

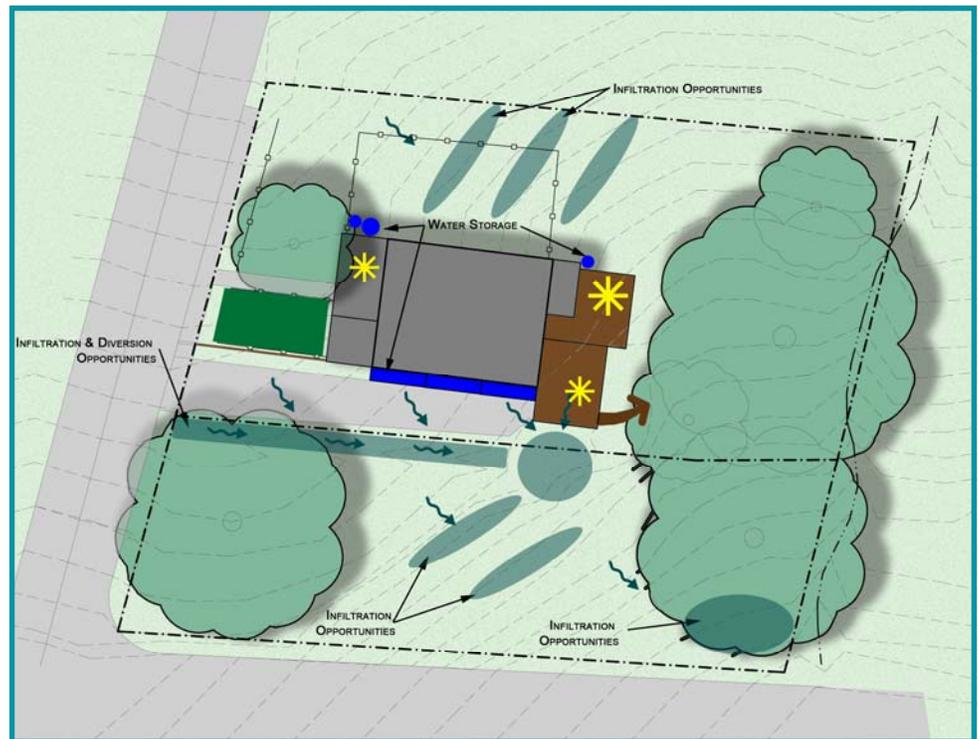


Site Inventory and Analysis

Site Inventory is taking stock of the existing conditions on your property. It includes social, environmental, and constructed features. It can identify problems such as erosion, drainage issues, and unsightly elements, or identify positive attributes such as specimen plants or a good view. Social elements identify how people use and move through the site, such as typical paths of travel or gathering spaces. Environmental elements include aspect, wind and sun patterns, plant communities, and noise issues. The constructed components include utility lines, buildings, sidewalks, driveways and decks or patios. It is also important to note the patterns of water movement during rain events, noting the severity of the storm to help identify opportunities to use what's working and mitigate what's not.

MATERIALS

- Scaled Map of Site
- Colored pens or pencils
- Slope Measuring tool
- Calculator
- Measuring tape
- Ruler
- Trace paper



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How to Perform a Site Inventory



STEP 1: Scaled Map

A. Scaled map of your property can be obtained in a few ways.

1. You may have received a plat or survey of the property in the closing of the property, either of these documents are the best option to use. Note: if you have only one copy, either scan it to an electronic file, or overlay trace paper to make comments and denote features.



Figure 1: Property Plat

2. You can obtain an aerial map of your property online at either the [Buncombe County](#) website: Figure 2: Aerial from GIS or the [City of Asheville](#) website.



STEP 2: Information Gathering

There are numerous resources to assist in evaluating your property. These systems are meant to be accessible to everyone but they can still be overwhelming because of the large amount of information they contain. If you have trouble using these resources, look for classes held by RiverLink, AB-Tech and University Extension that offer help with site evaluation techniques.

The City of Asheville—Geographical Information System (GIS)

[http://www.ashevilenc.gov/online_services/default.aspx?](http://www.ashevilenc.gov/online_services/default.aspx?id=1782&ekmense=22_submenu_0_link_3)

[id=1782&ekmense=22_submenu_0_link_3](http://www.ashevilenc.gov/online_services/default.aspx?id=1782&ekmense=22_submenu_0_link_3)

- **mapWNC-Steep Slope Tool:** Enter PIN, address or zoom to site and then Press RUN CALCULATION button and the website will generate the average slope across your site, and specify any restrictions or regulations which apply.
- **Standard GIS:** Enter the property PIN, address or zoom to site. On the left side of the screen, you can click on additional information such as, contours, FEMA flood mapping, streams, sewer lines etc.

