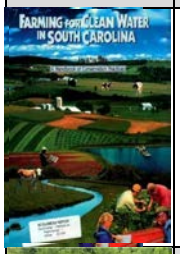
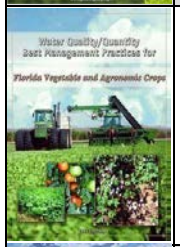
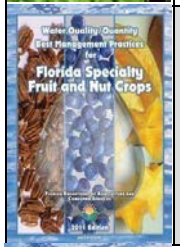
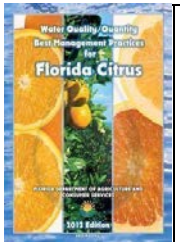
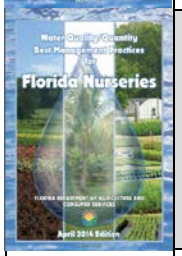
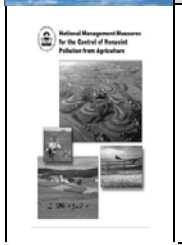
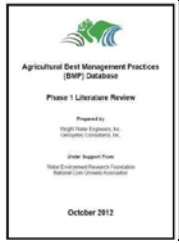
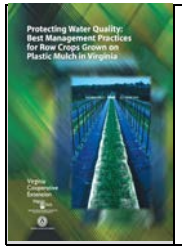
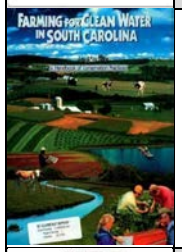
Govenors' South Atlantic Alliance
Coastal Water Quality Best Management Practices

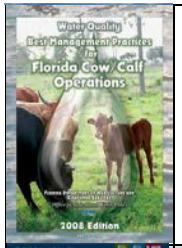
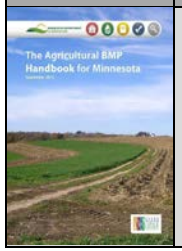
Agriculture Cropland				
Image	**State/National**	**Title**	**Weblink**	**Features**
Neuse River Basin-Nutrient Sensitive Waters Management Strategy: Agricultural Nitrogen Reduction Strategy	NC	Neuse River Basin-Nutrient Sensitive Waters Management Strategy: Agricultural Nitrogen Reduction Strategy	http://portal.ncdenr.org/c/document_library/get_file?p_l_id=38446&folderId=209713&name=DLFE-15352.pdf	• Targeted toward agricultural operations: production of crops, livestock, and poultry. • Specifies control strategies for reducing nitrogen loading to coastal estuary from agricultural activity to meet a state mandated nitrogen reduction goal. • Requires an annual report on BMP implementation for cropland, livestock, and poultry activities. For each of these agricultural operations, the annual report documents the BMPs implemented, their costs, estimated nitrogen net loading reduction as a result of BMPs, the effect of land use changes on nitrogen loading, the operation and maintenance of BMPs, and an accounting methodology to track nitrogen reduction loading.
	SC	Farming for Clean Water in South Carolina	info@dhec.sc.gov	•Targeted primarily towards the family farmer. •Provides basic, common sense practices and solutions to many aspects of farming. •Well photographed.
	GA	Best Management Practices for Georgia Agriculture: Conservation Practices to Protect Surface Water Quality	http://gaswcc.georgia.gov/best-management-practices-georgia-agriculture	• Comprehensive BMP guidance includes chapters covering management planning on general farm, animal waste, irrigation water, row crops, and wetlands and stream protection. • Contains a NPS pollution and control BMP flow chart for each BMP subject chapter that helps guide reader to practices that address specific pollutant issues. • Provides individual BMP profiles within each chapter covering water quality benefits, when to use, how to establish, costs and considerations and effectiveness of BMPs. • Includes BMP index, resourceful nonpoint source pollution and control chart which IDs all of BMPs covered in guidance document under four basic BMP components: sediment, fecal coliform, pesticide and nutrient control. • Contains pesticide handling, disposal and emergency information and federal BMPs for roads in wetlands.
	FL	Water Quality and Quantity Management Practices for Florida Vegetable and Agronomic Crops	http://www.freshfromflorida.com/content/download/32110/789059/Bmp_VeggieAgroCrops2005.pdf	•Provides relationship of BMPs to State and Federal Regulatory programs. •Contains dos and don'ts for pesticide management. •Topic related references in each section including some internet links. •Very comprehensive, 147 pages. •Includes techniques for irrigation water reuse. •Describes BMP incentive programs.
	FL	Water Quality and Quantity Management for Florida's Specialty Fruit and Nut Crops	http://freshfromflorida.s3.amazonaws.com/Bmp_FloridaSpecialtyFruitNut2011.pdf	•Describes the potential waterquality impacts from these specific ag practices. •Reccomends planting practices that minimize future erosion problems. •Reccomends wildlife management measures. •Detailed plant specific fertilization reccomendations. •Well referenced with web links and academic sources. •Detailed guidance on irrigation techniques. •Glossery of terms.

