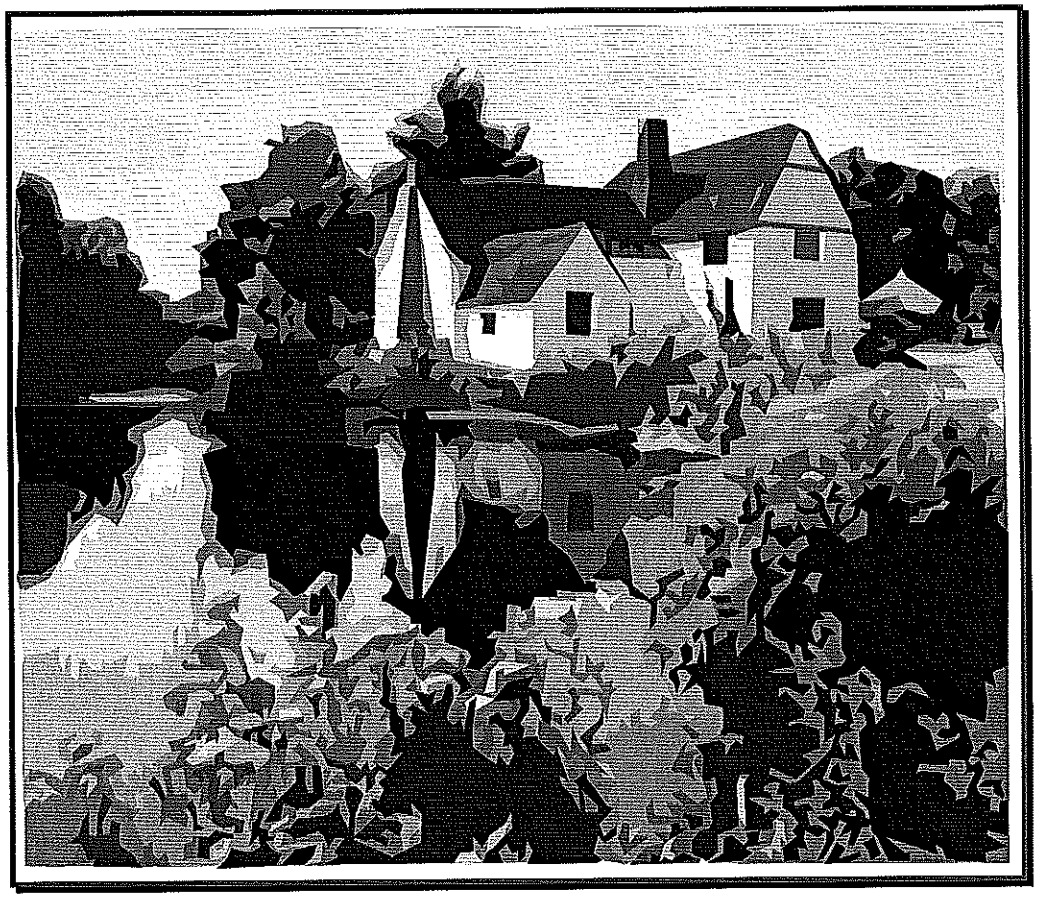
Residential Building/Zoning Application Package



Borough of Fox Chapel

BOROUGH OF FOX CHAPEL

Building Code Official
Robert John Smith
(412) 963-1100 Ext. 113
rjsmith@fox-chapel.pa.us

Visit us on our website – www.fox-chapel.pa.us

BOROUGH OF FOX CHAPEL

PREFACE

This Residential Building/Zoning Application Package was prepared to help you meet the requirements of the Borough's Building Code and Zoning Ordinance. Building/zoning permits are required for most types of construction and earth moving activities. Some of the specific activities which require a building/zoning permit include: new structures, additions, alterations, demolitions, fences, decks, sheds, swimming pools, sports courts, and satellite dish antennae over 36 inches in diameter. **Please contact the Building Code Official prior to undertaking any of these activities or any similar activity to obtain the requirements for your specific project.**

With the adoption of Borough of Fox Chapel Ordinance No. 639, effective July 1, 2004, the Borough began administering and enforcing the Commonwealth of Pennsylvania Construction Code Act, Act 45 of 1999. Ordinance No. 639 adopted the Pennsylvania Uniform Construction Code (UCC), revised and restated certain sections of Chapter 403 Administration of the UCC and retained all building code requirements which were in effect on or before July 1, 1999 which equal or exceed the requirements of the UCC.

Enclosed you will find the information you need to successfully complete the building/zoning permit application and the construction inspection process. Please keep in mind that by thoroughly completing the application forms and submitting the necessary information you will enable this office to process your application within a shorter period of time and you will be able to proceed with your construction project sooner.

If there are any questions, or additional information is required, please do not hesitate to contact Bob Smith, Building Code Official at (412) 963-1100 Ext. 113 or rjsmith@fox-chapel.pa.us.

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BOROUGH OF FOX CHAPEL

PROCEDURES AND REQUIREMENTS FOR OBTAINING A BUILDING PERMIT

1. Applicant must submit a Notice of Proposed Environmental Disturbance Application Package (Application) to the Environmental Advisory Council (EAC) for review. The review process consists of obtaining a recommendation from the EAC and approval or denial from Borough Council. The EAC meets the second Monday of each month and Borough Council meets the third Monday of each month. In order to be placed on the agenda the Application must be received at least twenty-eight (28) days prior to the EAC meeting date. All sections of the Application must be completed and all information requested by the Application must be submitted in the required format along with the Application Fee. The EAC will review the Application at its meeting and recommend that Borough Council approve or deny the Application. Borough Council then reviews the Application and either approves or denies the Application. The Applicant will be notified by the Borough of Council's decision. If approval is granted, the applicant should proceed with Step No. 2. If Council denies the Application, or approves it with conditions, an appeal may be taken to the Zoning Hearing Board within thirty (30) days.

   NOTE: If no environmental disturbance as defined by the Fox Chapel Natural Resources Assessment and Protection Ordinance of 2011 (NRO) is to be undertaken the submittal of the Notice of Proposed Environmental Disturbance Application may not be required. Please check with the Borough's Building Code Official early in the planning process. If it is determined that the Application is not necessary the application for building permit must include a current site plan showing the dimensions of the lot, boundary lines, easements, right-of-ways, building setback lines, all utilities including the sanitary sewer location and the size and location of the new construction and existing structures on the site and the structure's distance from lot lines. The Building Code Official may waive or modify the site plan requirement when the permit application is for an alteration or a repair or if the waiver is warranted for other reasons.

2. Applicant must complete and return the following Borough application forms and other information, as applicable:
   - Approved notice of Proposed Environmental Disturbance Application or site plan complying with Step No. 1
   - Application for Building/Zoning Permit
   - Zoning Certificate of Compliance Application
   - False Fire Alarm Notice
   - Permit Agreement
   - Building Permit Inspection Procedures Statement
   - Workers' Compensation Insurance Addendum
   - Municipal Contractor Registration Form
   - Minimum Requirements for Building Permit Construction Drawings for Single-Family Dwelling Projects & Checklist

- Minimum Requirements for Building Permit Construction Drawings for Wood Deck Projects & Checklist

3. The Building Code Official will check the Application for completeness and shall grant or deny the permit application, in whole or in part, within 15 business days of the filing of a complete application. The Building Code Official and the applicant may agree in writing to extend the deadline by a specific number of days. If the permit application is denied the applicant will be notified in writing of the reasons for denial. If the permit application is approved, the applicant will be notified and the permit will be issued upon receipt of all required fees, e.g., building permit fee, driveway permit fee, sanitary sewer tap-in fee, actual cost incurred by the Borough, etc.

4. Once the building permit is issued the permit holder should follow the required procedures contained in the Borough of Fox Chapel Building Permit Inspection Procedures Statement.

5. The Building Code Official will issue a Certificate of Occupancy within 5 business days after the approved occupancy/final inspection has been performed. **No building, or portion of a building, may be used or occupied without a Certificate of Occupancy issued by the Building Code Official.**

Borough of Fox Chapel
Allegheny County, Pennsylvania
Application for Building/Zoning Permit

(Please print or type all information)

LOCATION OF PROPOSED WORK OR IMPROVEMENT

Street Address: _____

Block & Lot Number: _____

Subdivision Name: _____ Lot No. _____

Owner: _____ Phone: _____ FAX: _____

Mailing Address: _____ E-Mail: _____

Principal Contractor: _____ Phone: _____ FAX: _____

Mailing Address: _____ E-Mail: _____

Architect: _____ Phone: _____ FAX: _____

Mailing Address: _____ E-Mail: _____

TYPE OF WORK OR IMPROVEMENT (Check all that apply)

□ New Building □ Addition □ Alteration □ Repair □ Demolition □ Relocation □ Foundation Only
□ Change of Use □ Plumbing □ Mechanical □ Electrical □ Other _____

Describe the proposed work: _____

Is the site located within an identified flood hazard area? (*Check One*) □ Yes □ No
Will any portion of the flood hazard area be developed? (*Check One*) □ Yes □ No
Is a variance, special exception or conditional use required? (Check One) □ Yes □ No
Is highway occupancy permit required? (*Check One*) □ Yes □ No
ESTIMATED TOTAL PROJECT COST OF CONSTRUCTION (Reasonable fair market value)
_____

The applicant certifies that all information on this application is correct and the work will be completed in accordance with the "approved" construction documents and PA Act 45 (Uniform Construction Code) and any additional approved building code requirements adopted by the Borough of Fox Chapel. The property owner assumes the responsibility of locating any property lines, setback lines, easements, rights-of-way, flood areas, etc. Issuance of a permit and approval of construction documents shall not be construed as authority to violate, cancel or set aside any provisions of the codes or ordinances of the Borough of Fox Chapel or any other governing body.

The undersigned acknowledges that the Borough's Building and Plumbing Ordinance may impose requirements more stringent than those contained in PA Act 45 (Uniform Construction Code) and agrees that the construction will meet the requirements of the Borough Ordinances. The applicant certifies he/she understands all the applicable codes, ordinances and regulations. Application for a permit is hereby made by the *owner* of the building or structure and the *contractor* employed in connection with the proposed work. I/we certify that the Borough of Fox Chapel Building Code Official or the Building Code Official's authorized representative shall have the authority to enter areas covered by such permit at any reasonable hour to enforce the provisions of the code(s) applicable to such permit. The undersigned verify that the statements made in this application and attachments are true and correct in all respects and that any false statements made herein are subject to the penalties of 18 Pa. C.S.A. §4904 relating to unsworn falsifications to authorities.100

Printed Name of Owner	Signature of Owner	Date	**APPLICATION DATE**
Printed Name of Owner	Signature of Owner	Date	**FOR OFFICIAL USE ONLY** **PERMIT NO.** _____
Printed Name of Contractor	Signature of Contractor	Date	**DATE ISSUED** _____

SECTION B

Building Permit No. _____

BOROUGH OF FOX CHAPEL
✦ NOTICE ✦

TO: All Contractors

RE: False Fire Alarms

Most homes in Fox Chapel Borough have fire and smoke detectors that are tied into a central dispatching center. Many of these detectors are extremely sensitive and can be set off by sawdust, sanding fumes and other by-products of home construction and remodeling. These false alarms result in firemen being exposed unnecessarily to the risks that occur when they respond to what they believe to be a real fire. Ordinance No. 620 holds those individuals who cause false alarms responsible for their actions and subjects them to a fine as high as $1,000 for *each* offense. You are directed, therefore, to take whatever steps are necessary to prevent false fire alarms as a result of the activities of your employees **or any subcontractors who may be working on the site.** These steps may include, but not be limited to, covering the smoke detectors and/or notifying the alarm company to disregard alarm calls during the hours that the work will be in progress. **It is vitally important, however, that the alarm system be made fully operational at the conclusion of each day's activities.**

The undersigned hereby acknowledges that he/she has read this Notice and fully understands their responsibility to take appropriate steps to prevent false alarms resulting from their construction activities and those of any subcontractor working on the site and that failure to do so could result in a fine of up to One Thousand Dollars ($1,000.00) for each false alarm.

