

ORDINANCE NO. 230

AN ORDINANCE OF THE TOWNSHIP OF INDIANA ADOPTING WATERSHED STORMWATER MANAGEMENT PLANS FOR THE DEER CREEK, PINE CREEK AND SQUAW RUN WATERSHEDS ADOPTED BY ALLEGHENY COUNTY AS REQUIRED BY THE PENNSYLVANIA STORMWATER MANAGEMENT ACT (ACT 167 OF 1978, P.L. 864) AND AMENDING, REVISING OR REPEALING CERTAIN SECTIONS OF THE ZONING ORDINANCE NO. 217, SUBDIVISION ORDINANCE NO. 215, FLOODPLAIN MANAGEMENT ORDINANCE NO. 203, GRADING ORDINANCE NO. 229, AND BUILDING CODE ORDINANCE NO. 180.

BE IT ORDAINED AND ENACTED by the Board of Supervisors of the Township of Indiana, Allegheny County, Pennsylvania, as follows:

SECTION 1. TITLE AND PURPOSE

Title. This Ordinance shall be known and may be cited as the "Indiana Township Stormwater Management Ordinance".

Purpose. The purpose of this Ordinance is:

1. To manage stormwater runoff resulting from land alteration and disturbance activities in accordance with the watershed stormwater management plans adopted by Allegheny County as required by the Pennsylvania Storm Water Management Act (Act 167 of 1978, P.L. 864).
2. To utilize and preserve the desirable existing natural drainage systems; to preserve the flood-carrying capacity of streams; and to maintain and improve the quality of streams.
3. To encourage natural infiltration of rainfall to preserve groundwater supplies and stream flows.
4. To provide for adequate maintenance of all permanent stormwater management structures in the Township of Indiana.

SECTION 2. ZONING ORDINANCE

The Zoning Ordinance, Ordinance No. 217, is hereby amended by including the following provisions:

- (a) Community Development Objectives
The Community Development Objectives which are the basis for the provisions of this Ordinance are set

forth in the Comprehensive Plan as adopted and amended by the Board of Supervisors, and in the stormwater management objectives for the Deer Creek, Pine Creek and Squaw Run Watersheds.

(b)

Definitions

AGRICULTURAL ACTIVITIES (FARMS): A tract or parcel of land upon which are grown and produced for sale or use, domestic livestock, dairy products, poultry, eggs, fruits and vegetables, and such other crops that are usually and customarily grown for food products.

FOREST MANAGEMENT OPERATIONS: All activities connected with growing and harvesting of forest products including the site preparation, cultivation and logging of trees, and the construction and maintenance of roads.

NURSERY: A tract of land on which trees and plants are raised or stored for transplanting and sale.

(c)

STORMWATER MANAGEMENT DISTRICTS: These districts are established according to the boundaries of the watersheds designated by the Pennsylvania Department of Environmental Resources in accordance with the Pennsylvania Storm Water Management Act (Act 167 of 1978, as amended) and the watershed stormwater management plans prepared pursuant thereto:

Deer Creek Watershed
Pine Creek Watershed
Squaw Run Watershed

Certain watersheds may be further subdivided into hydrologic subareas as shown on the watershed subarea map in the watershed plans and on the zoning district map. Copies of these maps are available in the township office.

FLOODPLAIN MANAGEMENT DISTRICTS: These districts are established as those areas subject to the 100-year flood as shown in the federal Flood Insurance studies. Copies of the studies and maps are available in the township office.

The provisions for the overlay districts shall supplement the requirements for the underlying zoning districts contained in the Zoning Ordinance.

(d)

STORMWATER MANAGEMENT

All users or lots in all districts shall comply with the requirements and standards for managing stormwater runoff in the stormwater management district in which the use or lot is located, as contained in the Subdivision and Land Development Ordinance (the "Subdivision Ordinance") and applicable provisions of the municipal building code.

Agricultural activities, nurseries and forestry management operations, where permitted by the Zoning Ordinance or other ordinances of the township, shall be required to provide for the safe management of stormwater runoff in accordance with the requirements of the stormwater management provisions of the Subdivision Ordinance; however, the submission and approval of a stormwater management plan, as required by the stormwater management provisions of the Subdivision Ordinance, shall be waived for such activities which have an erosion and sedimentation control plan approved by the County Conservation District.

Strip mining, where permitted by the Zoning Ordinance, shall have a plan for control of erosion and sedimentation and stormwater runoff, which is approved by the Pennsylvania Department of Environmental Resources, in accordance with the laws and regulations of the Commonwealth. If the strip mining operation is located within a watershed, or watersheds, for which a stormwater management plan has been approved in accordance with the requirements of the Pennsylvania Stormwater Management Act, then the erosion/sedimentation plan and any permanent stormwater runoff controls must be consistent with the standards and criteria of the watershed plan. A copy of the state-approved erosion/sedimentation plan shall be filed with the township prior to commencing mining operations.

The provisions of this Ordinance shall apply to all Planned Residential Developments, Planned Commercial Developments, and Mobile Home Parks, Light Industrial and Commercial Building projects, all parking lots and loading areas, unless specifically exempted.

(e)

No zoning or building permit shall be issued pursuant to the Zoning Ordinance until the stormwater plan for the property or lot has been approved in accordance with provisions of the Subdivision Ordinance. Further, the township shall not issue the permit until any required floodplain, dam safety or obstructions, or erosion/sedimentation approvals/permits have been re-

ceived from the applicable local, county or state agencies. Copies of the approval/permit must be filed with the township.

- (f) For any violation of any provision of this Ordinance relating to management of stormwater runoff, the minimum fine shall be not less than five hundred (\$500.00) dollars. Each day the violation shall continue after notice shall constitute a separate offense.
- (g) Anything contained in the Zoning Ordinance inconsistent with the provisions of this Section shall be deemed repealed for the purposes of this Ordinance.

SECTION 3. SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

The Subdivision and Land Development Ordinance, Ordinance No. 215 (the "Subdivision Ordinance"), is hereby amended by including the following provisions:

(a) PURPOSE AND APPLICABILITY

These regulations are adopted and implemented to achieve the following general purposes and objectives:

1. To manage stormwater runoff resulting from land alteration and disturbance activities in accordance with the watershed stormwater management plans adopted by Allegheny County as required by the Pennsylvania Storm Water Management Act (Act 167 of 1978, as amended).
2. To utilize and preserve the desirable existing natural drainage systems and to preserve the flood-carrying capacity of streams.
3. To encourage natural infiltration of rainfall to preserve groundwater supplies and stream flows.
4. To provide for adequate maintenance of all permanent stormwater management structures in the township.

The provisions of this Ordinance shall apply to all subdivision and land developments, including mobile home parks, unless specifically exempted.