Buncombe County—GIS

<http://www.buncombecounty.org/governing/depts/gis/Disclaimer.aspx>

- Click on I agree (to the disclaimer), it will take you to: <http://gis.buncombecounty.org/buncomap/>, where you can enter the property PIN, address or zoom to site
- On the left side of the screen, you can click on additional information such as, contours, FEMA flood mapping, streams, sewer lines etc.



Site Inventory



STEP 2: Information Gathering

Madison County—Geographical Information System (GIS)

www.madisoncountygis.com

- Click on Image to go to Online Mapping. Do a quick search by your address or PIN number to find your property
- On the left side of the screen, you can click on additional information such as, contours, FEMA flood mapping, streams, sewer lines etc.

Henderson County –GIS

<http://henderson.roktech.net/GoMapsAGS/#>

- At the top on the screen you can choose which layers to view

Transylvania County –GIS

<http://arcims.webgis.net/nc/transylvania/default.asp>

- Press the magnifying glass with the “?” to use the search by Address or PIN function.
- On the left side of the screen, you can click on additional information such as, contours, 2007 flood data, and water and sewer lines etc.

Haywood County– GIS

<http://maps.haywoodnc.net/gisweb/default.htm>

- Search by your address or property PIN.
- On the left side of the screen, you can click on additional information such as, contours, soils, streams, and sewer lines etc.

Soils Information

Any County of Municipality

<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>

- Click on GREEN Button that says “START WSS”
- Under Quick Navigation enter your address with city and state—click view
- Above the map there are 2 buttons that say “AOI” use either to define your area of interest (AOI) , or your property
- Click on Soil Map Tab to find out the soil types on your property , click on name of soil type and a description will appear in another window.
- Under the Soil Data Explorer Tab you can find out much information on your soils and appropriate uses. In the Soil Properties Tab within the Data Explorer you can view additional information, including Hydrological Soil Group for your soils, or depth to bedrock or other soil restrictive layer.
- Click view rating for information to appear on map

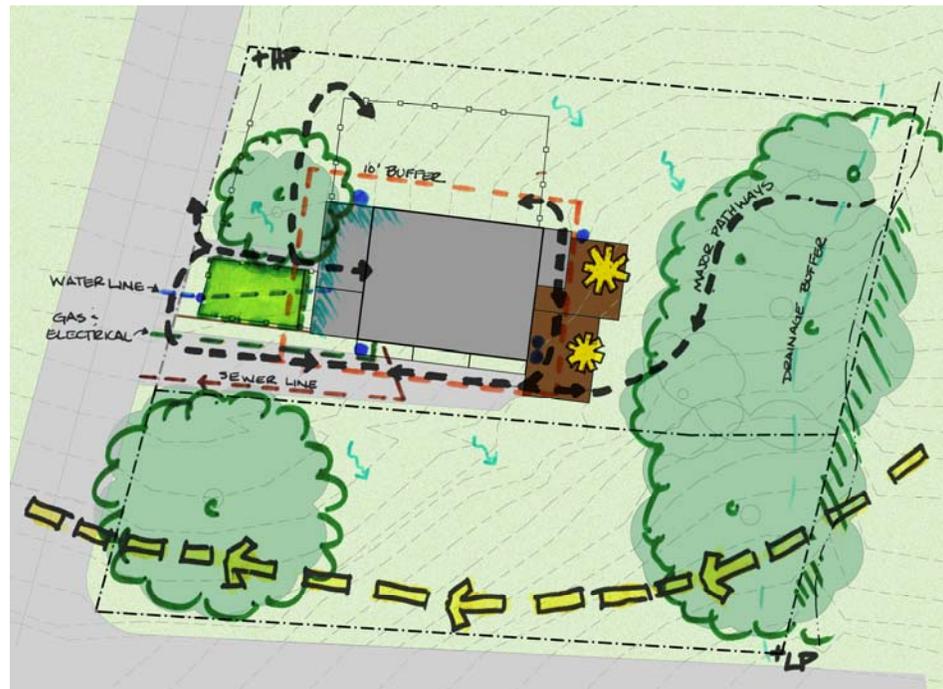


Figure 3: Example of Site Inventory

STEP 2: Recording Site Data

A. On the scaled map denote the following Social, built and environmental factors. Include elements you favor as well as the issues.