BOROUGH USE ONLY

_____
Name of Contractor (Printed)

_____
Signature

_____
Date

BOROUGH OF FOX CHAPEL
PERMIT AGREEMENT

In consideration of the issuance by the Borough of Fox Chapel (the "Borough") of a building or grading permit to the undersigned property owner(s) (the "Applicant"), the Applicant acknowledges that, in reviewing plans and specifications, in issuing permits and in inspecting work of the Applicant, employees, consultants, elected or appointed officials of the Borough are only performing their duties to require compliance with the minimum requirements of the applicable ordinances of the Borough pursuant to the police power of the Borough and are not warranting to the Applicant or to any third party the quality of adequacy of the design, engineering or work of the Applicant or their agents or contractors.

Applicant further acknowledges that it will not be possible for the Borough to review every aspect of Applicant's design and engineering or to inspect every aspect of Applicant's work. Accordingly, neither the Borough nor any of its elected or appointed officials, consultants or employees shall have any liability to the Applicant for defects or shortcomings in such design, engineering or work, even if it is alleged that such defects or shortcomings should have been discovered during the Borough's review or inspection. Furthermore, the Applicant agrees to defend, hold harmless and indemnify the Borough, its elected and appointed officials, consultants and employees from and against any and all claims, demands, actions and causes of action of any one or more third parties arising out of or relating to the Borough's review or inspection of the Applicant's design, engineering or work or issuance of a permit or permits, or arising out of or relating to the design, engineering or work done by Applicant pursuant to such permit or permits. All references in this Agreement to Applicant's design, engineering or work shall include such design, engineering and work which is performed by the Applicant or by the Applicant's employees, agents, independent contractors, subcontractors or any other persons or entities performing work pursuant to the issuance of the building or grading permit by the Borough.

Owner's Signature _____ Date _____

Printed Name _____

Building Address _____

Permit No. _____

Date Permit Issued _____

Building Permit No. _____

BOROUGH OF FOX CHAPEL
BUILDING PERMIT INSPECTION PROCEDURES STATEMENT

I hereby acknowledge that all applicable inspection procedures specified below must be adhered to:

- The building permit must be displayed and the approved construction documents must be kept at the work site and be open to inspection by the Building Code Official until the completion of the construction.

- All **building** inspections will be conducted during the hours of 9:30 A.M. and 4:00 P.M. All inspections will be **BY APPOINTMENT ONLY**. The appointment for the occupancy inspection must be made by 3:00 P.M. at least 7 days in advance of the desired inspection date. All other inspection appointments must be made by 3:00 P.M. at least 2 days in advance of the desired inspection date. There will be a $35.00 fee for any re-inspection.

- All **building sewer** inspections will be conducted during the hours of 7:00 A.M. and 2:30 P.M. All inspections will be **BY APPOINTMENT ONLY**. All inspection appointments must be made no later than between the hours of 7:00 A.M. and 9:00 A.M. of the desired inspection date. There will be a $55.00 fee for any re-inspections. **Note: For all new construction the Sanitary Sewer Department must perform a re-inspection of the sanitary sewer system prior to occupancy.** The appointment for the *pre*-occupancy inspection must be made by 2:30 P.M. at least 7 days in advance of the desired inspection date.

- Inspection #1 PRE-CONSTRUCTION: is to be performed prior to starting any construction. An inspection must be scheduled to verify that all environmental protection controls (straw bales, silt fences, protective tree fencing at drip lines, etc.) are in place.

- Inspection #2 FOOTINGS, SUPPORT PADS, ETC.: is to be performed after reinforcing rods are in place and before placing concrete. (All reinforcing rods must be placed on chairs and tied).

- Inspection #3 FOUNDATION AND ENVIRONMENTAL: is to be performed after foundation has been erected and before framing work begins or backfill is installed. Anchor bolts, foundation dampproofing/waterproofing and foundation drains should be in place. (At this time, a certified "as-built" plan must be provided for all new construction anywhere in the Borough and for construction of any type of PRD and Density Developments.) The environmental controls should also be in good working condition.

- Inspection #4 UNDERGROUND PIPING: is to be performed after building sewers (sanitary sewer laterals), rain conductors, foundation drains, and stormwater detention facilities are in place and prior to covering. **The requirements for building sewers ("laterals") in Fox Chapel Borough are different from those of the Allegheny County Health Department (ACHD). Plumbers are required to contact the Borough's Sanitary Sewer Department before starting any building sewer work in the Borough. All building sewers must be inspected and approved by both the ACHD and the Borough.**

- Inspection #5 FRAMING/MECHANICAL: is to be performed after all electrical, plumbing, HVAC and mechanical system rough-in work has been completed and before any insulation or wall/ceiling interior coverings have been installed. Copies of the rough plumbing inspection (ACHD) and rough electrical inspection (third-party agency) reports must be provided to the Borough.

- Inspection #6 ENERGY: is to be performed after all insulation, vapor retarders, caulking, and sealants have been installed and before any wall/ceiling interior coverings have been installed.

- Inspection #7 WALLBOARD: is to be performed after all wall/ceiling gypsum board has been installed and before any taping or finishing.

- Inspection #8 OCCUPANCY/FINAL: is to be performed after all items pertaining to the issued building permit have been completed and prior to occupancy of any portion of the structure. **Note: For all new construction the Sanitary Sewer Department must perform a reinspection of the sanitary sewer system prior to occupancy.** Copies of the final plumbing inspection (ACHD) and the final electrical inspection (third-party agency) reports must be provided to the Borough.

NO WORK MAY BE CONCEALED FROM VIEW, UNTIL THE BOROUGH HAS APPROVED IT.

I fully understand that it is my responsibility to call for inspections and that, if inspections are not made according to procedure, I may be in violation of the Pennsylvania Uniform Construction Code (UCC) and Borough of Fox Chapel Ordinance No. 639 and may be subject to prosecution. I also understand that no one may occupy this structure (or portion thereof) until a UCC Certificate of Occupancy is obtained.

Property Owners _____
(printed or typed)

_____ Date: _____
Signature

Contractor _____
(printed or typed)

_____ Date: _____
Signature

Project Street Address: _____

For Completion By Municipal Official Code Enforcement Officer:
_____
Date Issued ___/___/___
Building Permit No. _____

BOROUGH OF FOX CHAPEL
Workers' Compensation Insurance
Addendum to Building Permit

ALL APPLICANTS MUST COMPLETE THE FOLLOWING AS REQUIRED BY THE PENNSYLVANIA WORKMAN'S COMPENSATION ACT, SECTION 302:

I. Application for

Property Owner: _____

Street Address: _____

Telephone No.: _____ (Home) _____ (Office)

Lot & Block No.: _____-_____-_____

II. The contractor/applicant for the building permit, in compliance with Act 44 of 1993, hereby submits (check one):

☐ Certificate of Insurance with Borough of Fox Chapel named as policy certificate holder (please attach)

☐ Certificate of Self-Insurance (please attach)

☐ Claim of Exemption

III. If a Certificate of Insurance or Self-Insurance has been submitted, please complete the following:

Name of Insurer: _____
(or Self Insurer)

Address: _____

City: _____ State: _____ Zip: _____

Telephone No.: _____

Policy No.: _____ Coverage Period Ends: _____

Name of Contractor/Policyholder: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone No.: _____

Contractor/Policyholder's Federal/State Employer Identification Number (EIN):_____

1. This policy provides coverage for the requirements of the Workers' Compensation Act, the Occupational Disease Act, and where applicable, the Federal Longshore and Harbor Workers' Compensation Act.
2. The insurer has been notified that the municipality issuing the building permit is to be named as a policy certificate holder.
3. Any subcontractors used on this project will be required to carry their own Workers' Compensation coverage.
4. The contractor/policyholder will notify the municipality of any change in status, cancellation of expiration of Workers' Compensation coverage.
5. Violation of the Workers' Compensation Act or the terms of this permit will subject the contractor/policyholder to a Stop-Work Order and other fines and penalties as provided by law.
6. The contractor/applicant is not permitted to employ any individual to perform work on this project pursuant to the permit in violation of the Act.

IV. If an exemption is being claimed, please complete this section and if applicable, complete and sign the required Workers' Compensation Insurance Affidavit in the presence of a notary public:

Basis for exemption (check one):

☐ Applicant is an individual who owns the property.
a) Workers' Compensation Insurance Affidavit attached _____

☐ Contractor/Applicant is a sole proprietorship without employees.
a) Workers' Compensation Insurance Affidavit attached _____

☐ Contractor/Applicant is a corporation, and the only employees working on the project have and are qualified as "Executive Employees" under Section 104 of the Workers' Compensation Act. Please explain:

_____

_____

☐ All of the contractor/applicant's employees on the project are exempt on religious grounds under Section 304.2 of the Workers' Compensation Act. Please explain:

_____

_____

☐ Other. Please explain:

_____

BOROUGH OF FOX CHAPEL
Workers' Compensation Insurance Affidavit

The undersigned affirms that he/she is not required to provide workers' compensation insurance under the provisions of Pennsylvania's Workers' Compensation Law for one of the following reasons as indicated:

☐ Property owner performing own work. **If property owner does hire contractor to perform any work pursuant to building permit, contractor must provide proof of workers' compensation insurance to the municipality. Homeowner assumes liability for contractor compliance with this requirement.**

☐ Contractor has no employees. **Contractor prohibited by law from employing any individual to perform work pursuant to this building permit unless contractor provides proof of insurance to the municipality.**

☐ Religious exemption under the Workers' Compensation Law. **All employees of contractor are exempt from workers' compensation insurance. (Attach copies of religious exemption letters for all employees.)**

_____
Signature of Applicant

I understand that failure to comply will result in a Stop-Work Order and that such Order may not be lifted until proper coverage is obtained, as provided by Section 302(e)(4) of the Act of June 2, 1915 (P.L. 736), known as The Pennsylvania Workmen's Compensation Act, reenacted and amended June 21, 1939 and amended December 5, 1974 and amended July 2, 1993. (P.L.)

Subscribed and sworn to before me this _____ day of _____, 20___.

_____
(Signature of Notary Public)

_____
(Seal)

MY SIGNATURE ON BEHALF OF/OR AS THE CONTRACTOR/APPLICANT FOR THIS BUILDING PERMIT CONSTITUTES MY VERIFICATION THAT THE STATEMENTS CONTAINED HERE ARE TRUE, AND THAT I AM SUBJECT TO THE PENALTY OF 18 PA. C.S.A. §4904 RELATING TO UNSWORN FALSIFICATIONS TO AUTHORITIES.