(b) DEFINITIONS

For the purpose of this Ordinance, these terms shall be defined as follows:

Act. The Storm Water Management Act (Act of October 4, 1978, P.L. 864 No. 167; 32 P.S. §680.1-680.17, as amended by Act of May 24, 1984, No. 63).

Applicant. A landowner or developer, as defined by this Ordinance, who has filed an application for development, including his/her heirs, successors and assigns.

Channel. A natural stream that conveys water; a ditch or open channel excavated for the flow of water.

Confluence. Points where watercourses join together.

Conservation District (ACCD). The Allegheny County Conservation District.

County. The County of Allegheny, Pennsylvania.

Culvert. A pipe, conduit or similar structure including appurtenant works which carries a stream under or through an embankment or fill.

Dam. Any artificial barrier, together with its appurtenant works, constructed for the purpose of impounding or storing water, or a structure for highway, railroad or other purposes which may impound water.

Design Storm. The magnitude of precipitation from a storm event measured in probability of frequency of occurrence (e.g., 50-year storm) and duration (e.g., 24-hour), and used in computing stormwater management control systems.

Detention. The slowing, dampening, or attenuating of runoff flows entering the natural drainage pattern or storm drainage system by temporarily holding water on a surface area such as detention basins, reservoirs, on roof tops, in streets, parking lots, or within the drainage system itself, and releasing the water at a desired rate of discharge.

Detention Basin. A basin designed to retard stormwater runoff by temporarily storing the runoff and releasing it at a predetermined rate. A detention basin can be designed to drain completely after a storm event, or it can be designed to contain a permanent pool of water.

Developer. Any landowner, agent of such landowner or tenant with the permission of such landowner, who makes or causes to be made a subdivision or land development.

Development. Any activity, construction, alteration, change in land use or similar action that affects stormwater runoff characteristics.

Development Site. A lot, parcel or tract of land on which development is taking place or is proposed.

Discharge. Rate of flow, specifically fluid flow. A volume of fluid flowing from a conduit or channel, or being released from detention storage, per unit of time. Commonly expressed as cubic feet per second (cfs), million gallons per day (mgd), gallons per minutes (gpm), or cubic meters per second (cms).

Discharge Control Point. A point of hydraulic concern, such as a bridge, culvert, or channel section, for which the rate of runoff is computed or measured in the watershed plan.

Drainage. Interception and removal of excess surface water or groundwater from land by artificial or natural means.

Drainage Area. The contributing area to a single drainage basin, expressed in acres, square miles, or other units of area; also called a catchment area, watershed, or river basin; the area served by a drainage system or by a watercourse receiving storm and surface water.

Drainage Easement. A right granted by a landowner to a grantee allowing the use of private land for stormwater management purposes.

Encroachment. Any structure or activity which in any manner changes, expands or diminishes the course, current or cross section of any watercourse, floodway or body of water.

Engineer (Township Engineer). A professional engineer or engineering firm duly appointed as the engineer for the Township of Indiana.

Erosion. The wearing away of the land surface by running water, wind, ice, or other geological agents, including such process as gravitational creep.

Excavation (Cut). Any act by which soil or rock is cut into, dug, quarried, uncovered, removed, displaced, or re-located and shall include the conditions resulting therefrom.

Floodplain. A normally dry land area adjacent to stream channels that is susceptible to being inundated by overbank stream flows. For regulatory purposes, the Flood Plain

Management Act (Act of October 4, 1978, P.L. 851, No. 166) and regulations pursuant to the Act define the floodplain as the area inundated by a 100-year flood and delineated on a map by FEMA (Federal Emergency Management Agency).

Hydraulics. The branch of science concerned with the mechanics of fluids, especially liquids. As applied in stormwater management, the study of the characteristics of water flow in, and conveyance capacity of, a watercourse, considering such factors as depth, velocity and turbulence.

Hydrology. The science dealing with the waters of the earth and their distribution and circulation through the atmosphere. Engineering hydrology deals with the application of hydrologic concepts to the design of projects for use and control of water.

Hydrograph. A graph showing, for a given point on a stream or for a given point in any drainage system, the discharge, stage, velocity, or other property of water in respect to time.

Impervious Material or Surface. Material which resists the entrance or passing through of water or other liquids.

Land Development. As defined by the Municipalities Planning Code (Section 107(11): "(i) the improvement of one lot or two or more contiguous lots, tracts or parcels of land for any purpose involving (a) a group of two or more buildings, or (b) a division or allocation of land or space between or among two or more existing or prospective occupants by means of, or for the purpose of, streets, common areas, leaseholds, and condominiums, building groups, or other features; (ii) a division of land."

Land Disturbance. Any activity involving grading, tilling, digging or filling or stripping of vegetation; or any other activity which causes land to be exposed to the danger of erosion.

Municipality or Township. Township of Indiana, Allegheny County, Pennsylvania.

Natural Stormwater Runoff Regime. A watershed where natural surface configurations, runoff characteristics, and defined drainage conveyances have attained the conditions of equilibrium.

Obstruction. Any structure or assembly of materials including fill above or below the surface of land or water,

any activity which might impede, retard, or change flood flows.

Outfall. Points or areas at which stormwater runoff leaves a site, which may include streams, storm sewers, swales or other well defined natural or artificial drainage features, as well as areas of dispersed overland flows.

Outlet Structure. A structure designed to control the volume of stormwater runoff that passes through it during a specific length of time.

PaDER. Pennsylvania Department of Environmental Resources.

Peak Rate of Runoff (or Discharge). The maximum rate of flow of water at a given point and time resulting from a predetermined storm.

Performance Standard. A standard which establishes an end result or outcome which is to be achieved but does not prescribe specific means for achieving it. A specification standard in contrast is one which prescribes the exact characteristics to be used, leaving little choice to the applicant. The release rate percentage is an example of a performance standard; the design standards for storm sewers are specification standards.

Pervious Material. Material which permits the passage or entrance of water or other liquid.

Point of Interest. A point of hydrological and hydraulic importance used for computing a release rate percentage. These may include points of stream confluences, an existing obstruction or problem area, or other similar points.

Rate of Runoff. Instantaneous measurement of water flow expressed in a unit of volume per unit of time, also referred to as DISCHARGE. Usually stated in cubic feet per second (cfs) or gallons per minute (gpm).

Release Rate Percentage. The percentage of predevelopment peak rate of runoff from a watershed subarea (as delineated in the watershed plan), which defines the allowable post-development peak discharge from any development site in that subarea. The release rate percentage is determined by computing the following:

$$\frac{\text{Subarea predevelopment rate of runoff contributing to peak at downstream point of interest}}{\text{Subarea pre-development peak rate of runoff}} \times 100 = \text{Release Rate Percentage}$$

Runoff Characteristics. The surface components of any watershed which affect the rate, amount, and direction of stormwater runoff. These may include but are not limited to: vegetation, soils, slopes, and man-made landscape alterations.

