

TOOL 4

Post-Construction Guidance Manual

Codes & Ordinance Worksheet (COW)

This is one of several tools designed to assist local stormwater managers with the development of their post-construction stormwater program. The tools are a companion to the Post-Construction Guidance Manual (www.cwp.org/postconstruction). The following tools are available:

For more information on the Post-Construction Guidance Manual, contact the Center for Watershed Protection, 8390 Main Street, 2nd floor, Ellicott City, MD 21046, 410-461-8323
center@cwp.org
www.cwp.org.

Tool #1: Post-Construction Stormwater Program Self-Audit

Tool #2: Program & Budget Planning Tool

Tool #3: Post-Construction Stormwater Model Ordinance

Tool #4: Codes & Ordinance Worksheet (COW)

Tool #5: Stormwater Manual Builder

Tool #6: Plan Review, BMP Construction, and Maintenance Checklists

Tool #7: Performance Bonds

Tool #8: BMP Evaluation Tool

CODE AND ORDINANCE WORKSHEET

The Code and Ordinance Worksheet allows an in-depth review of the standards, ordinances, and codes (i.e., the development rules) that shape how development occurs in your community. You are guided through a systematic comparison of your local development rules against the model development principles. Institutional frameworks, regulatory structures and incentive programs are included in this review. The worksheet consists of a series of questions that correspond to each of the model development principles. Points are assigned based on how well the current development rules agree with the site planning benchmarks derived from the model development principles.

The worksheet is intended to guide you through the first two steps of a local site planning roundtable.

Step 1: Find out what the Development Rules are in your community.

Step 2: See how your rules stack up to the Model Development Principles.

The homework done in these first two steps helps to identify which development rules are potential candidates for change.

PREPARING TO COMPLETE THE CODE AND ORDINANCE WORKSHEET

Two tasks need to be performed before you begin in the worksheet. First, you must identify all the development rules that apply in your community. Second, you must identify the local, state, and federal authorities that actually administer or enforce the development rules within your community. Both tasks require a large investment of time. The development process is usually shaped by a complex labyrinth of regulations, criteria, and authorities. A team approach may be helpful. You may wish to enlist the help of a local plan reviewer, land planner, land use attorney, or civil engineer. Their real-world experience with the development process is often very useful in completing the worksheet.

Identify the Development Rules

Gather the key documents that contain the development rules in your community. A list of potential documents to look for is provided in Table 1. Keep in mind that the information you may want on a particular development rule is not always found in code or regulation, and maybe hidden in supporting design manuals, review checklists, guidance document or construction specifications. In most cases, this will require an extensive search. Few communities include all of their rules in a single document. Be prepared to contact state and federal, as well as local agencies to obtain copies of the needed documents.

Table 1: Key Local Documents that will be Needed to Complete the COW

Zoning Ordinance
Subdivision Codes
Street Standards or Road Design Manual
Parking Requirements
Building and Fire Regulations/Standards
Stormwater Management or Drainage Criteria
Buffer or Floodplain Regulations
Environmental Regulations
Tree Protection or Landscaping Ordinance
Erosion and Sediment Control Ordinances
Public Fire Defense Masterplans
Grading Ordinance

Identify Development Authorities

Once the development rules are located, it is relatively easy to determine which local agencies or authorities are actually responsible for administering and enforcing the rules. Completing this step will provide you with a better understanding of the intricacies of the development review process and helps identify key members of a future local roundtable. Table 2 provides a simple framework for identifying the agencies that influence development in your community. As you will see, space is provided not only for local agencies, but for state and federal agencies as well. In some cases, state and federal agencies may also exercise some authority over the local development process (e.g., wetlands, some road design, and stormwater).

USING THE WORKSHEET: HOW DO YOUR RULES STACK UP TO THE MODEL DEVELOPMENT PRINCIPLES?