_____
Signature

_____
Name (Please Print)

_____
Title

_____
Name of Company

NOTE: Applicant's copy to be attached to permit and posted. Municipality's copy to be filed with its permit copy.

BOROUGH OF FOX CHAPEL
CONTRACTOR REGISTRATION FORM

This form must be completed by any contractor who engages in any act regulated by the Commonwealth of Pennsylvania Uniform Construction Code (UCC) and/or performing home repairs valued at $400.00 or more, or by any contractor making application for a building permit.

Name _____

Home Address _____

_____

Telephone ( ) _____ FAX ( ) _____ E-mail _____

Driver's License Identification _____

Company _____

Address (if different) _____

_____

Telephone ( ) _____ FAX ( ) _____ E-mail _____

Tax Number: _____ Federal State Allegheny County

Does this company do business under any other name? If so please list:

_____

This company is a (check one):
☐ Sole Proprietorship
☐ Partnership
☐ Corporation
☐ Limited Liability Company
☐ Limited Partnership
☐ Joint Venture
☐ Other _____

List name(s) of other partners/shareholders/officers of the corporation with at least 10% interest:

☐ Name: _____ Title: _____

☐ Name: _____ Title: _____

☐ Name: _____ Title: _____

☐ Name: _____ Title: _____

Does the named registrant or company have insurance/Workman's Compensation coverage?

☐ Yes, _____ General Liability ☐ Yes ☐ No
Automobile Liability ☐ Yes ☐ No

☐ No

Name of Insurer _____

Address _____

_____

Telephone ( ) _____

Policy Number _____

***Please attach Certificate of Insurance with Borough of Fox Chapel as certificate holder.**

Number of employees:
☐ 1-4
☐ 5-10
☐ 11-20
☐ 21 +

Identify the nature of the contracting business being registered (check all that apply):
☐ New Home Construction
☐ HVAC
☐ Plumbing
☐ Electrical
☐ Masonry/Concrete
☐ Painting/Plaster
☐ Roofing
☐ Deck/Patio
☐ Waterproofing
☐ General

List municipality or municipalities of principal operation (defined as 6 or more contracts within the preceding 12 months) _____

Are you registered with any other municipalities? If so, please list:

_____

Has any named registrant ever been convicted of a criminal offense related to a home improvement transaction, fraud, theft, a crime of deception or a crime involving fraudulent business practices?

☐ Yes
☐ No

Has any named registrant ever had a civil judgment entered against the registrant or a business in which the registrant held an interest that was related to a home improvement transaction?

☐ Yes
☐ No

Has any named registrant been suspended or debarred from participating in any Federal, State or local program through which funding or other assistance is provided to consumers for home improvements within the last ten years?

☐ Yes
☐ No

Has any named registrant ever been refused a building permit?
☐ Yes. If yes, identify municipality involved: _____
☐ No

Has any named registrant ever been refused an occupancy permit after completion of a home improvement contract?
☐ Yes. If yes, identify municipality involved: _____
☐ No

Has any named registrant ever been issued a stop work order?
☐ Yes. If yes, identify municipality involved: _____
☐ No

How many years has this company been in business? _____

How many contracts have been successfully completed in the last two (2) years? _____

At which financial institution does the company maintain a checking account?

_____

Has the company ever been in bankruptcy? ☐ Yes ☐ No If Yes, in what year? _____

Please list three customer references:

Name _____

Address _____

Telephone ( ) _____

Name _____

Address _____

Telephone ( ) _____

Name _____

Address _____

Telephone ( ) _____

MY SIGNATURE CONSTITUTES MY VERIFICATION THAT THE STATEMENTS CONTAINED HERE ARE TRUE, AND THAT I AM SUBJECT TO THE PENALTY OF 18 PA. C.S.A. §4904 RELATING TO UNSWORN FALSIFICATIONS TO AUTHORITIES.

_____ _____
Signature Date:

_____
Name (Please Print)

_____
Title

BOROUGH OF FOX CHAPEL

BUILDING CODE REQUIREMENTS WHICH EQUAL OR EXCEED THE REQUIREMENTS OF THE COMMONWEALTH OF PENNSYLVANIA UNIFORM CONSTRUCTION CODE.

- Sanitary building sewer (sanitary sewer lateral) must be installed in accordance with the Borough of Fox Chapel Rules & Regulations Governing House or Building Sanitary Sewer Connections and must be inspected by both the Allegheny County Health Department and the Borough.

- Radon Control is required for additions and new construction. A sub-slab depressurization (passive) system in accordance with Appendix F of the 2009 International Residential Code is required.

- Footings; All concrete footings shall be reinforced concrete and the edge thickness shall not be less than 8 inches. Reinforcement shall not be less than two 5/8-inch diameter bars or three ½-inch diameter bars.

BOROUGH OF FOX CHAPEL

MINIMUM REQUIREMENTS FOR BUILDING PERMIT CONSTRUCTION DRAWINGS FOR SINGLE FAMILY DWELLING PROJECTS & CHECKLIST

GENERAL REQUIREMENTS

The application for building permit must be accompanied by **the completed checklist** and **two sets of construction drawings**. The construction drawings for new construction, alteration, repairs, expansion, addition or modification to buildings or structures shall be prepared by an architect or structural engineer who is registered in the Commonwealth of Pennsylvania. The construction drawings shall include the name and address of the registered design professional and shall be signed, sealed and dated by the registered design professional. (The Building Code Official may waive the requirement for a registered design professional if it is determined that the proposed work is minor in nature.) The construction drawings shall be drawn to scale and shall be of sufficient clarity to indicate the nature and extent of the work proposed and shall show in detail that the work will conform with the provisions of the Commonwealth of Pennsylvania Uniform Construction Code and Borough of Fox Chapel Ordinance No. 639.

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

Ground Snow Load	Wind Speed (mph)	Seismic Design Category	SUBJECT TO DAMAGE FROM				Winter Design Temp.	Ice Shield Under-Layment Required	Flood Hazards	Climate Zone		Radon Control Required
			Weathering	Frost Line Depth	Termite	Decay						
25 PSF	90	C	Severe	36"	Mod. To Heavy	Slight To Mod	0° F	Yes	Check FEMA Maps	IRC 5A	PA Alternative Central	Yes

This design criteria must be noted on the first page of the construction drawings and all buildings and structures must be designed in accordance with this criteria.

STRUCTURAL DESIGN CRITERIA

The design criteria, both **dead load** and **live load**, must be noted on the first page of the construction drawings for the following structural members:

- Decks (floor joist)
- Exterior balconies (floor joist)
- Sleeping rooms and attics accessed by a fixed stairway (floor joist)
- Attics with storage (ceiling joist)
- Attics without storage (ceiling joist)
- Rooms other than sleeping rooms (floor joist)
- Roof rafters (snow load or live load, whichever is greater)

FRAMING LUMBER

The species, grade, size, spacing and span for all framing lumber (floor joist, ceiling joist, roof rafters, headers, girders, walls, etc.) must be marked on the drawings. The minimum bearing requirements for all framing lumber bearing on wood, metal, masonry or concrete must be marked on drawings.

MANUFACTURED WOOD PRODUCTS

The manufacturer of the prefabricated wood components (roof trusses, floor trusses, glue-laminated beams, composite structural panels, etc.) must submit detailed construction drawings that have been prepared, signed and sealed by a professional structural engineer who is registered in the Commonwealth of Pennsylvania.

PLUMBING CONSTRUCTION DRAWING

The Allegheny County Health Department (ACHD) will do the plumbing, **including residential fire sprinkler systems,** plan review and approval/denial for the Borough. They will also conduct the required inspections in conjunction with the Borough of Fox Chapel. Drawings should be submitted directly to ACHD in the format required by them. NOTICE: The requirements for building sewers ("laterals") in Fox Chapel Borough are different from those of Allegheny County Health Department. PLUMBERS ARE REQUIRED TO CONTACT THE BOROUGH'S SANITARY SEWER SUPERINTENDENT AT 412/963-1100 EXT. 126 BEFORE STARTING ANY BUILDING SEWER WORK IN THE BOROUGH. All building sewers must be inspected and approved by both the ACHD and the Borough.

ELECTRICAL CONSTRUCTION DRAWINGS

The Borough requires the use of a third party agency that is certified by the Commonwealth of Pennsylvania Department of Labor & Industry. The third party agency will do the electrical plan review approval/denial and the required inspections. Drawings should be submitted directly to the third party agency in the format required by them.

CONSTRUCTION DRAWING REVIEW **CHECKLIST**

The checklist on the following pages must be completed and submitted with the construction drawings. All information must be filled in, checked (✓) to indicate that it is included or marked not applicable (N/A). An explanation for any information not marked as included or marked N/A must be given in Section XII – Comments at the end of the checklist. All explanations in the comment section must be correlated to its section number (i.e., Section II, 5. would refer to footing depth below grade). The drawing page number on which the information is noted must also be identified. This checklist is designed to help you develop an acceptable set of drawings and is not meant to be all inclusive. The building code official may require additional information.

Owners Name: _____ Telephone: _____

Project Address: _____

Agent Name: _____ Telephone: _____

Design Professional or other contact regarding information on construction drawings: _____ Telephone: _____

Section I - Building Planning

✓ or N/A	Drawing Page No.	
_____	_____	1. Two sets of construction drawings prepared and sealed by registered design professional
_____	_____	2. Scale marked on drawings
_____	_____	3. Climatic and geographic design criteria
_____	_____	4. Structural design criteria
_____	_____	5. Framing lumber; species, grade, size, spacing and span
_____	_____	6. Framing lumber; minimum bearing requirements
_____	_____	7. Manufactured wood products engineer seal
_____	_____	8. Use designation for all rooms/spaces
_____	_____	9. Dimensions for all rooms/spaces
_____	_____	10. Ceiling heights for all rooms/spaces
_____	_____	11. Typical building cross section
_____	_____	12. Elevation drawings including indication of finished grade; front, sides and rear
_____	_____	13. Windows and doors; size type and location
_____	_____	14. Hazardous glazing locations (safety glazing)
_____	_____	15. Window fall prevention devices; applies to open able windows where bottom of opening is > 72" above grade and bottom of opening is < 24" above finished floor
_____	_____	16. Skylight glazing material
_____	_____	17. 1 3/8" solid core door or 20-minute fire-rated door between garage and living space
_____	_____	18. 5/8" Type X gypsum board or equivalent separation between garage and habitable space
_____	_____	19. Emergency escape and rescue opening from basements.
_____	_____	20. Emergency escape and rescue opening from every sleeping room
_____	_____	21. Emergency escape and rescue opening net clear opening
_____	_____	22. Emergency escape and rescue opening net clear height and width