SCS. Soil Conservation Service, U.S. Department of Agriculture.

Sediment. Solid material, both mineral and organic, that is in suspension, is being transported, or has been moved from its site or origin by air, water, gravity, or ice and has come to rest on the earth's surface.

Sedimentation. The process by which mineral or organic matter is accumulated or deposited by moving wind, water, or gravity.

Sediment Basin. A barrier or dam built at a suitable location to retain rock, sand, gravel, silt, or other material.

Soil-Cover Complex Method. A method of runoff computation developed by the U.S. Soil Conservation Service and found in its publication "Urban Hydrology for Small Watersheds," Technical Release No. 55, SCS, January 1975 (or most current edition).

Storage Facility. (See Detention Basin).

Storm Sewer. A sewer that carries intercepted surface runoff, street water, and other washwaters, or drainage, but excludes domestic sewage and industrial wastes.

Storm Sewer Discharge. Flow from a storm sewer that is discharged into a receiving stream.

Stormwater Collection System. Natural or engineered structures which collect and transport stormwater through or from a drainage area to the point of final outlet, including but not limited to, any of the following: conduits and appurtenant features, canals, channels, ditches, streams, culverts, streets and pumping stations.

Stormwater Management Plan. The plan for managing stormwater runoff from a specific development site.

Stormwater Runoff. Waters resulting from snow melt or precipitation within a drainage basin, flowing over the surface of the ground, collected in channels and conduits, and carried by receiving streams.

Stream. A watercourse.

Subarea. A portion of the watershed that has similar hydrological characteristics and drains to a common point.

Swale. A low-lying stretch of land which gathers or carries surface water runoff.

Time of Concentration. The time period necessary for surface runoff to reach the outlet of a subarea from the hydraulically most remote point in the tributary drainage area.

Volume of Stormwater Runoff. Quantity of water normally measured in inches, cubic feet, or acre-feet, measured or determined analytically from (1) runoff coefficients; (2) rainfall/runoff ratios; and (3) areas underneath hydrographs.

Watercourse (Waterway). Any channel of conveyance of surface water having a defined bed and banks, whether natural or artificial, with perennial or intermittent flow.

Watershed. The entire region or area drained by a river or other body of water whether natural or artificial. A "designated watershed" is an area delineated by PaDER and approved by the Environmental Quality Board for which counties are required to develop watershed stormwater management plans.

Watershed Stormwater Management Plan (or Watershed Plan). The plan for managing stormwater runoff throughout a designated watershed adopted by Allegheny County as required by the Pennsylvania Storm Water Management Act.

(c) PLAT SPECIFICATIONS

General Requirements. No final subdivision or land development plan shall be approved, no permit authorizing construction issued, or any earthmoving or land disturbance activity initiated until the final stormwater management plan for the development site is approved in accordance with the provisions of this Ordinance.

Exemptions for Small Developments.

1. At the time of application, the township shall determine if the subdivision or land development qualifies as a "small development" and, therefore, is eligible for a simplified stormwater plan submission. For the purpose of this Ordinance, a small development is:

Any subdivision or land development which results (or will result when fully constructed) in the creation of 3,000 or less square feet of impervious surface area.

2. A small development shall be exempt from the preparation of a stormwater management plan as specified by the following two sections of this Ordinance. However, such developments shall provide safe management of stormwater runoff in accordance with the General Standards section of this Ordinance and as approved by the Engineer for the township.
 3. Applications for small developments shall include a plan which describes, narratively and graphically, the type and location of proposed on-site stormwater management techniques or the proposed connection to an existing storm sewer system. The plan should show accurately site boundaries, five-foot interval contours, location of watershed and/or subarea boundaries on the site (if applicable), and any watercourses, flood plains or existing drainage facilities or structures located on the site. Depending upon actual site conditions, number of lots involved and similar considerations, the township shall determine if the plan must be prepared by a registered professional engineer.
 4. The Engineer for the township shall review and approve the proposed provisions for stormwater management for a small development. Where the applicant is proposing to connect to an existing storm sewer, the Engineer for the township shall determine that sufficient capacity exists in the storm sewer from the point of connection to the point of outlet in the natural drainage system. The Engineer shall also determine if the proposed development site is part of a larger parcel or tract for which a stormwater management plan was approved previously and, therefore, subject to any specific stormwater management control contained in the prior plan.
 5. For a parcel or tract of land held under single ownership, only one application for a small development, as defined above, shall be permitted before requiring a stormwater management plan for the entire parcel.
- (d) STORMWATER PLAN CONTENTS: PRELIMINARY S/LD PLAN SUBMISSION
General Format. The stormwater plan shall be prepared using the general requirements for plan format contained in the Subdivision Ordinance with the following additions:

1. Watershed location - Provide a key map showing development site's location within the designated watershed and watershed subareas (consult watershed stormwater plans for boundaries). On all site drawings, show the boundaries of the watershed(s) and subareas as they are located on the development site and identify watershed name(s) and subarea number(s).
2. Floodplain boundaries - Identify 100-year floodplains on the development site (as appropriate) based on the municipal Flood Insurance Study maps or a determination by the applicant (see the township floodplain or zoning ordinances).
3. Natural features - Show all bodies of water (natural and artificial), watercourses (permanent and intermittent), swales, wetlands and other natural drainage courses on the development site, or which will be affected by runoff from the development.
4. Soils - Provide an overlay showing soils types and boundaries within the development site (consult county, SCS, U.S. Geologic Survey for information).
5. Contours - Show existing and final contours at intervals of two feet; in areas with slopes greater than 15%, five-foot contour intervals may be used.
6. Stormwater management controls - Show any existing stormwater management or drainage controls and/or structures, such as sanitary and storm sewers, swales, culverts, etc. which are located on the development site, or which are located off-site but will be affected by runoff from the development.

Professional Certification. The stormwater management plan (including all calculations) must be prepared and sealed by a registered professional engineer with training and expertise in hydrology and hydraulics. Documentation of qualifications may be required by the township.

Runoff Calculations. Calculations for determining pre-post-development discharge rates and for designing proposed stormwater control facilities must be submitted with the stormwater management plan. All calculations shall be prepared using the method and data prescribed by the STORMWATER MANAGEMENT PERFORMANCE STANDARDS of this Ordinance.

Stormwater Controls. All proposed stormwater runoff control measures must be shown on the plan, including methods for

collecting, conveying and storing stormwater runoff on-site which are to be used both during and after construction. Erosion/sedimentation controls shall be shown. The preliminary plan should provide information on the general type, location, sizing, etc. of all proposed facilities and their relationship to the existing watershed drainage system.