Elements to include

Social:

- How people and animals move through the site
- Proximity to other elements
- Privacy

Constructed:

- House and building (usually on plat but add any additions)
- Sheds
- Garages
- Animal shelters
- Decks and patios
- Sidewalks
- Driveways
- Play equipment, fire pits/rings, and social gathering places
- Fences

Have your utilities marked

- Water Line
- Electrical Line
- Cable

- Gas Line
- Sewer Line
- Wells
- Septic fields
- Propane or Oil tanks
- Rain Barrels or Cisterns

Environmental:

- Aspect/ Exposure of the site (which direction the slope faces)
- Soil type
- Sun/Shade locations
- Slope (note the steepness, (percent grade) and extent of grade changes, Note where grade changes) Note high spots and low spots
- Erosion (note location, square footage, severity, depth of ruts, extent of problem)
- Moisture/ Water Issues
- Roof, sidewalks, street, driveway
- Note high spots and low spots
- Ponding water
- Plants (existing, specimen, invasive, misplaced, declining or unhealthy)



Site Analysis



STEP 3: Analyzing your information

After all inventory has been taken it is important to process that information gathered, as well as think about future developments or uses. Beginning thinking about how you use the space and the elements that are important to you. Ask your self question about how you want to use the site. *See Questions to Consider.*

Return to your inventory map, with your design elements in mind. Begin examining the inventory and thinking about how all the elements could fit together.

Draw on the map areas for future or changing uses, design elements, issues, and opportunities.

Refer to Chapter 1: BMP Selection for assistance in selecting areas for Water features and infiltration opportunities.

QUESTIONS TO CONSIDER?

Are there special areas, or just areas you love to be in for one reason or another (ie, shade, privacy etc)?

Are you looking to expand your home, outdoor living space, or driveway in the future?

Are you looking to add specific elements to your outdoor area, such as a playground, fences, fires pits or water features?

Are any trees or vegetation going to be removed?

Where are the best places for infiltration?

Where do I have impervious surfaces and how do I route the runoff to infiltrate?

REASONS TO CONSTULT THE EXPERTS?

Did any portion of your property far in the floodplain?

Did any portion of your property regulated by the steep slopes ordinance? Or do your slopes exceed the recommended limits of the stormwater best management practice?

Are there any utility conflicts?

Are permits required? *See Regulations on next page*

Your desired stormwater best management practice is not covered in this manual, such as Bio-retention areas, pervious pavers etc.

Is your property located in the lower portions of the watershed? Does it receive large amounts or runoff through the site? Is there existing flooding issues?



Policy and Regulations



The Clean Water Act

The federal regulations associated with stormwater management are grounded in the Clean Water Act (CWA). The CWA is the primary basis for all water quality as it's original goal was to make all US waters swimmable and fishable. State stormwater programs, policies and regulations are founded as a means to meet the requirements and regulations of the CWA. The North Carolina Department of Environment and Natural Resources (NCDENR) is the primary state agency responsible for stormwater management and our water resources.

Although, US waters are not clearly defined, yet you can use the USGS blue line streams as a general basis to determine if a waterway could be a US waters. These are stream that appear on the USGS map. There is a movement to better define US waters proposed in 2008, this can be found here: <http://water.epa.gov/lawsregs/guidance/wetlands/CWAwaters.cfm>

Federal Regulations: The Army Corp of Engineers requires design review and permitting for any work that is conducted within the high waterline of a US waters. This would include installation of check dams, streambed modification, or channel relocation to name a few. This work also requires the assistance of an engineer.

State Regulations: The state regulates stormwater through 3 programs, the National Pollutant Discharge Elimination System (NPDES), Municipal and Industrial Stormwater permits. The NPDES program permits all point source pollution to reduce or eliminate pollutants in stormwater. The Municipal Stormwater permit is a federal mandate that requires municipalities with a population over 100,000 people to develop and manage stormwater discharge. This requires any land disturbing activity of on acre or more to submit a management plan to the local government for approval and monitoring.

Local Ordinances:

You can find the link to your local ordinance below:

City of Asheville:

Stormwater ordinance:

[http://www.ashevillenc.gov/uploadedFiles/Departments/Planning and Development/stormwater%20ordinance%20060810.pdf](http://www.ashevillenc.gov/uploadedFiles/Departments/Planning_and_Development/stormwater%20ordinance%20060810.pdf)

Grading Permits:

http://www.ashevillenc.gov/business/development_services/permits_apps/enviroeng_permits/default.aspx?id=1934

City of Hendersonville:

Stormwater Ordinance: <http://www.cityofhendersonville.org/index.aspx?page=415>

City of Asheville Residents:

The Unified Development Ordinance (UDO) requires residents to submit a GRADING PERMIT for disturbing an area greater than 1,000 sq. ft. Contact Nancy Hodges @ nancy@riverlink.org for more information or

http://www.ashevillenc.gov/business/development_services/permits_apps/enviroeng_permits/default.aspx?id=1934