Completing the Worksheet

Once you have located the documents that outline your development rules and identified the authorities responsible for development in your community, you are ready for the next step. You can now use the worksheet to compare your development rules to the model development principles. The worksheet is presented at the end of this chapter. The worksheet presents seventy-seven site planning benchmarks. The benchmarks are posed as questions. Each benchmark focuses on a specific site design practice, such as the minimum diameter of cul-de-sacs, the minimum width of streets, or the minimum parking ratio for a certain land use. You should refer to the codes, ordinances, and plans identified in the first step to determine the appropriate development rule. The questions require either a yes or no response or specific numeric criteria. If your development rule agrees with the site planning benchmark, you are awarded points.

Calculating Your Score

A place is provided on each page of the worksheet to keep track of your running score. In addition, the worksheet is subdivided into three categories:

- Residential Streets and Parking Lots (Principles No. 1 - 10)
- Lot Development (Principles No. 11 - 16)
- Conservation of Natural Areas (Principles No. 17 - 22).

For each category, you are asked to subtotal your score. This “**Time to Assess**” allows you to consider which development rules are most in line with the site planning benchmarks and what rules are potential candidates for change.

The total number of points possible for all of the site planning benchmarks is 100. Your overall score provides a general indication of your community's ability to support environmentally sensitive development. As a general rule, if your overall score is lower than 80, then it may be advisable to systematically reform your local development rules. A score sheet is provided at end of the Code and Ordinance Worksheet to assist you in determining where your community's score places in respect to the Model Development Principles. Once you have completed the worksheet, go back and review your responses. Determine if there are specific areas that need improvement (e.g., development rules that govern road design) or if your development rules are generally pretty good. This review is key to implementation of better development: assessment of your current development rules and identification of impediments to innovative site design. This review also directly leads into the next step: a site planning roundtable process conducted at the local government level. The primary tasks of a local roundtable are to systematically review existing development rules and then determine if changes can or should be made. By providing a much-needed framework for overcoming barriers to better development, the site planning roundtable can serve as an important tool for local change.

Table 2: Local, State, and Federal Authorities Responsible for Development in Your Community			
Development Responsibility	State/Federal	County	Town
Sets road standards	Agency:		
	Contact Name:		
	Phone No.:		
Review/approves subdivision plans	Agency:		
	Contact Name:		
	Phone No.:		
Establishes zoning ordinances	Agency:		
	Contact Name:		
	Phone No.:		
Establishes subdivision ordinances	Agency:		
	Contact Name:		
	Phone No.:		
Reviews/establishes stormwater management or drainage criteria	Agency:		
	Contact Name:		
	Phone No.:		
Provides fire protection and fire protection code enforcement	Agency:		
	Contact Name:		
	Phone No.:		
Oversees buffer ordinance	Agency:		
	Contact Name:		
	Phone No.:		
Oversees wetland protection	Agency:		
	Contact Name:		
	Phone No.:		
Establishes grading requirements or oversees erosion and sediment control program	Agency:		
	Contact Name:		
	Phone No.:		
Reviews/approves septic systems	Agency:		
	Contact Name:		
	Phone No.:		
Review/approves utility plans (e.g., water and sewer)	Agency:		
	Contact Name:		
	Phone No.:		
Reviews/approves forest conservation/ tree protection plans	Agency:		
	Contact Name:		
	Phone No.:		

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1. Street Width

What is the minimum pavement width allowed for streets in low density residential developments that have less than 500 daily trips (ADT)?

_____ feet

*If your answer is between **18-22 feet**, give yourself **4 points***

At higher densities are parking lanes allowed to also serve as traffic lanes (i.e., queuing streets)?

YES/ NO

*If your answer is **YES**, give yourself **3 points***

Notes on Street Width (include source documentation such as name of document, section and page #):

2. Street Length

Do street standards promote the most efficient street layouts that reduce overall street length?

YES/ NO

*If your answer is **YES**, give yourself **1 point***

Notes on Street Length (include source documentation such as name of document, section and page #):

3. Right-of-Way Width

What is the minimum right of way (ROW) width for a residential street?

_____ feet

*If your answer is **less than 45 feet**, give yourself **3 points***

Does the code allow utilities to be placed under the paved section of the ROW?

YES/ NO

*If your answer is **YES**, give yourself **1 point***

Notes on ROW Width (include source documentation such as name of document, section and page #):

4. Cul-de-Sacs

What is the minimum radius allowed for cul-de-sacs?