✓ or N/A	Drawing Page No.	
_____	_____	23. Emergency escape and rescue opening sill height above finished floor
_____	_____	24. Emergency escape and rescue opening sill height above finished grade
_____	_____	25. Width of hallways
_____	_____	26. Required exit door; width, height and type
_____	_____	27. Floor and stair landings; size and location
_____	_____	28. Width of stairways
_____	_____	29. Stairs; riser height, tread depth and nosing projection
_____	_____	30. Stair headroom
_____	_____	31. Stair closed or open riser (if open, give dimension of opening)
_____	_____	32. Protection of enclosed accessible space under stairs
_____	_____	33. Handrail location and height above nosing
_____	_____	34. Handrail type and grip size
_____	_____	35. Handrail continuous for full length of flight
_____	_____	36. Handrail returned or terminated in newel post
_____	_____	37. Guardrail location and height
_____	_____	38. Guardrail intermediate rail or ornamental closure spacing
_____	_____	39. Smoke alarm locations
_____	_____	40. Smoke alarm interconnection and power source
_____	_____	41. Carbon Monoxide Alarm locations.
_____	_____	42. Foam plastic ½" gypsum board separation from interior of building
_____	_____	43. Moisture vapor retarder for all elements comprising the building thermal envelope that are not vented.
_____	_____	44. Pressure treated lumber in areas subject to decay damage
_____	_____	45. Termite shield; location, material and type

Section II - Footings and Foundation

✓ or N/A	Drawing Page No.	
_____	_____	1. Presumptive load-bearing value of soil
_____	_____	2. Concrete compressive strength
_____	_____	3. Footing; width and edge thickness
_____	_____	4. Footing; reinforcement size, location and spacing
_____	_____	5. Footing depth below grade
_____	_____	6. Footing projection
_____	_____	7. Footings supporting piers and columns; size, thickness and reinforcement
_____	_____	8. Type of foundation walls (masonry, poured concrete, ICF, precast concrete, etc.)
_____	_____	9. Precast concrete foundations require engineer's stamp and manufacturers installation instructions
_____	_____	10. Foundation wall height

✓ or N/A	Drawing Page No.	
_____	_____	11. Foundation unbalanced backfill height
_____	_____	12. Height of foundation above finished grade
_____	_____	13. Foundation wall thickness
_____	_____	14. Change in foundation wall thickness (masonry veneer ledge); course of solid masonry between thicker wall below and thinner wall above
_____	_____	15. Foundation reinforcement size and spacing
_____	_____	16. Sill plate size and decay protection
_____	_____	17. Type of sill plate anchorage (anchor bolts or anchor straps)
_____	_____	18. Anchor straps require manufacturer's installation instructions
_____	_____	19. Anchor bolts; diameter, spacing, depth of embedment and distance from corners
_____	_____	20. Foundation drains; location, type and size of pipe, depth of gravel cover, size of gravel and filter membrane
_____	_____	21. Dampproofing/Waterproofing system
_____	_____	22. Steel beam; location, size, weight and thickness
_____	_____	23. Steel beam pocket bearing details; thickness of solid masonry
_____	_____	24. Steel columns; size, weight and method of corrosion protection
_____	_____	25. Wood columns; size and method of decay protection
_____	_____	26. Method of column anchorage (prevent lateral displacement)
_____	_____	27. Under-floor space (crawlspace) vented or not vented
_____	_____	28. Vented crawlspace; location and size of openings, vapor retarder
_____	_____	29. Non-vented crawlspaces; indicate if mechanical ventilation or conditioned air, vapor retarder
_____	_____	30. Crawlspace access size and location
_____	_____	31. Crawlspace; distance of crawlspace grade to bottom of floor joist

Section III - Floors

✓ or N/A	Drawing Page No.	
_____	_____	1. Floor framing details plan
_____	_____	2. Floor joist; species, grade, size, spacing and span
_____	_____	3. Girder and header; species, grade, size, spacing and span
_____	_____	4. Cantilevered joist; ratio of backspan to cantilever, full depth rim joist, blocking and type of connections
_____	_____	5. Double floor joist under parallel bearing partitions
_____	_____	6. Floor joist lateral restraint and bridging; location and method
_____	_____	7. Floor joist framing of openings; header, trimmer joist and tail joist
_____	_____	8. Floor sheathing; type, span rating and thickness
_____	_____	9. Concrete floors (on ground); thickness of slab, compressive strength, thickness of gravel base, size of gravel used for base and vapor retarder

Section IV - Wall Construction

✓ or N/A	Drawing Page No.	
_____	_____	1. Wall studs (interior and exterior); species, grade, size, spacing and height
_____	_____	2. Girder and header; species, grade, size, span and number of jack studs
_____	_____	3. Wall bracing; braced wall lines, location, length and method
_____	_____	4. Stud wall capped with double top plate
_____	_____	5. Stud wall bottom plate
_____	_____	6. Fireblocking (required to cut off all concealed draft openings both vertical and horizontal); location and material

Section V - Wall Covering

✓ or N/A	Drawing Page No.	
_____	_____	1. Interior wall covering; type, material, thickness and fastening method (nails, screws, glued or combination)
_____	_____	2. Exterior wall covering material
_____	_____	3. Exterior wall sheathing; type, span rating and thickness
_____	_____	4. Exterior wall water-resistive barrier
_____	_____	5. Exterior wall flashing (top of doors and windows, chimneys, porches, decks, stairs, roof intersections, etc.)
_____	_____	6. Stone and masonry veneer ties; type, gage, horizontal spacing and area supported
_____	_____	7. Stone and masonry veneer; air space, flashing and weep holes
_____	_____	8. Stone and masonry veneer lintels; size, thickness and bearing

Section VI - Roof and Ceiling Construction

✓ or N/A	Drawing Page No.	
_____	_____	1. Pitch/slope of roof
_____	_____	2. Roof and ceiling framing details plan
_____	_____	3. Roof rafter; species, grade, size, spacing and span
_____	_____	4. Ceiling joist; species, grade, size, spacing and span
_____	_____	5. Roof rafter framing of openings; header, trimmer rafters and tail rafters
_____	_____	6. Ceiling joist framing of openings; header, trimmer joist and tail joist
_____	_____	7. Roof ridge board; size and thickness
_____	_____	8. Roof valley or hip rafter; size and thickness

✓ or N/A	Drawing Page No.	
_____	_____	9. Ceiling joist not parallel to rafters: rafter ties; type, size and spacing
_____	_____	10. Ceiling joist not parallel to rafters: roof ridge beam/girder; designed and sealed by registered design professional
_____	_____	11. Ceiling joist parallel to rafters; distance ends of joist lapped
_____	_____	12. Roof rafter and ceiling joist lateral restraint and bridging; location and method
_____	_____	13. Roof tie-down; type, method and spacing
_____	_____	14. Roof sheathing; type, span rating and thickness
_____	_____	15. Attic access; location and size
_____	_____	16. Roof ventilation for attics and enclosed rafter spaces; location, type, number and size
_____	_____	17. Eave or cornice vents; amount of space provided between insulation and roof sheathing
_____	_____	18. Ceiling covering; type, material, thickness and fastening method (nails, screws, glued or combination)
_____	_____	19. Roof covering; material and class
_____	_____	20. Roof covering underlayment; type, thickness and number of layers
_____	_____	21. Roof flashing; location, method and material
_____	_____	22. Ice shield/protection underlayment; type, material and distance from exterior wall line of building
_____	_____	23. Chimney cricket/saddle; material, height and width

Section VII - Masonry Chimneys and Fireplaces

✓ or N/A	Drawing Page No.	
_____	_____	1. Footings; width, edge thickness, reinforcement and depth below grade
_____	_____	2. Chimney wall; thickness of solid masonry units
_____	_____	3. Termination; height above roof and height above any portion of the building within ten feet
_____	_____	4. Chimney clearances; distance of air space clearance to combustibles
_____	_____	5. Chimney fireblocking; location and material
_____	_____	6. Fireplace flue size
_____	_____	7. Fireplace firebox walls; thickness of solid masonry units
_____	_____	8. Fireplace firebox dimensions; height, width and depth
_____	_____	9. Fireplace lintel; size, location and material
_____	_____	10. Fireplace throat; distance above lintel
_____	_____	11. Fireplace damper; material and distance above fireplace opening
_____	_____	12. Fireplace smoke chamber; thickness of solid masonry units
_____	_____	13. Fireplace smoke chamber dimensions; inside height and width
_____	_____	14. Fireplace hearth slab thickness

✓ or N/A	Drawing Page No.	
_____	_____	15. Fireplace hearth extension; material, thickness, distance to sides and distance to front
_____	_____	16. Fireplace clearance to combustible material; distance from front, sides and back
_____	_____	17. Fireplace mantel and trim made of combustible material; thickness of material and distance from fireplace opening
_____	_____	18. Fireplace exterior air supply; method and location

Section VIII – Factory Built Chimneys and Fireplaces

✓ or N/A	Drawing Page No.	
_____	_____	1. Listing and labeling information provided
_____	_____	2. Manufacturer's installation instructions provided
_____	_____	3. Fireplace exterior air supply; method and location

Section IX - Mechanical

✓ or N/A	Drawing Page No.	
_____	_____	1. Heating, ventilating and air conditioning (HVAC) appliances; location and type of fuel
_____	_____	2. Water heating appliance; location and type of fuel
_____	_____	3. Heating appliances located in garage; height of ignition source above floor and method of protection from impact
_____	_____	4. HVAC appliance access; location and size
_____	_____	5. Heating and cooling equipment; load calculations **(system load calculations should be obtained from mechanical contractor prior to application for building permit and submitted with construction drawings)**
_____	_____	6. Duct systems; material, location and size
_____	_____	7. Combustion air; calculations and source
_____	_____	8. Clothes dryer exhaust; length and termination point
_____	_____	9. Range hood exhaust; material and termination point
_____	_____	10. Bathroom exhaust, material and termination point

Section X - Energy Efficiency

You must demonstrate compliance with the energy requirements of the Pennsylvania Uniform Construction Code. One method is to use the REScheck residential compliance program which you can obtain free from the U.S. Department of Energy at www.energycodes.gov. If you do not use the REScheck program, you must provide enough information on the construction drawings to demonstrate compliance with Chapter 11 of the International Residential Code (IRC) or the International Energy Conservation Code (IECC) or Pennsylvania's Alternative Residential Energy Provisions (PAREP).

REScheck Program

✓ or N/A	Drawing Page No.	
_____	_____	1. Computer generated compliance record and inspectors checklist provided
		Chapter 11 of IRC IECC PAREP
_____	_____	2. Indicate selected compliance path; IRC, IECC or PAREP
_____	_____	3. Climate Zone
_____	_____	4. Glazing area; percent of the gross area of the exterior walls
_____	_____	5. Glazing/fenestration; U-factor for all skylights, windows, doors, glass block, etc.
_____	_____	6. Roof/ceiling insulation; R-value
_____	_____	7. Framed wall insulation; R-value
_____	_____	8. Floor over non-conditioned space insulation; R-value
_____	_____	9. Concrete slab perimeter insulation; R-value and length
_____	_____	10. Basement wall insulation; R-value
_____	_____	11. Crawl space wall insulation; R-value
_____	_____	12. Vapor retarder; location and type
_____	_____	13. Air leakage; all joints, seams, penetrations, windows, doors, etc. sealed to limit air movement
_____	_____	14. HVAC appliances and equipment; energy efficiency rating
_____	_____	15. HVAC duct insulation; R-value and location
_____	_____	16. HVAC piping insulation; R-value and location
_____	_____	17. Water heating appliance; energy efficiency rating

Section XI – Passive Radon Control System

✓ or N/A	Drawing Page No.	
_____	_____	1. Gas-permeable material; thickness of aggregate, size of aggregate
_____	_____	2. Soil gas retarder; type and thickness of material
_____	_____	3. Concrete floor openings and joints; type of sealant
_____	_____	4. Change in foundation wall thickness (masonry veneer ledge); course of solid masonry between thicker wall below and thinner wall above
_____	_____	5. Vent pipe; material and size
_____	_____	6. Vent pipe termination; height above roof, distance from openings into conditioned space
_____	_____	7. Vent pipe accessibility; location for future fan installation and power source

Section XII – COMMENTS

Correlate Comments with Section Number

MY SIGNATURE AS THE DESIGN PROFESSIONAL FOR THIS BUILDING PERMIT CONSTITUTES MY VERIFICATION THAT THE STATEMENTS CONTAINED HERE ARE TRUE, AND THAT I AM SUBJECT TO THE PENALTY OF 18 PA. C.S.A. §4904 RELATING TO UNSWORN FALSIFICATIONS TO AUTHORITIES.