	FL	Water Quality and Quantity Management Practices for Florida Citrus	http://freshfromflorida.s3.amazonaws.com/Bmp_FloridaCitrus2012.pdf	•Specifically for Citrus. •Detailed plant specific fertilization reccomendations. •Well referenced with web links and academic sources. •Detailed guidance on irrigation techniques. •Section on drainage management. •Specific citrus nitrogen fertilizer guidance.
	FL	Water Quality and Quantity Management Measures for Florida Nurseries	http://www.floridaagwaterpolicy.com/PDF/Bmps/Bmp_FloridaContainerNurseries2007.pdf	•Part of a series of ag sector specific BMP manuals. •Published 2014. •Has QR code links to videos detailing some issues. •Describes BMPs for the variety of nursery production methods eg. In ground vs above ground container vs greenhouse
	National	National Management Measures to Control NPS from Agricultural Sources	http://water.epa.gov/polwaste/nps/agriculture/agmm_index.cfm	• EPA's main web resource for agriculture nonpoint source control. • Very detailed. • Narrative literature review for agricultural sources.
	National	Agricultural Best Management Practices: Phase 1 Literature Review	http://www.bmpdatabase.org/Docs/Phase1AgriculturalBMPDatabaseLiteratureReview.pdf	•Extensive literature review for the ultimate publication in the International Stormwater Database. •Emphasis on pollutant removal efficiencies. •Includes well organized citations in table format. Current as of Oct 2012.
	National	Production Practices for an Environmentally Friendly Nursery Industry	http://www.clemson.edu/extension/horticulture/nursery/images/sustainable_prod_prac.pdf	•Provides low impact crop production information for the commercial nursery industry. •Details technical basis for recommendations. •Concise, only 22 pages. •High quality photos of some practices. •Section by section bibliography.
	Other States			

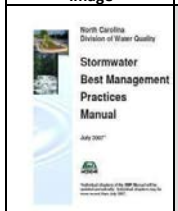
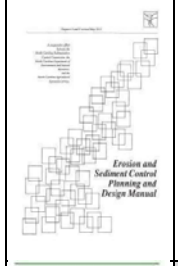
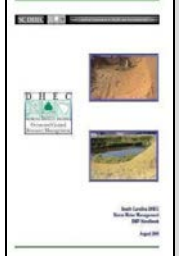
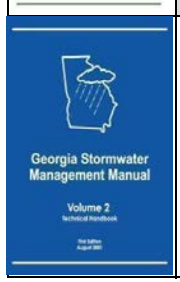
	VA	Protecting Water Quality: BMPs for Row Crops Grown in Plastic Mulch in Virginia	http://www.cbes.org/publications/Plasticulture%20Manual%20442-756.pdf	• Describes impacts of plastic mulch on runoff and pollutants associated with crop production. • Virginia's guide to BMPs for crop production on plastic mulch to protect water quality. • Provides guidelines on developing water quality protection plans for crop farms with plastic mulch. • Example water quality protection plans. • Provides qualitative information on effectiveness of BMPs in minimizing loss of NPS pollutant on crop farms with plastic mulch. • Contains information conservation incentive programs for landowners and crop producers. • Contains a list of websites for related information including but not limited to pest management, dedicated agricultural search, and Integrated Pest Management (IPM) Information.