_____ feet

*If your answer is **less than 35 feet**, give yourself **3 points***

*If your answer is **36 feet to 45 feet**, give yourself **1 point***

Can a landscaped island be created within the cul-de-sac?

YES/ NO

*If your answer is **YES**, give yourself **1 point***

Are alternative turnarounds such as “hammerheads” allowed on short streets in low density residential developments?

YES/ NO

*If your answer is **YES**, give yourself **1 point***

Notes on Cul-de-Sacs (include source documentation such as name of document, section and page #):

5. Vegetated Open Channels

Are curb and gutters required for most residential street sections?

YES/ NO

*If your answer is **NO**, give yourself 2 points*

Are there established design criteria for swales that can provide stormwater quality treatment (i.e., dry swales, biofilters, or grass swales)?

YES/ NO

*If your answer is **YES**, give yourself 2 points*

Notes on Vegetated Open Channel (include source documentation such as name of document, section and page #):

6. Parking Ratios

What is the minimum parking ratio for a professional office building (per 1000 ft² of gross floor area)?

_____ spaces

*If your answer is **less than 3.0 spaces**, give yourself 1 point*

What is the minimum required parking ratio for shopping centers (per 1,000 ft² gross floor area)?

_____ spaces

*If your answer is **4.5 spaces or less**, give yourself 1 point*

What is the minimum required parking ratio for single family homes (per home)?

_____ spaces

*If your answer is **less than or equal to 2.0 spaces**, give yourself 1 point*

Are your parking requirements set as maximum or median (rather than minimum) requirements?

YES/ NO

*If your answer is **YES**, give yourself 2 points*

Notes on Parking Ratios (include source documentation such as name of document, section and page #):

7. Parking Codes

Is the use of shared parking arrangements promoted?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Are model shared parking agreements provided?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Are parking ratios reduced if shared parking arrangements are in place?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

If mass transit is provided nearby, is the parking ratio reduced?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Notes on Parking Codes (include source documentation such as name of document, section and page #):

8. Parking Lots

What is the minimum stall width for a standard parking space?

_____ feet

*If your answer is **9 feet or less**, give yourself **1 point** 🏆*

What is the minimum stall length for a standard parking space?

_____ feet

*If your answer is **18 feet or less**, give yourself **1 point** 🏆*

Are at least 30% of the spaces at larger commercial parking lots required to have smaller dimensions for compact cars?

YES/ NO

*If your answer is **YES**, give yourself **1 point** 🏆*

Can pervious materials be used for spillover parking areas?

YES/ NO

*If your answer is **YES**, give yourself **2 points** 🏆*

Notes on Parking Lots (include source documentation such as name of document, section and page #):

9. Structured Parking

Are there any incentives to developers to provide parking within garages rather than surface parking lots?

YES/ NO

*If your answer is **YES**, give yourself **1 point** 🏆*

Notes on Structured Parking (include source documentation such as name of document, section and page #):

10. Parking Lot Runoff

Is a minimum percentage of a parking lot required to be landscaped?

YES/ NO


*If your answer is **YES**, give yourself **2 points** 🏆*

Is the use of bioretention islands and other stormwater practices within landscaped areas or setbacks allowed?

YES/ NO

*If your answer is **YES**, give yourself **2 points** 🏆*

Notes on Parking Lot Runoff (include source documentation such as name of document, section and page #):

 **Time to Assess:** Principles 1 - 10 focused on the codes, ordinances, and standards that determine the size, shape, and construction of parking lots, roadways, and driveways in the suburban landscape. There were a total of **40** points available for Principles 1 - 10. What was your total score?

Subtotal Page 5 ____ + Subtotal Page 6 ____ + Subtotal Page 7 ____ =

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

11. Open Space Design

Are open space or cluster development designs allowed in the community?

*If your answer is **YES**, give yourself **3** points*

*If your answer is **NO**, skip to question No. 12*

YES/ NO

Is land conservation or impervious cover reduction a major goal or objective of the open space design ordinance?