Person Completing Checklist

_____
Signature

_____
Name (Please Print)

_____
Title

_____
Name of Company

Building Permit No. _____

BOROUGH OF FOX CHAPEL

MINIMUM REQUIREMENTS FOR BUILDING PERMIT CONSTRUCTION DRAWINGS FOR WOOD DECK PROJECTS & CHECKLIST

GENERAL REQUIREMENTS

The application for building permit must be accompanied by **the completed checklist** and **two sets of construction drawings**. The construction drawings shall be drawn to scale and shall be of sufficient clarity to indicate the nature and extent of the work proposed and shall show in detail that the work will conform with the provisions of the Commonwealth of Pennsylvania Uniform Construction Code and Borough of Fox Chapel Ordinance No. 639.

CONSTRUCTION DRAWING REVIEW **CHECKLIST**

The checklist on the following pages must be completed and submitted with the construction drawings. All information must be filled in, checked (✓) to indicate that it is included or marked not applicable (N/A). An explanation for any information not marked as included or marked N/A must be given in Section V - Comments at the end of the checklist. All explanations in the comment section must be correlated to its section number (i.e., Section II, 3. would refer to footing depth below grade). The drawing page number on which the information is noted must also be identified. This checklist is designed to help you develop an acceptable set of drawings and is not meant to be all inclusive. The building code official may require additional information.

Owners Name: _____ Telephone: _____

Project Address: _____

Agent Name: _____ Telephone: _____

Contact person regarding information on construction drawings:

_____ Telephone: _____

Section I – Deck Planning

✓ or N/A	Drawing Page No.	
_____	_____	1. Two sets of construction drawings
_____	_____	2. Scale marked on drawings
_____	_____	3. Structural design criteria; live load deck designed to support
_____	_____	4. Elevation drawing indicating height of deck above finished grade
_____	_____	5. Deck dimensions

Section II - Footings

✓ or N/A	Drawing Page No.	
_____	_____	1. Presumptive load-bearing value of soil
_____	_____	2. Concrete compressive strength
_____	_____	3. Footing depth below grade
_____	_____	4. Footings supporting piers, posts and columns; size, thickness of concrete, reinforcement and location

Section III – Floors and Columns

✓ or N/A	Drawing Page No.	
_____	_____	1. Floor framing details plan
_____	_____	2. Floor joist; species, grade, size, spacing and span
_____	_____	3. Girder and header; species, grade, size, spacing and span
_____	_____	4. Cantilevered joist; ratio of backspan to cantilever, full depth rim joist, blocking and type of connections
_____	_____	5. Pressure preservatively treated or natural decay resistance wood
_____	_____	6. Floor joist lateral restraint and bridging; location and method
_____	_____	7. Floor joist framing of openings; header, trimmer joist and tail joist
_____	_____	8. Floor sheathing/decking; type, span rating, thickness and direction
_____	_____	9. Positive anchorage to primary structure; method, type of connector, diameter and spacing. **Where positive connection to the primary building structure cannot be verified during inspection, decks shall be self-supporting.**
_____	_____	10. Support columns; size, spacing and location
_____	_____	11. Deck lateral load connection; type of hold-down tension device and locations
_____	_____	12. Connections to support columns; type of connector, length, diameter and spacing
_____	_____	13. Joist hangers; material, size and location
_____	_____	14. Flashing at house; method, material and location

Section IV – Stairs, Handrails and Guardrails

✓ or N/A	Drawing Page No.	
_____	_____	1. Stair landings; size and location
_____	_____	2. Width of stairways
_____	_____	3. Stairs; riser height and tread depth
_____	_____	4. Stair headroom
_____	_____	5. Stair closed or open riser (if open, give dimensions of opening)
_____	_____	6. Handrail location and height above riser
_____	_____	7. Handrail type and grip size
_____	_____	8. Handrail continuous for full length of flight
_____	_____	9. Handrail returned or terminated in newel post
_____	_____	10. Guardrail location and height
_____	_____	11. Guardrail intermediate rail or ornamental closure spacing
_____	_____	12. Guardrail connection to deck; method, type of connector, length, diameter and spacing
_____	_____	13. Guardrail construction detail; material, size of top rail, bottom rail and intermediate rails

Section V – Comments

Correlate Comments with Section Number

_____

_____

_____

_____

_____

MY SIGNATURE ON BEHALF OF/OR AS THE CONTRACTOR/APPLICANT FOR THIS BUILDING PERMIT CONSTITUTES MY VERIFICATION THAT THE STATEMENTS CONTAINED HERE ARE TRUE, AND THAT I AM SUBJECT TO THE PENALTY OF 18 PA. C.S.A. §4904 RELATING TO UNSWORN FALSIFICATIONS TO AUTHORITIES.

Person Completing Checklist

_____
Signature

_____
Name (Please Print)

_____
Title

_____
Name of Company

BUILDING PERMIT
FEE SCHEDULE

The fee for nonresidential and residential building permits for buildings, houses and accessory structures and for additions thereto, shall be the higher of the following:

A fee based on the area of construction equal to $0.30/per square foot of building space. In determining the building space, the area on each floor within the building or work envelope shall be counted including, but not limited to, the area of garages, basements and areas of upper floors which are open to the floor below (such as atria, open stairwell, etc.) but excluding the area of crawl spaces.

A fee based on the estimated cost of construction using the following table:

Estimated Constructions Cost		Fee
$0	$ 999	$28
$1,000	$ 1,999	$33
$2,000	$ 4,999	$44
$5,000	$ 9,999	$61
$10,000	$15,000	$77

>$15,000 = $4.60 per $1,000 of estimated construction cost.
The estimated construction cost shall be determined by the Borough.

Plus the actual costs incurred by the Borough.

Demolition Permits
The fee for a permit for the demolition of a building or structure less than 800 Square feet shall be $30.00 and for a building or structure 800 square feet or greater shall be $210.00

Labor and Industry Building Permit Training Fund
$4.00 or charge equal to amount imposed by Pennsylvania Uniform Construction Code (Applies to each building permit and each demolition permit)

Building Permit Re-inspections
$35.00

BOROUGH OF FOX CHAPEL
ZONING CERTIFICATE OF COMPLIANCE APPLICATION

A Zoning Certificate is required when there is a change of ownership, occupancy or use and upon application for building permit in the Borough of Fox Chapel per Borough Ordinance No. 686. This form must be returned to the Borough and a Zoning Certificate issued by the Borough *prior* to a real estate closing on the property or issuance of a building permit.

The following is to be completed by the Buyer/Proposed Landowner/Building Permit Applicant

Date of Application _____
Name _____
Address of Property _____

Will Applicant be occupying home? Yes _____ No _____
If no, who will? _____

What is current use of property?

Single-Family Dwelling [ ] Vacant Land [ ]
Other [ ] _____

What is the proposed use of property: _____

_____

Proposed number of occupants. _____

Do your planned activities constitute a Home Occupation, business and/or require a license?
Yes _____ No _____

If Yes, please provide details and copy of license. _____

_____

_____

Under penalty of law, I/we certify that the above information is true and correct.

_____ _____
Signature Printed

_____ _____
Signature Printed

NOTICE! This Certificate does not pertain to Building Code Compliance

* Borough Use Only *

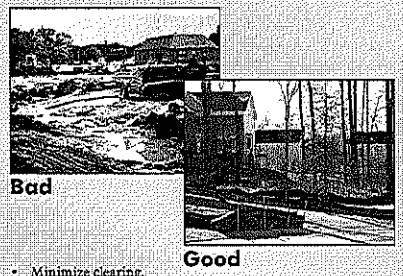
Zoning District _____

[ ] The stated occupancy is in accordance with the provisions of the Zoning Ordinance.
[ ] The stated occupancy is not in accordance with the provisions of the Zoning Ordinance.
Reason: _____

_____ _____
Signature, Zoning Officer Certificate No.

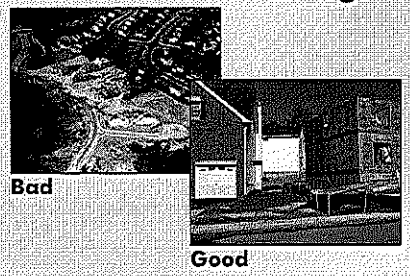
Stormwater and the Construction Industry

Protect Natural Features



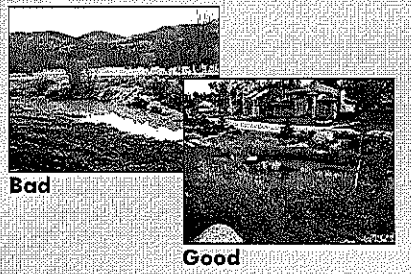
- Minimize clearing.
- Minimize the amount of exposed soil.
- Identify and protect areas where existing vegetation, such as trees, will not be disturbed by construction activity.
- Protect streams, stream buffers, wild woodlands, wetlands, or other sensitive areas from any disturbance or construction activity by fencing or otherwise clearly marking these areas.

Construction Phasing



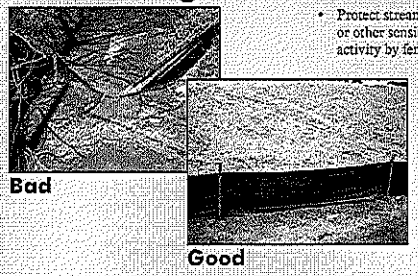
- Sequence construction activities so that the soil is not exposed for long periods of time.
- Schedule or limit grading to small areas.
- Install key sediment control practices before site grading begins.
- Schedule site stabilization activities, such as landscaping, to be completed immediately after the land has been graded to its final contour.

Vegetative Buffers



- Protect and install vegetative buffers along waterbodies to slow and filter stormwater runoff.
- Maintain buffers by mowing or replanting periodically to ensure their effectiveness.

Silt Fencing



- Inspect and maintain silt fences after each rainstorm.
- Make sure the bottom of the silt fence is buried in the ground.
- Securely attach the material to the stakes.
- Don't place silt fences in the middle of a waterway or use them as a check dam.
- Make sure stormwater is not flowing around the silt fence.

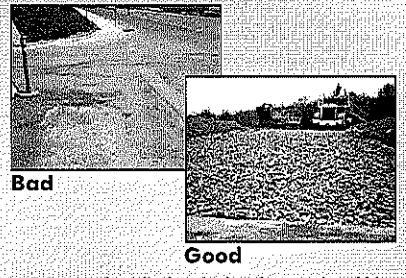
Maintain your BMPs!

www.epa.gov/npdes/menuofbmps

Site Stabilization

- Vegetate, mulch, or otherwise stabilize all exposed areas as soon as land alterations have been completed.