If the development is to be constructed in stages, the applicant must demonstrate that stormwater facilities will be installed to manage stormwater runoff safely during each stage of development.

Easements, Rights-of-Way, Deed Restrictions. All existing and proposed easements and rights-of-way for drainage and/or access to stormwater control facilities shall be shown and the proposed owner identified. Show any areas subject to special deed restrictions relative to or affecting stormwater management on the development site.

Other Permits/Approvals. a list of any approval/permits relative to stormwater management that will be required from other governmental agencies (e.g., an obstructions permit from PaDER) and anticipated dates of submission/receipt should be included with the preliminary plan submission. Copies of applications may be requested by the township where they may be helpful for the stormwater plan review.

Maintenance Program. The preliminary application shall contain a proposed maintenance plan for all stormwater control facilities, in accordance with the following:

- a. Identify the proposed ownership entity (e.g., municipality, property owner, a homeowner's association, other management entity).
- b. Include a maintenance program for all facilities, outlining the type of maintenance activities, probable frequencies, personnel and equipment requirements, and estimated annual maintenance costs.
- c. Identify method of financing continuing operation and maintenance if facility is to be owned by other than the township or other governmental agency.

Stormwater Plan Contents: Final S/LD Plan Submission. All information pertaining to stormwater management from the preliminary plan along with any changes.

Final plan maps and drawings showing the exact nature and location of all temporary and permanent stormwater management controls along with design and construction specifications.

A schedule for the installation of all temporary and permanent stormwater control measures and devices.

An accurate survey showing all current and proposed easements and rights-of-way and copies of all proposed deed restrictions.

A maintenance program establishing ownership and maintenance responsibilities for all stormwater control facilities (identify specific person or entity) and detailing financial requirements and sources of funding. Submit any legal easements required to implement the maintenance program and copies of the maintenance agreement as specified by the MAINTENANCE AGREEMENT FOR PRIVATELY OWNED STORMWATER FACILITIES of this Ordinance.

Financial guarantees, consistent with the SPECIAL STORMWATER FACILITY MAINTENANCE FUND section of this Ordinance, to ensure that all stormwater controls will be installed properly and function satisfactorily.

Stormwater Plan Review Procedures:

Pre-Application Phase. Prior to submitting the preliminary S/LD plan, applicants are urged to consult with the township, the Allegheny County Planning Department and the County Conservation District on the requirements for safely managing stormwater runoff from the development site in a manner consistent with the municipal ordinances and applicable stormwater management plan. These agencies may be helpful in providing the data that are necessary for preparing the stormwater management plan.

Applicants are encouraged to submit a sketch plan with a narrative description of the proposed stormwater management controls for general guidance and discussion with the township and other agencies.

The pre-application phase is not mandatory, and any review comments provided by the township or other agencies are advisory only and do not constitute any legally binding action on the part of the township or any other agency.

Preliminary and Final Stormwater Plan Reviews:

Preliminary and Final Plans Required. Stormwater Management plans, in accordance with the requirements of the STORMWATER PLAN REQUIREMENTS of this Ordinance, will be submitted with

the preliminary and final subdivision or land development plan application.

Review by township Engineer and Conservation District. Preliminary and final plans will be reviewed by the township Engineer and the County Conservation District. At its discretion, the township may also engage other specialists in hydrology or hydraulics to assist with the stormwater plan review.

Preliminary Plan to the Allegheny County Planning Department. A copy of the preliminary plan, along with all runoff calculations, will be forwarded to the Allegheny County Planning Department. A report of the findings of the Planning Department will be returned to the township within thirty (30) days. If the County Planning Department review identifies the possibility of harmful impacts downstream of the development site, the applicant will be advised so that the necessary modifications can be made to the stormwater management controls for the development site. The township Engineer shall not approve a preliminary stormwater plan which receives a negative watershed impact review from the Allegheny County Planning Department.

Notification of Affected Municipalities. The township shall notify municipalities upstream and downstream of the development site, which may be affected by the stormwater runoff and proposed management system for the site, when both the preliminary and final plan applications are submitted. Copies of the plans will be made available to the municipalities upon request. Comments received from any affected municipality will be considered by the township Engineer and will be submitted with the Engineer's report to the Planning Commission and the Board of Supervisors.

Township Engineer's Review. The township Engineer shall approve or disapprove the preliminary and final stormwater management plan based on the requirements of the township's ordinances, the standards and criteria of the watershed plan, and good engineering practice. The Engineer shall submit a written report, along with supporting documentation, to the township Planning Commission for its consideration as part of the overall subdivision or land development plan review.

Status of the Engineer's Determination. The approval/disapproval of the site's stormwater management plan by the township Engineer shall be considered final. The township Planning Commission or the Board of Supervisors shall not reverse the Engineer's determination by approving or disapproving the site's stormwater management plan or any

specific control measure in contradiction to the Engineer's action. The Planning Commission or the Board of Supervisors can request modifications or alternative approaches to the stormwater management controls, provided these are agreed to by the township Engineer and the applicant's engineer.

Approval of Stormwater Plan Required for S/LD Approval. No preliminary or final approval shall be granted for the overall subdivision or land development application until a stormwater management plan for the site has been approved.

Permits Required from Other Governmental Agencies. Where the subdivision or land development application requires an obstruction or erosion/sedimentation permit from PaDER, then final subdivision or land development plan approval shall be conditional upon receipt of such permits. However, no building permit shall be issued, or construction started, until the permits are received and copies filed with the township.

Status of the Stormwater Plan After Final Approval:

Upon final S/LD plan approval and compliance with other applicable ordinances of the township, the applicant may commence to install or implement the approved stormwater management controls, subject to the provisions of the PRELIMINARY AND FINAL STORMWATER PLAN REVIEWS of this Ordinance. If site development or building construction does not begin within two (2) years of the date of final approval of the subdivision or land development plan, then before doing so, the applicant shall resubmit the stormwater management plans to verify that no condition has changed within the watershed that would affect the feasibility or effectiveness of the previously approved stormwater management controls. Further, if for any reason development activities are suspended for two (2) years or more, then the same requirement for resubmission of the stormwater management plan shall apply.

Stormwater Plan Modifications:

Procedures for Approving Plan Modifications. Requests for modifications in the finally approved stormwater management controls shall be submitted to the township Engineer as follows:

1. If the request is initiated before construction begins, the stormwater plan must be resubmitted and reviewed according to the procedures in the STORMWATER PLAN REVIEW PROCEDURES of this Ordinance.
2. If the request is initiated after construction is underway, the township Engineer shall have the author-

ity to approve or disapprove the modification, based on field inspection, provided: (a) the requested changes in stormwater controls do not result in any modifications to other approved township land use/development requirements (such as required building setbacks, yards, etc.), and (b) the performance standards in the STORMWATER MANAGEMENT PERFORMANCE STANDARDS of this Ordinance are met. Notification of the Engineer's action shall be sent to the township Planning Commission and the Board of Supervisors. The Board of Supervisors may issue a stay of the stormwater plan modification within five (5) days and require the permittee to resubmit the plan modification for full stormwater plan review in accordance with the procedures in the STORMWATER PLAN REVIEW PROCEDURES of this Ordinance.