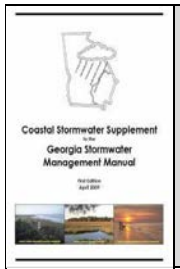
Agriculture Livestock

Image	State/National	Title	Weblink	Features
	NC	Animal Feeding Operations Branch: Animal Waste Management Permits	http://portal.ncdenr.org/web/wq/aps/afo/perm	• Provides links to State and NPDES permits for animal waste management permits for farms across North Carolina related to swine, cattle, and poultry. • Permits contain information on the structures and nonstructural practices is to be included in an animal waste management plan for a farm to collect, treat, store, and land apply animal waste. • Animal waste management plans include, but are not limited to, provisions for performance standards, operation and maintenance, monitoring and reporting, and inspecting.
	SC	Farming for Clean Water in South Carolina	info@dhec.sc.gov	•Targeted towards the family farmer. •Provides basic, common sense practices and solutions to many aspects of farming. •Well photographed.
	GA	Small Farm Nutrient Management Primer: For Unpermitted Animal Feeding Operations	http://coastalgadnr.org/sites/uploads/crd/	• Comprehensive small farm nutrient management primer to assist un-permitted animal feeding operations. • Includes the following chapter topics: environmental stewardship, water quality and nutrient balance; farm and homestead maps, manure storage and treatment; nutrient budgeting, land application of manure and fertilizers; grazing land; pesticide and chemical management for water quality; mortality management; record keeping; and emergency action plans and resources. • Includes information on common BMPs for land application of manure and BMP summary guide. • Provides examples of nutrient management plans, submission forms for manure application, field assessments for manure applications, manure storage facility checklists and sample field record forms.
	GA	Best Management Practices for Storing and Applying Poultry Litter	http://www.caes.uga.edu/applications/publications/files/pdf/B%201230_3.PDF	• Intended for poultry farmers and producers. • Provides basic, practical descriptions and guidance on primary nutrients of concern, BMPs for storing and applying poultry litter, nutrient management plans, calibrations, application rate chart and summary.
	FL	Water Quality /Quantity Best Management Practices for Florida Equine Operations	http://www.freshfromflorida.com/content/download/30687/760953/Equine_Updated.pdf	•Well organized, detailed information on runoff minimization from Equine operations. •Experts from many fields were involved in the publication including, acedemia, veterinary, water management , and ag industry. •Introduction includes rationale for how and why BMPs are needed to protect water quality in the context of equine operations. •Attractive layout.

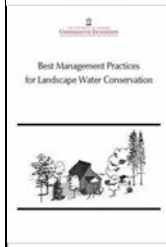
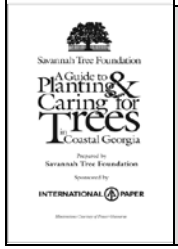
	FL	Water Quality Best Management Practices for Florida Cow/Calf Operations	http://freshfromflorida.s3.amazonaws.com/Bmp_FloridaCowCalf2008.pdf	•Summarizes basic livestock BMPs in 10 keys to pollution prevention then provides details of each. •Provides guidance on optimal heights for different grass types. •Details how to manage a variety of ranch wastes such as pesticides, fuels, and compostables. •Good basic instructions on prescribed grazing with references to more details. •Inlcudes sections on: Water resources management, fencing, heavy use areas, animal mortality, and well head protection.
	National	Lone Star Healthy Stream Program	http://lshs.tamu.edu/publications	•Series of detailed publications specializing in environmental aspects of range land and livestock managment. •Includes, dairy cattle, Beef, horse, poultry. Also includes wildlife management including feral hogs. •Good information on bacterial inputs and best managment practices. •Includes videos.
	National	EPA Animal Feeding Operations: BMPs	http://epa.gov/agriculture/anafobmp.html	• EPA webportal to Animal Feeding Operations (AFO) BMPs. • Includes a specific link to coastal measures as well as links to state manure and animal waste program websites.
	Other States			
	MN	The Agricultural BMP Handbook for Minnesota	http://www.mda.state.mn.us/protecting/cleanwaterfund/research/agbmphandbook.aspx	•Published by Minnesota Dept of Ag. •Individual and detailed Ag Practice descriptions. •Includes extensive pollutant removal efficiency information for most BMPs.

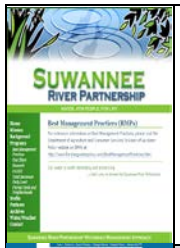
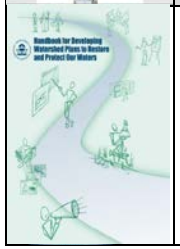
Construction