Construction Entrances

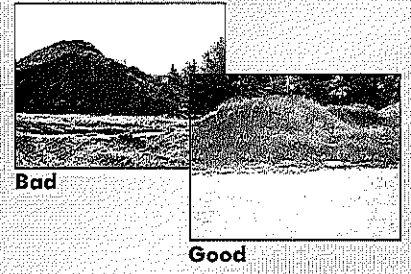


- Remove mud and dirt from the tires of construction vehicles before they enter a paved roadway.
- Properly size entrance BMPs for all anticipated vehicles.
- Make sure that the construction entrance does not become buried in soil.

Slopes

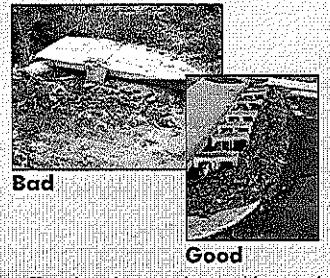
- Rough grade or terrace slopes.
- Break up long slopes with sediment barriers, or under drain, or divert stormwater away from slopes.

Dirt Stockpiles



- Cover or seed all dirt stockpiles.

Storm Drain Inlet Protection



- Use rock or other appropriate material to cover the storm drain inlet to filter out trash and debris.
- Make sure the rock size is appropriate (usually 1 to 2 inches in diameter).
- If you use inlet filters, maintain them regularly.

Stormwater and the Construction Industry

Planning and Implementing Erosion and Sediment Control Practices

The construction industry is a critical participant in the nation's efforts to protect streams, rivers, lakes, wetlands, and oceans. Through the use of best management practices (BMPs), construction site operators are the key defense against erosion and sedimentation.

As stormwater flows over a construction site, it picks up pollutants like sediment, debris, and chemicals. High volumes of stormwater can also cause stream bank erosion, and destroy downstream aquatic habitat. Preventing soil erosion and sedimentation is an important responsibility at all construction sites.

In addition to the environmental impact, uncontrolled erosion can have a significant financial impact on a construction project. It costs money and time to repair gullies, replace vegetation, clean sediment-clogged storm drains, replace poorly installed BMPs, and mitigate damage to other people's property or to natural resources.

Best Management Practice (BMP)
A BMP is a method used to prevent or control stormwater runoff and the discharge of pollutants, including sediment, into local waterbodies. Silt fences, inlet protection, and site-stabilization techniques are typical BMPs on a construction site.

Operator
An operator is someone who has control over and the ability to modify construction plans and specifications (e.g. owner, general contractor)

or

Someone who has control over the day-to-day operations at a site (e.g., owner, general contractor) that are necessary to ensure compliance with the permit requirements. It is the responsibility of a construction site owner or operator to contain stormwater runoff and prevent erosion during all stages of a project.

There may be more than one person at a site who meets these definitions and must apply for permit coverage. (States may have different definitions of the term "operator.")

So what's being done about polluted runoff?

The Clean Water Act includes the National Pollutant Discharge Elimination System (NPDES) permitting program. As of January 2003, 44 states and territories are authorized to issue NPDES stormwater permits. If your state isn't authorized to operate the NPDES stormwater permit program, EPA issues the permits. Permits vary from state to state, so contact your state or EPA for specific information. Your permitting authority has specific information on your state's NPDES stormwater permit program. In general, construction permits require construction operators to do all of the following:

- Develop and implement a stormwater pollution prevention plan
- Submit a permit application or notice of intent (NOI)
- Comply with the permit, including maintaining BMPs and inspecting the site

Under the NPDES program, construction activities that disturb 1 or more acres are required to obtain stormwater permit coverage. States have different names for the plans that construction operators must develop, such as:

- Stormwater pollution prevention plan
- Erosion and sediment control plan
- Erosion control and stormwater management plan
- Stormwater management plan
- Water pollution control plan
- Pollution prevention plan

This document uses the term "*Plan*."

I think I need a permit... Where do I start?

All land-disturbing activities, including clearing, grading, and excavation, that disturb 1 or more acres are required to be covered under a state or EPA-issued NPDES construction stormwater permit prior to land disturbance. Permit requirements vary by state. Begin by researching the specific requirements in your state. You might already be subject to local erosion and sediment control requirements, but that doesn't release you from the requirements of the NPDES program at the state or EPA level. Although you must comply with both sets of requirements, in most cases they have been designed to be complementary. Contact your permitting authority to find out exactly what you need to do. A good place to start your search is the Construction Industry Compliance Assistance web site at http://www.cicas.org/cica.

The NPDES permit requirements include small construction activities that are part of a larger common plan of development or sale, such as a single lot within a larger subdivision. For developments with multiple operators, all operators must have permit coverage for their individual parts of the larger development, no matter how large or small each operation happens to be. When there are multiple operators at one site, they're encouraged to develop and share one comprehensive Plan and obtain permit coverage as co-permittees.

Construction sites that discharge unpermitted stormwater are in violation of the Clean Water Act and may be subject to fines of up to $27,500 a day per violation.

The **owner or operator** of the construction site is responsible for complying with the requirements of the permit. Responsibilities include developing a Plan, obtaining permit coverage, implementing BMPs, and stabilizing the site at the end of the construction activity.

Determine your eligibility

All construction activity that disturbs 1 or more acres of land, as well as activity that disturbs less than 1 acre but is part of a larger common plan of development, must obtain permit coverage.

Read and understand your stormwater permit requirements

Get a copy of the permit for construction activities and a permit application (or notice of intent form) from your state or EPA permitting authority.

Develop a Plan

Most states do not require you to submit your Plan. However, you do need to keep the Plan on site. If that's impractical, you may post a notice that tells where the Plan is kept so it can be accessed by the permitting authority and other interested parties.

You'll need to post a copy of your completed application on site. Put it in a place where the public can see it so they'll know your site is covered by an NPDES permit.

Apply for permit coverage

Once you understand your permit requirements and have developed a Plan, you can submit a stormwater permit application (or notice of intent) to your permitting authority. This must be done before beginning any land disturbance on the site. Some states require a few days of lead time, so check with your permitting authority. Once you've submitted the application, you must satisfy the conditions of the permit.

Implement the Plan

Be prepared to implement the BMPs in your Plan before construction begins. Ensure that BMPs are properly maintained, and upgrade and repair them as necessary.

Developing and Implementing a Plan

You must have a Plan that includes erosion and sediment control and pollution prevention BMPs. These Plans require:

- Advance planning and training to ensure proper implementation of the BMPs
- Erosion and sediment control BMPs in place until the area is permanently stabilized
- Pollution prevention BMPs to keep the construction site "clean"
- Regular inspection of the construction site to ensure proper installation and maintenance of BMPs

Fortunately, the practices and measures that must be included in your Plan are already part of the standard operating procedures at many construction sites.

Six steps are associated with developing and implementing a stormwater Plan. There's a wealth of information available on developing pollution prevention plans. Please contact your permitting authority for help in finding additional guidance materials, or visit www.epa.gov/npdes/stormwater. A sample construction plan is available at www.epa.gov/npdes/pubs/sample_swppp.pdf.

1. Site Evaluation and Design Development

- Collect site information
- Develop site plan design
- Prepare pollution prevention site map

The first step in preparing a Plan is to define the characteristics of the site and the type of construction that will occur. This involves collecting site information, identifying natural features that should be protected, developing a site plan design, describing the nature of the construction activity, and preparing a pollution prevention site map.

2. Assessment

- Measure the site area
- Determine the drainage areas
- Calculate the runoff coefficient

The next step in assessing the impact the project will have on stormwater runoff. Determine the drainage areas and estimate the runoff amounts and velocities. For more information on calculating the runoff coefficient, go to www.epa.gov/npdes/pubs/chap02_construction.pdf, page 11.

3. Control Selection and Plan Design

- Review and incorporate state or local requirements
- Select erosion and sediment controls
- Select other controls
- Select stormwater management controls
- Indicate the location of controls on the site map
- Prepare an inspection and maintenance plan
- Coordinate controls with construction activity
- Prepare sequence of major activities

In the third step you'll actually document your procedures to prevent and control polluted stormwater runoff. You must delineate areas that will not be disturbed, including critical natural areas like streamside areas, floodplains, and trees. You must also identify the measures (or BMPs) you'll use to protect these areas.

Planning your project to minimize the amount of exposed soil at any given time is a highly effective way to prevent erosion. Erosion control measures designed to prevent soil from being mobilized include diversions to route stormwater away from exposed soils and stabilization with vegetation, mulch, and geotextiles. Sedimentation control measures designed to remove sediment from stormwater or prevent it from leaving the site include silt fences, sediment traps, and diversions.

You'll need to select erosion and sediment controls—including stabilization measures for protecting disturbed areas and structural controls for diverting runoff and removing sediment—that are appropriate for your particular site. The appropriateness of the control measures will depend on several factors, but will be influenced most directly by the site characteristics. Some stabilization measures you might consider are temporary seeding, permanent seeding, and mulching. Structural control measures include earth dikes, silt fences, and sediment traps. No single BMP will meet all of the erosion and sedimentation control needs of a construction site. A combination of BMPs is necessary. For more information on the types of BMPs appropriate for your construction site, see the BMP fact sheet series available at www.epa.gov/npdes/stormwaterbmps.

Soil erosion control tips...

- Design the site to infiltrate stormwater into the ground and to keep it out of storm drains. Eliminate or minimize the use of stormwater collection and conveyance systems while maximizing the use of stormwater infiltration and bioretention techniques.
- Minimize the amount of exposed soil on site.
  - To the extent possible, plan the project in stages to minimize the amount of area that is bare and subject to erosion. The less soil exposed, the easier and cheaper it will be to control erosion.
  - Vegetate disturbed areas with permanent or temporary seeding immediately upon reaching final grade.
  - Vegetate or cover stockpiles that will not be used immediately.
- Reduce the velocity of stormwater both onto and away from the project area.
  - Interceptor, diversions, vegetated buffers, and check dams are a few of the BMPs that can be used to slow down stormwater as it travels across and away from the project site.
  - Diversion measures can also be used to divert flow away from exposed areas toward stable portions of the site.
  - Silt fences and other types of perimeter filters should never be used to reduce the velocity of runoff.
- Prevent defined channels immediately with measures adequate to handle the storm flows expected.
  - Sod, geotextile, natural fiber, riprap, or other stabilization measures should be used to allow the channels to carry water without causing erosion. Use softer measures like geotextile or vegetation where possible to prevent downstream impacts.
- Keep sediment on site.
  - Place aggregate or stone at construction site vehicle exits to accommodate at least two tire revolutions of large construction vehicles. Much of the dirt on the tires will fall off before the vehicle gets to the street.
  - Regular street sweeping if the construction entrance will prevent dirt from entering storm drains. Do not hose paved streets.
  - Sediment traps and basins are temporary structures and should be used in conjunction with other measures to reduce the amount of erosion.
- Maintaining all BMPs in edition to ensure their effectiveness during the life of the project.
  - Regularly remove collected sediment from silt fences, berms, traps, and other BMPs.
  - Ensure that geotextiles and mulch remain in place until vegetation is well established.
  - Maintain fences that protect sensitive areas, silt fences, diversion structures, and other BMPs.