Stormwater Management Performance Standards:

Stormwater Management Districts. For purposes of stormwater management, the township is divided into the following stormwater management districts:

Deer Creek Watershed
Pine Creek Watershed
Squaw Run Watershed

One or more of these districts may be further divided into subareas which have similar hydrological characteristics and drain to a common point.

The location and boundaries of the stormwater management districts and subareas are adopted as overlay districts to the Township Zoning Map and are shown on the Zoning Map and the watershed maps which are available in the township office.

General Standards. The following provisions shall be considered the overriding performance standards against which all proposed stormwater control measures shall be evaluated, and they shall apply in all Stormwater Management districts in the township: (1) Any landowner and any person engaged in the alteration of land which may affect stormwater runoff characteristics shall implement such measures as are reasonable necessary to prevent injury to health, safety or other property. Such measures shall include such actions as are required to assure that the maximum rate of stormwater runoff is no greater after development than prior to development activities; or, to manage the quantity, velocity and direction of resulting stormwater runoff in a manner which otherwise adequately protects health and property from possible injury. (2) The stormwater management plan for

the development site must consider all the stormwater runoff flowing over the site. (3) No discharge of toxic materials into any stormwater management system shall be permitted.

Watershed Standards. The stormwater performance standards contained in this section are intended to implement the standards and criteria contained in the Deer Creek, Pine Creek, and Squaw Run Watershed Stormwater Management Plans, adopted and approved as required by the Pennsylvania Stormwater Management Act. If there is any discrepancy between the provisions of this Ordinance and the standards and criteria of the said Plans, or if the watershed Plans are subsequently amended, then the standards/criteria of the current watershed Plans shall govern.

1. **Design Storms.** The 2-, 10-, and 100-year design storm frequencies shall be used for analyzing stormwater runoff in pre- and post-development conditions as well as for designing runoff control facilities in the Deer Creek, Pine Creek, and Squaw Run Watersheds. The SCS 24-hour, Type II Rainfall Distribution shall be used for all analyses. The design storms, along with the 24-hour total rainfall for these storm frequencies for the watersheds are:

<u>Design Storm</u>	<u>Rainfall Depth in Inches</u>
2-year	2.14
<u>10-year*</u>	<u>3.23*</u>
100-year	4.59

*Not applicable to Squaw Run Watershed.

2. **Release Rate Percentage.** (a) **Application:** All subdivisions and land development activities which result in an increase in the post-development peak rate of stormwater runoff from any outfall on the development site shall be subject to the Release Rate Percentage for the watershed subarea in which the site (or outfall) is located. A listing of the release rate percentage for each subarea in the Deer Creek, Pine Creek, and Squaw Run Watersheds appears in Appendix A of this Ordinance, and the subareas are delineated on the watershed subarea map in the watershed Plans. (b) **Definition:** The release rate percentage defines the percentage of the pre-development peak rate of runoff that can be discharged from an outfall on the site after development. It applies uniformly to all land developments or alterations within a subarea, and the post-development rate of runoff discharging from each outfall of the development site cannot exceed the

release rate percentage for the subarea in which it is located. (c) Procedure for Use: The steps that must be followed to utilize the release rate percentage for a particular development site are: (i) Identify from the watershed subarea map, the specific subarea in which the development site is located and obtain the subarea release rate percentage from Appendix A, (ii) Compute the pre- and post-development runoff hydrographs for each stormwater outfall for the site, using the soil cover complex method (SCS TR-55), for the 2-, 10-, and 100-year design storms for the Pine Creek and Deer Creek Watersheds, and for the 2- and 100-year design storms for the Squaw Run Watershed, applying no on-site detention for stormwater management but including any techniques to minimize impervious surfaces and/or increase the time of concentration for stormwater runoff flowing over the development site. If the post-development peak runoff rate is less than or equal to the pre-development peak runoff rate, then additional stormwater control shall not be required at that outfall. If the post-development peak runoff rate is greater than the pre-development value, then stormwater detention will be required and proceed to the next step, (iii) Multiply the subarea release rate percentage by the pre-development rate of runoff from the development site to determine the maximum allowable release rate from any detention facility for the 2-, 10-, and 100-year storm events for the Pine Creek and Deer Creek Watersheds and for the 2- and 100-year storm events for the Squaw Run Watershed.

No-Harm Evaluation. An applicant may seek to exceed the otherwise applicable subarea release rate percentage by performing the "No Harm Evaluation" which requires an independent engineering analysis to demonstrate that other reasonable options exist to protect downstream areas from harmful storm runoff impacts. The "No Harm Evaluation" shall be prepared by a registered engineer, who is experienced in hydrology and hydraulics, in accordance with the procedure contained in Appendix B of this Ordinance. The analysis for the "No Harm Evaluation" shall be submitted to the township Engineer for review and approval.

Design Criteria for Stormwater Management Controls:

General Design Guidelines. Applicants may select runoff control techniques, or a combination of techniques, which are most suitable to control stormwater runoff from the development site. All controls are subject to the approval of the township Engineer. The Engineer

may request specific information on design and/or operating features of the proposed stormwater controls in order to determine their suitability and adequacy in terms of the standards of this Ordinance. In selecting and designing stormwater management systems and controls, applicants may be guided by the following references:

"Urban Hydrology for Small Watershed" Technical Release No. 55, USDA, Soil Conservation Service, 1975 (or most recent edition).

"Soil Erosion and Sedimentation Control Manual" Pennsylvania Department of Environmental Resources, March 1982.

"Standards and Specifications for Soil Erosion and Sediment Control" Maryland Water Resources Administration, 1983.

"Urban Stormwater Management" Special Report No. 49, American Public Works Administration, 1981.

"Water Resources Protection Measures in Land Development - A Handbook" University of Delaware Water Resources Center, April 1974.

"Design and Construction of Sanitary and Storm Sewers" WPCF Manual of Practice No. 9, Water Pollution Control Federation, 1970.

The applicant should consider the effect on the proposed stormwater management techniques of any special soils conditions or geological hazards which may exist on the development site. In the event such conditions are identified on the development site, the township may require in-depth studies by a competent geotechnical engineer.

