obtained from test well(s), adjacent supply wells and springs to include as background nitrate levels. Total nitrate levels shall not be allowed to exceed the 10 mg/I drinking water limit.

(h) In the event a proposed use requires any upgrade or expansion to either a public water supply system or public sewer conveyance and treatment system, or both, the cost of the design, permitting, construction and installation thereof shall be borne by the applicant.

(5) Where required by §240-48, a visual impact plan shall be conducted in accordance with that section.