*If your answer is **YES**, give yourself **1** point*

YES/ NO

Are the submittal or review requirements for open space design greater than those for conventional development?

*If your answer is **NO**, give yourself **1** point*

YES/ NO

Is open space or cluster design a by-right form of development?

*If your answer is **YES**, give yourself **1** point*

YES/ NO

Are flexible site design criteria available for developers that utilize open space or cluster design options (e.g., setbacks, road widths, lot sizes)


*If your answer is **YES**, give yourself **2** points*

YES/ NO

Notes on Open Space Design (include source documentation such as name of document, section and page #):

12. Setbacks and Frontages

Are irregular lot shapes (e.g., pie-shaped, flag lots) allowed in the community?

*If your answer is **YES**, give yourself 1 point* 

YES/ NO

What is the minimum requirement for front setbacks for a one half (1/2) acre residential lot?

*If your answer is **20 feet or less**, give yourself 1 point* 

_____ feet

What is the minimum requirement for rear setbacks for a one half (1/2) acre residential lot?

*If your answer is **25 feet or less**, give yourself 1 point* 

_____ feet

What is the minimum requirement for side setbacks for a one half (1/2) acre residential lot?

*If your answer is **8 feet or less**, give yourself 1 points* 

_____ feet

What is the minimum frontage distance for a one half (1/2) acre residential lot?

*If your answer is **less than 80 feet**, give yourself 2 points* 

_____ feet

Notes on Setback and Frontages (include source documentation such as name of document, section and page #):

13. Sidewalks

What is the minimum sidewalk width allowed in the community?

*If your answer is **4 feet or less**, give yourself 2 points* 


_____ feet

Are sidewalks always required on both sides of residential streets?

*If your answer is **NO**, give yourself 2 points* 


YES/ NO

Are sidewalks generally sloped so they drain to the front yard rather than the street?

*If your answer is **YES**, give yourself 1 point* 

YES/ NO

Can alternate pedestrian networks be substituted for sidewalks (e.g., trails through common areas)?


*If your answer is **YES**, give yourself 1 point* 

YES/ NO

Notes on Sidewalks (include source documentation such as name of document, section and page #):

14. Driveways

What is the minimum driveway width specified in the community?

*If your answer is **9 feet or less (one lane) or 18 feet (two lanes)**, give yourself 2 points* 

_____ feet

Can pervious materials be used for single family home driveways (e.g., grass, gravel, porous pavers, etc)?

YES/ NO

*If your answer is **YES**, give yourself 2 points*

Can a “two track” design be used at single family driveways?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Are shared driveways permitted in residential developments?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Notes on Driveways (include source documentation such as name of document, section and page #):

15. Open Space Management

Skip to question 16 if open space, cluster, or conservation developments are not allowed in your community.

Does the community have enforceable requirements to establish associations that can effectively manage open space?

YES/ NO

*If your answer is **YES**, give yourself 2 points*

Are open space areas required to be consolidated into larger units?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Does a minimum percentage of open space have to be managed in a natural condition?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Are allowable and unallowable uses for open space in residential developments defined?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Can open space be managed by a third party using land trusts or conservation easements?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Notes on Open Space Management (include source documentation such as name of document, section and page #):

16. Rooftop Runoff

Can rooftop runoff be discharged to yard areas?

YES/ NO


*If your answer is **YES**, give yourself 2 points*

Do current grading or drainage requirements allow for temporary ponding of stormwater on front yards or rooftops?

YES/ NO

*If your answer is **YES**, give yourself 2 points*

Notes on Rooftop Runoff (include source documentation such as name of document, section and page #):

 **Time to Assess:** Principles 11 through 16 focused on the regulations which determine lot size, lot shape, housing density, and the overall design and appearance of our neighborhoods. There were a total of **36** points available for Principles 11 - 16. What was your total score?


Subtotal Page 8 ____ + Subtotal Page 9 ____ + Subtotal Page 10 ____ =

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

17. Buffer Systems

Is there a stream buffer ordinance in the community?

YES/ NO

If your answer is **YES**, give yourself **2 points** 


If so, what is the minimum buffer width?