Criteria for Stormwater Detention Facilities. If detention facilities are utilized for the development site, the facilities shall be designed such that the post-development peak runoff rates from the developed site are controlled to those rates defined by the sub-area release rate percentage or no-harm evaluation for the 2-, 10-, and 100-year design storms for the Pine Creek and Deer Creek Watersheds and the 2- and 100-year design storms for the Squaw Run Watershed. All detention facilities shall be equipped with multi-stage outlet structures to provide discharge control for the 2-, 10-, and 100-year storm frequencies for the Pine

Creek and Deer Creek Watersheds and the 2- and 100-year storm frequencies for the Squaw Run Watershed. Provisions shall also be made for safely passing the post-development 100-year storm runoff flows without damaging (i.e., impairing the continued function of) the facilities. Shared storage facilities, which provide detention of runoff for more than one development site, may be considered within a single subarea. Such facilities, shall meet the design criteria contained in this Ordinance. In addition, runoff from the development site involved shall be conveyed to the facility in a manner so as to avoid adverse impacts, such as flooding or erosion, to channels and properties located between the development site and the shared-storage facilities. Where detention facilities will be utilized, multiple-use facilities, such as lakes, ballfields or similar recreational uses, are encouraged wherever feasible. Other considerations which should be incorporated into the design of the detention facilities include: (a) Inflow and outflow structures shall be designed and installed to prevent erosion, and bottoms of impoundment type structures should be protected from soil erosion. (b) Control and removal of debris both in the storage structure and in all inlet or outlet devices shall be a design consideration. (c) Inflow and outflow structures shall be protected and designed to minimize safety hazards. (d) The water depth of a storage pond shall be limited to that which is safe for children. Otherwise, appropriately landscaped fencing at least four (4) feet in height shall be required. (e) Site slopes of storage ponds shall not exceed a ratio of three to one (3:1) horizontal to vertical dimension. (f) Landscaping shall be provided for the facility which harmonizes with the surrounding area. (g) Facility shall be located to facilitate maintenance, considering the frequency and type of equipment that will be required.

Criteria for Storm Sewer Systems. Storm sewer systems shall meet the requirements of Chapter 1270.04 of the Subdivision Ordinance.

Erosion and Sedimentation Controls:

No earthmoving activity, including cuts and fills, excavation, removal of topsoil, trees, or vegetative cover of the land, shall commence until the plans for minimizing soil erosion and sedimentation, both during and after construction, have been approved.

The erosion/sedimentation plan shall be prepared in accordance with the Pennsylvania Erosion and Sedimentation Regulations (25 PA. Code, Chapter 102) and the Standards and specifications of the County Conservation District.

Proposed erosion/sedimentation measures shall be submitted with the stormwater management plan as part of the applicant's preliminary and final plans.

The plan should show the type, location, and application of the proposed erosion/sedimentation control measures, and include the calculations and criteria used in designing them.

Some of the guides to be followed in designing the erosion/sedimentation measures include: (a) Smallest practicable area of soil should be exposed at any one time during construction, and exposure should be limited to the shortest practicable period of time. (b) Temporary ditches, dikes, vegetation, and/or mulching shall be used to protect critical areas exposed during development. (c) Sediment basins (debris basins, desilting basins, or silt traps) shall be installed and maintained to remove sediment from runoff waters from land undergoing development. (d) Wherever possible, temporary erosion/sedimentation control measures should be designed to serve as part of a site's permanent stormwater management control system. (e) Permanent vegetation and erosion control structures should be installed as soon as practicable during construction activities. (f) Wherever feasible, natural vegetation should be regained and protected, and natural grade alterations kept to a minimum.

Maintenance of Stormwater Control Facilities and Systems:

Maintenance Responsibilities. The Stormwater management plan for the development site shall establish responsibilities for the continuing operation and maintenance of all proposed stormwater control facilities. The proposed maintenance plan should be consistent with the general policies adopted by the township Board of Supervisors, from time to time, by Resolution. The township Board of Supervisors shall make the final determination on the continuing maintenance responsibilities as part of the development application review and reserve the right to accept the ownership and operating responsibility of any or all of the stormwater management controls.

Maintenance Agreement for Privately Owned Stormwater Facilities. Prior to final approval of the site's stormwater management plan, the property owner shall sign and record a maintenance agreement covering all stormwater control facilities which are to be privately owned. The agreement shall stipulate that: (a) The owner shall maintain all facilities in accordance with the approved maintenance schedule and shall keep all facilities maintained in a safe and attractive manner. (b) The owner shall convey to the township easements and/or rights-of-way to assure access for periodic inspections by the township and maintenance if required. (c) The owner shall keep on file with the township the name, address, and telephone number of the person or company responsible for maintenance activities. In the event of a change, new information will be submitted to the township within ten (10) days of the change. (d) The owner shall establish any special maintenance funds or other financing sources, in accordance with the approved maintenance plan. (e) The owner shall pay the amount due to the Special Stormwater Facility Maintenance Fund as outlined in the SPECIAL STORMWATER FACILITY MAINTENANCE FUND section of this Ordinance. (f) If the owner fails to maintain the stormwater control facilities, following due notice by the township to correct the problems, the township shall perform the necessary maintenance or corrective work. The owner shall reimburse the township for all costs.

Other items may be included in the agreement where determined necessary to guarantee the satisfactory maintenance of all facilities. The maintenance agreement shall be subject to the review and approval of the township solicitor.

Special Stormwater Facility Maintenance Fund. Persons installing stormwater storage facilities will be required to pay a specified amount to the township Stormwater Facility Maintenance Fund to help defray costs of periodic inspections and annual maintenance expenses. The amount of the deposit shall be determined as follows:

- (a) If the storage facilities are to be privately owned and maintained, the deposit shall cover the cost of periodic inspections performed by the township for a period of ten (10) years, as estimated by the township engineer. After that period

of time, inspections will be performed at the expense of the township.

- (b) If the storage facilities are to be owned and maintained by the township, the deposit shall cover the estimated annual costs for maintenance AND inspections for ten (10) years. The township Engineer will establish the estimated annual maintenance costs utilizing information submitted by the applicant.
- (c) The amount of the deposit to Maintenance Fund, covering annual inspection and maintenance costs, shall be converted to present worth of the annual series values. The township Engineer (or Manager) shall determine the present worth equivalents which shall be subject to the final approval of the township Board of Supervisors.

If a storage facility is proposed, which also serves as a recreation facility such as a lake or ballfield, the township may reduce or waive the amount of the maintenance fund deposit based on the value of the land for public recreational purposes.

If at some future time any storage facility (whether publicly or privately owned) is eliminated due to the installation of storm sewers or another storage facility (e.g., a distributed storage facility), the unused portion of maintenance fund will be applied to the cost of abandoning the facility and connecting to the storm sewer system or other facility. Any amount of the deposit remaining after the costs of abandonment are paid will be returned to the depositor.