Other BMPs and Activities to Control Polluted Runoff

You'll need to select other controls to address potential pollutant sources on your site. Construction materials, debris, trash, fuel, paint, and stockpiles become pollution sources when it rains. Some pollution prevention practices can significantly reduce the amount of pollutants leaving construction sites. The following are some simple practices that should be included in the Plan and implemented on site:

- Keep potential sources of pollution out of the rain as practicable (e.g., inside a building, covered with plastic or tarps, or sealed tightly in a leak-proof container).
- Clearly identify a protected, lined area for concrete truck washouts. This area should be located away from streams, storm drain inlets, or ditches and should be cleaned out periodically.
- Park, refuel, and maintain vehicles and equipment in one area of the site to minimize the area exposed to possible spills and fuel storage. This area should be well away from streams, storm drain inlets, or ditches. Keep spill kits close by and clean up any spills or leaks immediately, including spills on pavement or earthen surfaces.
- Practice good housekeeping. Keep the construction site free of litter, construction debris, and leaking containers. Keep all waste in one area to maintain cleaning.
- Never hose down paved surfaces to clean dust, debris, or trash. This water could wash directly into storm drains or streams. Sweep up materials and dispose of them in the trash. Never bury trash or debris!
- Dispose of hazardous materials properly.

4. Certification and Notification

- Certify the Plan
- Submit permit application or notice of intent

Once the Plan has been developed, an authorized representative must sign it. Now is the time to submit the permit application or notice of intent. Your permit might require that the Plan be kept on site, to be sure to keep it available for the staff implementing the Plan.

Erosion and sedimentation control practices are only as good as their installation and maintenance.

5. Implementing and Maintaining a Plan

- Implement controls
- Inspect and maintain controls
- Update/change the Plan
- Report releases of hazardous materials

A Plan describes the practices and activities you'll use to prevent stormwater contamination and meet the NPDES permit requirements. Make sure that the Plan is implemented and that the Plan is updated as necessary to reflect changes on the site.

Erosion and sedimentation control practices are only as good as their installation and maintenance. Train the contractors that will install the BMPs and inspect immediately to ensure that the BMPs have been installed correctly.

Regularly inspect the BMPs (especially before and after rain events) and perform any necessary repairs or maintenance immediately. Many BMPs are designed to handle a limited amount of sediment. If not maintained, they'll become ineffective and a source of sediment pollution.

It's also important to keep records of BMP installation, implementation, and maintenance. Keep track of major grading activities that occur on the site, when construction activities cease (temporarily or permanently), and when a site is temporarily or permanently stabilized.

If construction plans change at any time, or if more appropriate BMPs are chosen for the site, update the Plan accordingly.

6. Completing the Project: Final Stabilization and Termination of the Permit

- Final stabilization
- Notice of Termination
- Record retention

Many states and EPA require a Notice of Termination (NOT) or other notification signifying that the construction activity is completed. An NOT is required when:

- Final stabilization has been achieved on all portions of the site for which the permittee is responsible.
- Another operator has assumed control over all areas of the site that have not been finally stabilized. That operator would need to submit a new permit application to the permitting authority.
- For residential construction only, temporary stabilization of a lot has been completed prior to transference of ownership to the homeowner, with the homeowner being made aware of the need to perform final stabilization.

Permittees must keep a copy of their permit application and their Plan for at least 3 years following final stabilization. This period may be longer depending on state and local requirements.

Preconstruction Checklist

- A site description, including
  - Nature of the activity
  - Intended sequence of major construction activities
  - Total area of the site
  - Existing soil type and rainfall runoff data
  - A site map with:
    - Drainage patterns
    - Approximate slopes after major grading
    - Area of soil disturbance
    - Outline of areas which will not be disturbed
    - Location of major structural and nonstructural soil erosion controls
    - Areas where stabilization practices are expected to occur
    - Surface waters
    - Stormwater discharge locations
  - Name of the receiving water(s)
- A description of controls:
  - Erosion and sediment controls, including
    - Stabilization practices for all areas disturbed by construction
    - Structural practices for all drainage/discharge locations
  - Stormwater management controls, including
    - Measures used to control pollutants occurring in stormwater discharges after construction activities are complete
    - Velocity dissipation devices to provide nonerosive flow conditions from the discharge point along the length of any outfall channel
  - Other controls, including
    - Waste disposal practices that prevent discharge of solid materials
    - Measures to minimize offset tracking of sediments by construction vehicles
    - Measures to ensure compliance with state or local waste disposal, sanitary sewer, or septic system regulations
  - Description of the timing during the construction when measures will be implemented
- State or local requirements incorporated into the Plan
- Inspection and maintenance procedures for control measures identified in the Plan
- Contractor certification and Plan certification

Implementation Checklist

- Maintain records of construction activities, including
  - Dates when major grading activities occur
  - Dates when construction activities temporarily cease on the site or a portion of the site
  - Dates when construction activities permanently cease on the site or a portion of the site
  - Dates when stabilization measures are completed on the site
- Prepare inspection reports summarizing
  - Name of person conducting BMP inspections
  - Qualifications of person conducting BMP inspections
  - BMPs/areas inspected
  - Observed conditions
  - Necessary changes in the Plan
- Report releases of reportable quantities of oil or hazardous materials
  - Notify the National Response Center at 800-424-8802 immediately
  - Report releases to your permitting authority (immediately, or as specified in your permit. You must also provide a written report within 14 days.
  - Modify the Plan to include
    - The date of release
    - Circumstances leading to the release
    - Steps taken to prevent reoccurrence of the release
- Modify Plan as necessary
  - Incorporate requests of the permitting authority to bring the Plan into compliance
  - Address changes in design, construction operation, or maintenance that affect the potential for discharge of pollutants

An ounce of prevention is worth a pound of cure! It's far more efficient and cost-effective to prevent pollution than it is to try to correct problems later. Installing and maintaining simple BMPs and pollution prevention techniques on site can greatly reduce the potential for stormwater pollution and can also save you money!

SECTION M

Visit www.epa.gov/npdes/stormwater for more information.

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THE YEAR OF CLEAN WATER

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Stormwater Phase II Final Rule

Construction Site Runoff Control Minimum Control Measure

Stormwater Phase II Final Rule Fact Sheet Series

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Construction Program

3.0 – Construction Program Overview

3.1 – Construction Rainfall Erosivity Waiver

Industrial "No Exposure"

4.0 – Conditional No Exposure Exclusion for Industrial Activity

This fact sheet profiles the Construction Site Runoff Control minimum control measure, one of six measures that the operator of a Phase II regulated small municipal separate storm sewer system (MS4) is required to include in its stormwater management program to meet the conditions of its National Pollutant Discharge Elimination System (NPDES) permit. This fact sheet outlines the Phase II Final Rule requirements and offers some general guidance on how to satisfy them. It is important to keep in mind that the small MS4 operator has a great deal of flexibility in choosing exactly how to satisfy the minimum control measure requirements.

Why Is The Control of Construction Site Runoff Necessary?

Polluted stormwater runoff from construction sites often flows to MS4s and ultimately is discharged into local rivers and streams. Of the pollutants listed in Table 1, sediment is usually the main pollutant of concern. According to the 2000 National Water Quality Inventory, States and Tribes report that sedimentation is one of the most widespread pollutants affecting assessed rivers and streams, second only to pathogens (bacteria). Sedimentation impairs 84,503 river and stream miles (12% of the assessed river and stream miles and 31% of the impaired river and stream miles). Sources of sedimentation include agriculture, urban runoff, construction, and forestry. Sediment runoff rates from construction sites, however, are typically 10 to 20 times greater than those of agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction sites can contribute more sediment to streams than can be deposited naturally during several decades. The resulting siltation, and the contribution of other pollutants from construction sites, can cause physical, chemical, and biological harm to our nation's waters. For example, excess sediment can quickly fill rivers and lakes, requiring dredging and destroying aquatic habitats.

Table 1

Pollutants Commonly Discharged From Construction Sites
Sediment
Solid and sanitary wastes
Phosphorous (fertilizer)
Nitrogen (fertilizer)
Pesticides
Oil and grease
Concrete truck washout
Construction chemicals
Construction debris

What Is Required?

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in stormwater runoff to their MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. The small MS4 operator is required to:

- ❑ Have an ordinance or other regulatory mechanism requiring the implementation of proper erosion and sediment controls, and controls for other wastes, on applicable construction sites;
- ❑ Have procedures for site plan review of construction plans that consider potential water quality impacts;

- ❑ Have procedures for site inspection and enforcement of control measures;
- ❑ Have sanctions to ensure compliance (established in the ordinance or other regulatory mechanism);
- ❑ Establish procedures for the receipt and consideration of information submitted by the public; and
- ❑ Determine the appropriate best management practices (BMPs) and measurable goals for this minimum control measure. Suggested BMPs (i.e., the program actions/activities) and measurable goals are presented below.

What Are Some Guidelines for Developing and Implementing This Measure?

Further explanation and guidance for each component of a regulated small MS4's construction program is provided below.

Regulatory Mechanism

Through the development of an ordinance or other regulatory mechanism, the small MS4 operator must establish a construction program that controls polluted runoff from construction sites with a land disturbance of greater than or equal to one acre. Because there may be limitations on regulatory legal authority, the small MS4 operator is required to satisfy this minimum control measure only to the maximum extent practicable and allowable under State, Tribal, or local law.

Site Plan Review

The small MS4 operator must include in its construction program requirements for the implementation of appropriate BMPs on construction sites to control erosion and sediment and other waste at the site. To determine if a construction site is in compliance with such provisions, the small MS4 operator should review the site plans submitted by the construction site operator before ground is broken.

Site plan review aids in compliance and enforcement efforts since it alerts the small MS4 operator early in the process to the planned use or non-use of proper BMPs and provides a way to track new construction activities. The tracking of sites is useful not only for the small MS4 operator's recordkeeping and reporting purposes, which are required under their NPDES stormwater permit (see Fact Sheet 2.9), but also for members of the public interested in ensuring that the sites are in compliance.

Inspections and Penalties

Once construction commences, BMPs should be in place and the small MS4 operator's enforcement activities should begin. To ensure that the BMPs are properly installed, the small MS4 operator is required to develop procedures for site inspection and enforcement of control measures to deter infractions. Procedures could include steps to identify priority sites for inspection and enforcement based on the nature and extent of the construction activity, topography, and the characteristics of soils and receiving water quality. Inspections give the MS4 operator an opportunity to provide additional guidance and education, issue warnings, or assess penalties. In early 2002, EPA's Office of Compliance established a national workgroup to address issues related to the construction industry. The workgroup has developed a construction industry compliance assistance Web site as a tool for builders and developers (www.cicacenter.org). Inspectors can use the Web site to find plain language explanations of the major environmental laws affecting the construction industry as well as guidance that can be distributed developers and construction site operators.

To conserve staff resources, one possible option for small MS4 operators is to have inspections performed by the same inspector that visits the sites to check compliance with health and safety building codes.

Information Submitted by the Public

A final requirement of the small MS4 program for construction activity is the development of procedures for the receipt and consideration of public inquiries, concerns, and information submitted regarding local construction activities. This provision is intended to further reinforce the public participation component of the regulated small MS4 stormwater program (see Fact Sheet 2.4) and to recognize the crucial role that the public can play in identifying instances of noncompliance.