Image	State/National	Title	Weblink	Features
	NC	North Carolina Stormwater Best Management Practices Manual	http://portal.ncdenr.org/web/lr/bmp-manual	• North Carolina's official stormwater manual. • Primarily targeted towards designers, developers, contractors and local communities – may also be of some benefit to homeowners. • Contains design criteria, guidance, and O&M to meet North Carolina stormwater management requirements. • Contains figures, example calculations, operation and maintenance items, pollutant removal efficiencies for nutrients and sediments, etc., to aid professional decision making. • Includes low impact development practices and design criteria. • Includes guidance on practices, design criteria, and O&M for stormwater management on airports to minimize potential hazards from birds and other wild life. • Information contained in manual are based on research and guidance from professionals in academia, research organizations, and design practioners from across the state of North Carolina.
	NC	NC Erosion and Sediment Control Planning and Design Manual	http://portal.ncdenr.org/web/lr/publications#espubs	• North Carolina's official Erosion and Sediment Control Planning and Design Manual. • Provides detailed information for the planning, designing, construction and maintaining of erosion and sedimentation control practices including but not limited to runoff control and stream protection. • Provides sample erosion and sedimentation control plan. • Entire manual last revised in 2009 - the chapter on runoff control measures updated in 2013.
	SC	SC BMP Handbook	http://www.scdhec.gov/environment/water/swater/docs/BMP-handbook.pdf	• Referenced in South Carolina's DHEC construction permit guidance. • Includes post construction BMPs. •Detailed guidance on vegetative site stabilization. •Mathematical design formulas. •Photos of BMPs.
	GA	Georgia Stormwater Management Manual	http://atlantaregional.com/environment/georgia-stormwater-manual	• Official GA stormwater manual consists of comprehensive three volume set on stormwater management policy (Vol 1), technical design standards (Vol 2), and pollution prevention (Vol 3). • Stormwater Policy Guidebook provides guidance for local jurisdictions on the basic principles of effective urban stormwater management including regulatory requirements, local programs, implementing requirements for development, watershed-based and floodplain planning, stormwater operations and maintenance, pollution prevention, and information tools. • Technical Handbook provides guidance on techniques and measures that can be implemented to meet a set of stormwater management minimum standards for new development and redevelopment including sustainable site design and stormwater management BMPs (planning and design, hydrology, structural control, drainage system design, and numerous appendices). Vol. 2 is intended for site planners, engineers, contractors, local plan reviewers and inspectors on required on-site measures. • The Pollution Prevention Guidebook is a compendium of stormwater pollution prevention and control measures for use by local jurisdictions, business, industry, institutions and the public.

	GA	Coastal Stormwater Supplement to the Georgia Stormwater Management Manual	http://epd.georgia.gov/georgia-epd-coastal-stormwater-supplement-stormwater-management-manual	• Provides Georgia's 24 coastal counties with comprehensive guidance on an integrated, green infrastructure-based approach to natural resource protection, stormwater management, and site planning and design. • Provides guidance for watershed and site-scale natural resource protection and shifts post-construction stormwater management efforts to prevention of stormwater runoff from new and existing development. • Prevents and reduces post-construction stormwater runoff rates and volumes through the use of better site planning techniques, better site design techniques, and low impact development (LID) practices. • Advances protection of coastal GA's state-designated high priority terrestrial and aquatic habitats and animals from negative impacts of land development and nonpoint source pollution. • Primarily targeted to managers, professionals, developers, contractors and local communities in implementing coastal stormwater management programs for polluted runoff.
	GA	Manual for Sediment and Erosion Control in Georgia	http://gaswcc.georgia.gov/technical-guidance-0	• Covers state of Georgia construction site sediment and erosion control BMPs that are not covered in the Georgia Stormwater Management Manual. • 2014 revisions include the addition of new Best Management Practices (BMPs), as well as benchmark standards for most new and existing BMPs. • Includes the current plan review checklists with guidance documents. • The criteria, standards and specifications contained in Chapter 6 must be incorporated into all local erosion and sediment control programs. • The remaining chapters and sections contain guidelines and support materials to assist users in implementation of BMPs. Website maintains updates and additional resources and guidance.
	FL	Florida Sediment and Erosion Control: Designer and Reviewer Manual	http://www.dot.state.fl.us/rddesign/Drainage/files/Erosion-Sediment-Control.pdf	•Florida's sediment and erosion control manual. • Produced by both FL DOT and FLDEP. •Links to FL stormwater NPDES requirements. •Provides detailed guidance specific to FL's stormwater permitting. •Has narrative rational for the reasons for installing each BMP. •Detailed BMP design schematics as well as photos. •There is a special appendix for Coastal considerations.
	National	How to Conserve Natural Resources on Construction Sites	www.gfc.state.ga.us/resources/publications/HowtoConserveNaturalResourcesonConstructionSites.pdf	• Well organized and practical guidance manual emphasizing preservation and restoration of onsite natural vegetation on construction sites. • Intended for home builders. • BMPs include erosion control, protective vegetation, stone check dams, drainage, construction debris, energy conservation, conserving trees, restoring vegetation (using native plants), planting trees, and planning and scheduling. • Provides helpful resources such as well-designed diagrams, state laws, and appendices including seeding rates for temporary and permanent cover, recommended overstory and understory trees, native plants for revegetation, mulching for erosion control, and references.
	National	EPA Menu of BMPs: Construction Site Stormwater Runoff Controls	http://water.epa.gov/polwaste/npdes/swbmp/Construction-Site-Stormwater-Run-Off-Control.cfm	•BMPs organized by the 6 minimum measures required for MS4 permits. •Has links to construction BMP fact sheets. • Details success stories from around the nation.