Inspections of Stormwater Management Controls During Construction:

The township Engineer or a designated representative shall inspect the construction of the temporary and permanent stormwater management for the development site. The permittee shall notify the Engineer forty-eight (48) hours in advance of the completion of the following key development phases: (a) At the completion of preliminary site preparation, including stripping of vegetation, stockpiling of topsoil, and construction of temporary stormwater management and

erosion control facilities. (b) At the completion of rough grading, but prior to placing top soil, permanent drainage, or other site development improvements and ground covers. (c) During construction of the permanent stormwater facilities at such times as specified by the township Engineer. (d) Completion of permanent stormwater management facilities, including established ground covers and plantings. (e) Completion of any final grading, vegetative control measures, or other site restoration work done in accordance with the approved plan and permit.

No work shall commence on any subsequent phase until the preceding one has been inspected and approved. If there are deficiencies in any phase, the township Engineer shall issue a written description of the required corrections and stipulate the time by which they must be made.

If, during construction, the contractor or permittee identifies any site conditions, such as subsurface soil conditions, alterations in surface or subsurface drainage, which could affect the feasibility of the approved stormwater facilities, he must notify the township Engineer within twenty-four (24) hours of the discovery of such condition and request a field inspection. The township Engineer shall determine if the condition requires a stormwater plan modification.

In cases where stormwater facilities are to be installed in areas of landslide-prone soils or other special site condition exists, the township may require special precautions such as soil tests and core borings, full-time resident inspectors, and/or similar measures. All costs of any such measures shall be borne by the permittee.

(f) GUARANTEE OF REQUIRED IMPROVEMENTS AND DEDICATION OF PUBLIC IMPROVEMENTS

1. Guarantee of Completion:

A completion guarantee in the form of a bond, cash deposit, certified check or other negotiable securities, acceptable to the township shall be filed, which covers all streets, sanitary sewers, stormwater management facilities, water systems, fire hydrants, sidewalks and other required improvements. The guarantee shall:

- (i) Run to favor of the township;

(ii) Be in an amount specified by the township Engineer; and

(iii) Be acceptable to the township solicitor.

2. Release of Completion Guarantee:

Bonds, cash, checks, or securities filed as completion guarantee shall be returned or released upon written certification by the township Engineer or a designated agent that improvements and facilities have been installed and completed in accordance with standards and specifications and that the inspection fee has been paid. Such written certification shall be given by the township Engineer within thirty (30) days after installation and completion of improvements and facilities.

3. Default of Completion Guarantee:

If improvements are not installed and completed within two (2) years of the date of recording of the plat or do not comply with the standards and specifications of this Ordinance, the township may proceed to complete the improvements and facilities and may use whatever proceeds from bonds, cash deposits, checks or securities as are required to meet the expense of completing such improvements.

4. Dedication of Public Improvements:

When streets, sanitary sewers, storm drainage facilities, water lines or other required improvements in the subdivision or land development have been completed in accordance with this Ordinance and approved S/LD plan for the development site, such improvements shall be deemed private until such time as they have been offered for dedication to the township and accepted by separate Ordinance or Resolution, or until they have been condemned for use a public facility.

Prior to the acceptance of any improvement, the township Engineer shall inspect it to ensure that it is constructed in accordance with the approved plan and is functioning properly.

In the case of any stormwater control facility, it must be free of sediment and debris. In addition, the developer shall submit as-built plans for all facilities proposed for dedication.

5. Construction Warranty:

Prior to acceptance of any improvements or facilities, the applicant shall provide to the township for a period of eighteen (18) months from the date of acceptance of the improvements and facilities, a financial security bond in the form of a bond, cash, certified check, or other negotiable securities, acceptable to the township, in an amount equal to fifteen percent (15%) of the actual cost of the improvements and facilities in order to guarantee against any defect in material or installation of the improvements and facilities.

- (g) FEEES FOR PLAN REVIEW AND SITE INSPECTION. The township Board of Supervisors shall establish, from time to time, by Resolution fees for plan review and site inspection.
- (h) Anything contained in the Subdivision Ordinance inconsistent with the provisions of this section shall be deemed repealed for the purposes of this Ordinance.

APPENDIX A

RELEASE RATE PERCENTAGES BY SUBAREA
SQUAW RUN WATERSHED

Subarea	Municipality	Release Rate Percentage
1	Fox Chapel, Indiana	100
2	Fox Chapel, Indiana	90
3	Fox Chapel, Indiana	90
4	Fox Chapel	100
5	Fox Chapel, Harmar, O'Hara	85
6	Fox Chapel, Harmar	65
7	Fox Chapel	100
8	Fox Chapel	100
9	Fox Chapel	80
10	Fox Chapel, Indiana, O'Hara	100
11	Fox Chapel	100
12	Fox Chapel	95
13	Fox Chapel	100
14	Fox Chapel, O'Hara	100
15	Fox Chapel, O'Hara	75
16	O'Hara, City of Pittsburgh	100
17	O'Hara	100

APPENDIX A

**RELEASE RATE PERCENTAGES BY SUBAREA
DEER CREEK WATERSHED**

Subarea	Municipality	Release Rate Percentage
1	West Deer	100
2	Richland, West Deer	100
3	Richland, West Deer	100
4	Richland, West Deer	100
5	West Deer	100
6	Richland	100
7	Richland, West Deer	100
8	Richland, West Deer	95
9	West Deer	85
10	West Deer	100
11	West Deer	100
12	West Deer	75
13	Hampton, West Deer	75
14	West Deer	80
15	Indiana, West Deer	100
16	Hampton, Indiana, West Deer	100
17	Indiana, West Deer	100
18	West Deer	100
19	West Deer	100
20	West Deer	100
21	Indiana, West Deer	100
22	Indiana	100
23	Indiana	100
24	Indiana	100
25	Harmar, Indiana	100
26	Indiana, West Deer	60
27	Harmar, Indiana	100
28	Harmar, Indiana	100
29	West Deer	100
30	West Deer	100
31	Frazier, West Deer	95
32	West Deer	100
33	Frazier, West Deer	100
34	Frazier, Indiana, West Deer	100
35	Indiana	90
36	Frazier, Indiana, West Deer	80
37	Frazier, Indiana	70
38	Harmar, Indiana	100
39	Harmar	100
40	Harmar	100

APPENDIX A

RELEASE RATE PERCENTAGES BY SUBAREA
PINE CREEK WATERSHED
(Continued)