_____ feet

If your answer is **75 feet or more**, give yourself **1 point** 

Is expansion of the buffer to include freshwater wetlands, steep slopes or the 100-year floodplain required?

YES/ NO

If your answer is **YES**, give yourself **1 point** 


Notes on Buffer Systems (include source documentation such as name of document, section and page #):

18. Buffer Maintenance

If you do not have stream buffer requirements in your community, skip to question No. 19

Does the stream buffer ordinance specify that at least part of the stream buffer be maintained with native vegetation?

YES/ NO

If your answer is **YES**, give yourself **2 points** 

Does the stream buffer ordinance outline allowable uses?

YES/ NO

If your answer is **YES**, give yourself **1 point**

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Does the ordinance specify enforcement and education mechanisms?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Notes on Buffer Systems (include source documentation such as name of document, section and page #):

19. Clearing and Grading

Is there any ordinance that requires or encourages the preservation of natural vegetation at residential development sites?

YES/ NO

*If your answer is **YES**, give yourself 2 points*

Do reserve septic field areas need to be cleared of trees at the time of development?

YES/ NO

*If your answer is **NO**, give yourself 1 point*

Notes on Buffer Maintenance (include source documentation such as name of document, section and page #):

20. Tree Conservation

If forests or specimen trees are present at residential development sites, does some of the stand have to be preserved?

YES/ NO

*If your answer is **YES**, give yourself 2 points*

Are the limits of disturbance shown on construction plans adequate for preventing clearing of natural vegetative cover during construction?

YES/ NO

*If your answer is **YES**, give yourself 1 point*

Notes on Tree Conservation (include source documentation such as name of document, section and page #):

21. Land Conservation Incentives

Are there any incentives to developers or landowners to conserve non-regulated land (open space design, density bonuses, stormwater credits or lower property tax rates)?

YES/ NO

*If your answer is **YES**, give yourself 2 points*

Is flexibility to meet regulatory or conservation restrictions (density compensation, buffer averaging, transferable development rights, off-site mitigation) offered to developers?

YES/ NO

*If your answer is **YES**, give yourself 2 points*

Notes on Land Cons. Incentives (include source documentation such as name of document, section and page #):

22. Stormwater Outfalls


Is stormwater required to be treated for quality before it is discharged?

YES/ NO

If your answer is **YES**, give yourself **2 points** 


Are there effective design criteria for stormwater best management practices (BMPs)?

YES/ NO

If your answer is **YES**, give yourself **1 point** 


Can stormwater be directly discharges into a jurisdictional wetland without pretreatment?

YES/ NO

If your answer is **NO**, give yourself **1 point** 

Does a floodplain management ordinance that restricts or prohibits development within the 100-year floodplain exist?


YES/ NO

If your answer is **YES**, give yourself **2 points** 

Notes on Stormwater Outfalls (include source documentation such as name of document, section and page #):

Code and Ordinance Worksheet

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 **Time to Assess:** Principles 17 through 22 addressed the codes and ordinances that promote (or impede) protection of existing natural areas and incorporation of open spaces into new development. There were a total of 24 points available for Principles 17 - 22. What was your total score?

Subtotal Page 11 ____ + Subtotal Page 12 ____ + Subtotal Page 13 ____ =

Where were your codes and ordinances most in line with the principles? What codes and ordinances are potential impediments to better development?

To determine final score, add up subtotal from each  **Time to Assess**

Principles 1 - 10 (Page 8)






Principles 11 - 16 (Page 11)

Principles 17 - 22 (Page 13)

TOTAL

SCORING (A total of 100 points are available):

Your Community's Score

90- 100		Congratulations! Your community is a real leader in protecting streams, lakes, and estuaries. Keep up the good work.
80 - 89		Your local development rules are pretty good, but could use some tweaking in some areas.
79 - 70		Significant opportunities exist to improve your development rules. Consider creating a site planning roundtable.
60 - 69		Development rules are inadequate to protect your local aquatic resources. A site planning roundtable would be very useful.
less than 60		Your development rules definitely are not environmentally friendly. Serious reform of the development rules is needed.