The small MS4 operator is required only to *consider* the information submitted, and may not need to follow-up and respond to every complaint or concern. Although some form of enforcement action or reply is not required, the small MS4 operator is required to demonstrate acknowledgment and consideration of the information submitted. A simple tracking process in which submitted public information, both written and verbal, is recorded and then given to the construction site inspector for possible follow-up will suffice.

What Are Appropriate Measurable Goals?

Measurable goals, which are required for each minimum control measure, are intended to gauge permit compliance and program effectiveness. The measurable goals, as well as the BMPs, should reflect the needs and characteristics of the operator and the area served by its small MS4. Furthermore, they should be chosen using an integrated approach that fully addresses the requirements and intent of the minimum control measure.

EPA has developed a Measurable Goals Guidance for Phase II MS4s that is designed to help program managers comply with the requirement to develop measurable goals. The guidance presents an approach for MS4 operators to develop measurable goals as part of their stormwater management plan. For example, an MS4 program goal might be to educate at least 80 percent of all construction site operators and contractors about proper selection, installation, inspection, and maintenance of BMPs by the end of the permit term, which will help to ensure compliance with erosion and sediment control requirements. This goal could be tracked by documenting attendance at local, State, or Federal training programs. Attendance can be encouraged by decreasing permitting fees for those contractors who have been trained and provide proof of attendance when applying for permits.

Are Construction Sites Covered Under the NPDES Stormwater Program?

Yes. On March 10, 2003, Phase II NPDES regulations came into effect that extended coverage to construction sites that disturb one to five acres in size, including smaller sites that are part of a larger common plan of development or sale (see Fact Sheet 3.0 for information on the Phase II construction program). Sites disturbing five acres or more were regulated previously. Most states have been authorized to implement the NPDES stormwater program and have issued, or are developing state-specific construction general permits. EPA remains the permitting authority in a few states, territories, and on most land in Indian Country, however. For construction (and other land disturbing activities) in areas where EPA is the permitting authority, operators must meet the requirements of the EPA Construction General Permit (CGP). Permitting authority information can be found in Appendix B of the CGP. CGP permit requirements include the submission of a Notice of Intent and the development of a stormwater pollution prevention plan (SWPPP). The SWPPP must include a site description and measures and controls to prevent or minimize pollutants in stormwater discharges.

Even though all construction sites that disturb more than one acre are covered by national NPDES regulations, the construction site runoff control minimum measure for the small MS4 program is needed to induce more localized site regulation and enforcement efforts, and to enable operators of regulated small MS4s to more effectively control construction site discharges into their MS4s.

To aid operators of regulated construction sites in their efforts to comply with both local requirements and their NPDES permit, the Phase II Final Rule includes a provision that allows the NPDES permitting authority to reference a "qualifying State, Tribal or local program" in the NPDES general permit for construction. This means that if a construction site is located in an area covered by a qualifying local program, then the construction site operator's compliance with the local program constitutes compliance with their NPDES permit. A regulated small MS4's stormwater program for construction could be a "qualifying program" if the MS4 operator requires a SWPPP, in addition to the requirements summarized in this fact sheet.

The ability to reference other programs in the NPDES permit is intended to reduce confusion between overlapping and similar local and NPDES permitting authority requirements, while still providing for both local and national regulatory coverage of the construction site. The provision allowing NPDES permitting authorities to reference other programs has no impact on, or direct relation to, the small MS4 operator's responsibilities under the construction site runoff control minimum measure profiled here.

Is a Small MS4 Required to Regulate Construction Sites that the Permitting Authority has Waived from the NPDES Construction Program?

No. If the NPDES permitting authority waives requirements for stormwater discharges associated with small construction activity (see 40 CFR § 122.26(b)(15)(i)), the small MS4 operator is not required to develop, implement, and/or enforce a program to reduce pollutant discharges from such construction sites.

For Additional Information

Contacts

☞ U.S. EPA Office of Wastewater Management
http://www.epa.gov/npdes/stormwater
Phone: 202-564-9545

☞ Your NPDES Permitting Authority. Most States and Territories are authorized to administer the NPDES Program, except the following, for which EPA is the permitting authority:

Alaska	Guam
District of Columbia	Johnston Atoll
Idaho	Midway and Wake Islands
Massachusetts	Northern Mariana Islands
New Hampshire	Puerto Rico
New Mexico	Trust Territories
American Samoa	

☞ A list of names and telephone numbers for each EPA Region and State is located at http://www.epa.gov/npdes/stormwater (click on "Contacts").

Reference Documents

☞ EPA's Stormwater Web Site
http://www.epa.gov/npdes/stormwater
- Stormwater Phase II Final Rule Fact Sheet Series
- Stormwater Phase II Final Rule (64 *FR* 68722)
- National Menu of Best Management Practices for Stormwater Phase II
- Measurable Goals Guidance for Phase II Small MS4s
- Stormwater Case Studies
- And many others
- EPA Construction General Permit and Fact Sheet www.epa.gov/npdes/stormwater/cgp
- EPA Stormwater Management for Construction Activities and Best Management Practices: Developing Pollution Prevention Plans Guidance

☞ Construction Industry Compliance Assistance Center. http://www.cicacenter.org/

United States Environmental Protection Agency
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Fact Sheet 2.7

Stormwater Phase II Final Rule

Post-Construction Runoff Control Minimum Control Measure

Stormwater Phase II Final Rule Fact Sheet Series

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3.0 – Construction Program Overview

3.1 – Construction Rainfall Erosivity Waiver

Industrial "No Exposure"

4.0 – Conditional No Exposure Exclusion for Industrial Activity

This fact sheet profiles the Post-Construction Runoff Control minimum control measure, one of six measures that the operator of a Phase II regulated small municipal separate storm sewer system (MS4) is required to include in its stormwater management program in order to meet the conditions of its National Pollutant Discharge Elimination System (NPDES) permit. This fact sheet outlines the Phase II Final Rule requirements for post-construction runoff control and offers some general guidance on how to satisfy those requirements. It is important to keep in mind that the small MS4 operator has a great deal of flexibility in choosing exactly how to satisfy the minimum control measure requirements.

Why Is The Control of Post-Construction Runoff Necessary?

Post-construction stormwater management in areas undergoing new development or redevelopment is necessary because runoff from these areas has been shown to significantly affect receiving waterbodies. Many studies indicate that prior planning and design for the minimization of pollutants in post-construction stormwater discharges is the most cost-effective approach to stormwater quality management.

There are generally two forms of substantial impacts of post-construction runoff. The first is caused by an increase in the type and quantity of pollutants in stormwater runoff. As runoff flows over areas altered by development, it picks up harmful sediment and chemicals such as oil and grease, pesticides, heavy metals, and nutrients (e.g., nitrogen and phosphorus). These pollutants often become suspended in runoff and are carried to receiving waters, such as lakes, ponds, and streams. Once deposited, these pollutants can enter the food chain through small aquatic life, eventually entering the tissues of fish and humans. The second kind of post-construction runoff impact occurs by increasing the quantity of water delivered to the waterbody during storms. Increased impervious surfaces (e.g., parking lots, driveways, and rooftops) interrupt the natural cycle of gradual percolation of water through vegetation and soil. Instead, water is collected from surfaces such as asphalt and concrete and routed to drainage systems where large volumes of runoff quickly flow to the nearest receiving water. The effects of this process include streambank scouring and downstream flooding, which often lead to a loss of aquatic life and damage to property.

What Is Required?

The Phase II Final Rule requires an operator of a regulated small MS4 to develop, implement, and enforce a program to reduce pollutants in post-construction runoff to their MS4 from new development and redevelopment projects that result in the land disturbance of greater than or equal to 1 acre. The small MS4 operator is required to:

- ❑ Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs);
- ❑ Have an ordinance or other regulatory mechanism requiring the implementation of post-construction runoff controls to the extent allowable under State, Tribal or local law;

- ❑ Ensure adequate long-term operation and maintenance of controls;
- ❑ Determine the appropriate best management practices and measurable goals for this minimum control measure.

What Is Considered a "Redevelopment" Project?

The Phase II Final Rule applies to "redevelopment" projects that alter the "footprint" of an existing site or building in such a way that there is a disturbance of equal to or greater than 1 acre of land. Redevelopment projects do not include such activities as exterior remodeling. Because redevelopment projects may have site constraints not found on new development sites, the Phase II Final Rule provides flexibility for implementing post-construction controls on redevelopment sites that consider these constraints.

What Are Some Guidelines for Developing and Implementing This Measure?

This section includes some non-structural and structural BMPs that could be used to satisfy the requirements of the post-construction runoff control minimum measure. It is important to recognize that many BMPs are climate-specific, and not all BMPs are appropriate in every geographic area. Because the requirements of this measure are closely tied to the requirements of the construction site runoff control minimum measure (see Fact Sheet 2.6), EPA recommends that small MS4 operators develop and implement these two measures in tandem.

❑ Non-Structural BMPs

- **Planning Procedures.** Runoff problems can be addressed efficiently with sound planning procedures. Local master plans, comprehensive plans, and zoning ordinances can promote improved water quality in many ways, such as guiding the growth of a community away from sensitive areas to areas that can support it without compromising water quality.
- **Site-Based BMPs.** These BMPs can include buffer strip and riparian zone preservation, minimization of disturbance and imperviousness, and maximization of open space.

❑ Structural BMPs

- **Stormwater Retention/Detention BMPs.** Retention or detention BMPs control stormwater by gathering runoff in wet ponds, dry basins, or multichamber catch basins and slowly releasing it to receiving waters or drainage systems. These practices can be designed to both control stormwater volume and settle out particulates for pollutant removal.
- **Infiltration BMPs.** Infiltration BMPs are designed to facilitate the percolation of runoff through the soil to ground water, and, thereby, result in reduced stormwater runoff quantity and reduced mobilization of pollutants. Examples include infiltration basins/trenches, dry wells, and porous pavement.
- **Vegetative BMPs.** Vegetative BMPs are landscaping features that, with optimal design and good soil conditions, remove pollutants, and facilitate percolation of runoff, thereby maintaining natural site hydrology, promoting healthier habitats, and increasing aesthetic appeal. Examples include grassy swales, filter strips, artificial wetlands, and rain gardens.

What Are Appropriate Measurable Goals?

Measurable goals, which are required for each minimum control measure, are intended to gauge permit compliance and program effectiveness. The measurable goals, as well as the BMPs, should reflect needs and characteristics of the operator and the area served by its small MS4. Furthermore, the measurable goals should be chosen using an integrated approach that fully addresses the requirements and intent of the minimum control measure.

EPA has developed a Measurable Goals Guidance for Phase II MS4s that is designed to help program managers comply with the requirement to develop measurable goals. The guidance presents an approach for MS4 operators to develop measurable goals as part of their stormwater management plan. For example, an MS4 program goal might be to reduce by 30 percent the road surface areas directly connected to storm sewer systems (using traditional curb and gutter infrastructure) in new developments and redevelopment areas over the course of the first permit term. Using "softer" stormwater conveyance approaches, such as grassy swales, will increase infiltration and decrease the volume and velocity of runoff leaving development sites. Progress toward the goal could be measured by tracking the linear feet of curb and gutter not installed in development projects that historically would have been used.