Subarea	Municipality	Release Rate Percentage
106	Hampton	80
107	Hampton	80
108	Hampton	75
109	Hampton	65
110	Hampton	85
111	Hampton	60
112	Hampton, Shaler	100
113	Hampton, Shaler	100
114	Hampton, Shaler	100
115	Hampton, Shaler	100
116	Shaler	100
117	Shaler	100
118	Shaler	100
119	Shaler	100
120	Shaler	100
121	Shaler	100
122	Shaler	100
123	Shaler	100
124	Shaler	100
125	Shaler	100
126	Shaler	100
127	Etna, Shaler	100
128	Hampton, Indiana	100
129	Hampton, Indiana	100
130	Hampton, Indiana	70
131	Indiana	100
132	Hampton, Indiana	80
133	Indiana	70
134	Fox Chapel, Indiana	90
135	Hampton, Indiana	85
136	Fox Chapel, Indiana, O'Hara	95
137	Fox Chapel, Indiana, O'Hara	80
138	Indiana, O'Hara	65
139	Fox Chapel, Indiana, O'Hara, Shaler	100
140	O'Hara, Shaler	70

APPENDIX B

PROCEDURES FOR PERFORMING NO-HARM EVALUATION

1. Identify the discharge control points, as shown on the Sub-area Map, which are downstream of the proposed development site and at which the existing peak flow from the subarea in which the development site is located is greater than 20 percent of the watershed peak flow rate at that point. These points of interest so identified shall be used for comparison in subsequent steps of the no-harm evaluation.
2. Compute the pre- and post-development peak rate of runoff for the subarea in which the development site is located for the 2-, 10-, and 100-year design storms, using the Soil Cover Complex Method (SCS. TR-55).
3. Using the same method of calculation, determine the pre- and post-development peak flow rate at the points of interest identified in Step 1. For determining the contributing flow of subareas (other than that in which the development is located) at a point of interest, the applicant shall use the existing conditions runoff hydrograph for that subarea prepared for the watershed plan. Copies of this information may be obtained from the Allegheny County Planning Department.
4. When the computed post-development discharges for the 2, 10, and 100-year storms at all designated points of interest do not exceed the computed pre-development discharges at the same points, then the applicant shall have demonstrated, within reasonable limits, that no harm or adverse effects will occur downstream.
5. Computed post-development discharges may exceed computed pre-development discharges at a designated point of interest, provided that the applicant can demonstrate that the potential for flooding is not increased at that point of interest.

Section 4. FLOODPLAIN MANAGEMENT ORDINANCE. -- The Floodplain Management Ordinance, Ordinance No. 203, is hereby amended by including the following provisions:

(a) Design and Construction Standards.

Drainage Facilities. Storm drainage facilities shall be designed to convey the flow of surface waters without damage to persons or property and in accordance with the stormwater performance standards for the applicable stormwater management district, as contained in the STORMWATER MANAGEMENT section of this Ordinance. The system shall insure drainage at all points along streets, and provide positive drainage away from buildings. The system shall also be designed to prevent the discharge of excess runoff onto adjacent properties.

(b) Anything contained in the Floodplain Management Ordinance inconsistent with the provisions of this section shall be deemed repealed for the purposes of this Ordinance.

Section 5. GRADING ORDINANCE. -- The Grading Ordinance, Ordinance No. 229, is hereby amended by including the following provisions:

(a) DEFINITIONS

Outfall. Points or areas at which stormwater runoff leaves a site, which may include streams, storm sewers, swales or other well defined natural or artificial drainage features, as well as areas of dispersed overland flows.

(b) Anything contained in the Grading Ordinance inconsistent with the provisions of this section shall be deemed repealed for the purposes of this Ordinance.

(c) All grading operations shall be in conformance with applicable watershed stormwater management plans adopted by Allegheny County.

Section 6. BUILDING CODE ORDINANCE. -- The Building Code Ordinance, Ordinance No. 180, is hereby amended by including the following provisions:

(a) General Definitions

Development Site. A lot, parcel or tract of land on which development is taking place or is proposed.

Stormwater Management. The management of stormwater runoff resulting from land alteration and disturbance activities in accordance with the watershed stormwater management plans adopted by Allegheny County as required by Pennsylvania Storm Water Management Act (Act 167 of 1978, as amended, 32 P.S. 680.1 et seq.).

Stormwater Management Plan. A plan for managing storm water runoff from a specific site conforming to the requirements and specifications outlined in this Ordinance adopted by the township.

Watershed Plan. The plan for managing stormwater runoff throughout a designated watershed adopted by Allegheny County as required by the Pennsylvania Water Management Act (Act 167 of 1978, as amended, 32 P.S. 680.1 et seq.).

(b) Provisions for Stormwater Management Controls

General: As required by the Pennsylvania Storm Water Management Act (Act 167 of 1978, as amended), the location, design, construction and equipment of all buildings and structures shall be consistent with the stormwater management plan, prepared and approved in accordance with township zoning, subdivision and land development and other applicable ordinances, for the development site or lot on which the building/structure is located and with the standards and criteria of the watershed stormwater management plan for the watershed in which the structure is located.

(c) "Sections 423.5 and 423.7 of the Building Code Ordinance are hereby deleted and replaced with the following sections:

Section 423.5 Surfaces: Parking lots shall be graded with rolled or compacted materials approved by the township. Porous pavement may be utilized in accordance with the municipally-approved storm-

water management plan for the development site on which the parking lot is located."

Section 423.7 Drainage: The design of parking lots shall include methods to provide adequate, safe control of stormwater runoff in accordance with the approved stormwater management plan for the development site on which the parking lot is located.

- (d) Ponding: Where roof top storage is being considered for stormwater detention purposes, the storage volume and rate of release shall be designed in accordance with the municipally-approved stormwater management plan for the development site on which the structure is located.
- (e) General: Every building or structure shall be provided with a system, or a method of control, that safely collects and releases stormwater runoff from building roof surfaces in a manner consistent with the municipally-approved stormwater management plan for the development site on which the structure is located.
- (f) System Design: Plans submitted as part of the building permit application shall show the design and proposed release rate of stormwater runoff controls for the proposed building or structure. The township Zoning Officer shall review the proposed stormwater system design and determine that it is consistent with the stormwater management plan for the development site on which the structure is located; the Zoning Officer may forward the plans to the township Engineer for review and comment on the building's proposed stormwater system. The Zoning Officer shall also obtain copies of the approvals required by the Allegheny County Plumbing Code prior to issuing the township Building Permit.
- (g) Anything contained in the Building Code Ordinance inconsistent with the provisions of this section shall be deemed rejected for the purposes of this Ordinance.

Section 7. This Ordinance shall become effective in ten (10) days.

ORDAINED AND ENACTED INTO LAW, this 26th day of
January, 1988.

ATTEST:

TOWNSHIP OF INDIANA

Mitchell T. Konec
Secretary

John Paul J.
Mayor

Approved as to form:

Thomas L. Snyder
Solicitor