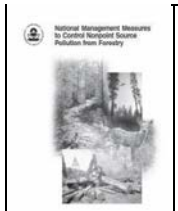
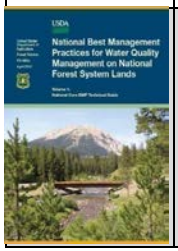
Educational

Image	State/National	Title	Weblink	Features
	NC	An Assessment of Outer Banks Coastal Environmental Conditions, Existing Stormwater Management Strategies, and the Local and State Regulatory Context to Help Communities Effectively Implement Low Impact Development-Outer Banks NC	http://csi.northcarolina.edu/content/Final_Report_-_LID_Implementation_on_OBX.pdf	• Primarily targeted toward persons engaged in real estate development such as administrators, designers, builders, and certifiers. • Contains a feasibility assessment concerning Low Impact Development (LID) Methods & stormwater management for real estate development in the Outer Banks of North Carolina. Information on the impediments to LID is contained in this assessment. • Contains non-technical descriptions and photos of recommended LID stormwater management measures, draft model ordinance for post construction stormwater management, and references to white papers and handbooks, analysis and design models on LID relevant topics.
	SC	Community Associations and Stormwater Management: A SC Coastal Perspective	http://www.clemson.edu/cafls/safes/faculty_staff/research/hitchcock/9_community_associations_and_stormwater_management_v_1%200.pdf	•Targeted mainly toward homeowners and HOAs. •Provides information on BMPs at the site and development level. •Includes BMPs that the owner can implement on their own such as backyard buffers.
	GA	GA Riparian Buffer Guidance Manual	http://www.rivercenter.uga.edu/research/coastal/documents/coastal_guidance_manual_2007_03_21.pdf	• Serves as companion to Model Coastal Buffer Ordinance developed for coastal communities. • Establishes BMPs for building in and around riparian buffers and discussion on BMPs in adjacent upland areas. • Provides information to landowners about how to best preserve or enhance the ecological functions of the buffer and solutions for minimizing impacts of common encroachments into riparian buffers. • Photos, schematics, diagrams, tables, references, resources, and native and non-native invasive plant species list appendices provide additional visual and technical resources.
	GA	BMPs for Landscape Water Conservation	http://www.commodities.caes.uga.edu/turfgrass/georgiaturf/Water/Articles/B1329.pdf	• Provides comprehensive BMP guidance to conserve water in landscape design, installation and maintenance, irrigation systems, and turfgrass; • Intended primarily for homeowners, but can also assist municipalities, irrigation professionals, landscape architects, and landscape professionals. • Contains photos and charts regarding drought tolerant species, irrigation schedules by grass, regional considerations and appropriate fertilization rates. • Includes new and emerging irrigation practices for turf grass including environmental guided irrigation.
	GA	A Guide to Planting and Caring for Trees in Coastal Georgia: Savannah Tree Foundation	http://www.savannahtree.com/learn/how-to-plant-care-for-trees/	• Practical guide intended for homeowners, public, landscape professionals, and county and municipal grounds personnel. • Provides basic and sound BMP guidance on tree planting, maintenance, preservation of trees during construction and other pertinent BMPs to conserve and protect trees in coastal Georgia. • Also provides diagrams, charts and guidance on choosing the right tree for the right location, energy efficiency and conservation tree placement, basic spacing guides, and other.

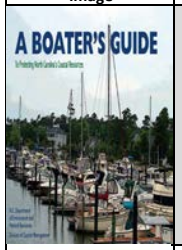
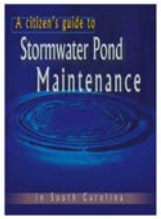
	FL	Suwannee River Partnership	http://www.suwannee.org/bmps.html	•Website of a River basin partnership. •Describes cost share programs available for basin residents. •Has links to local surface and groundwater data. •Discusses ongoing BMP effictiveness research in the watershed.
	FL	Stormwater Management Academy	http://www.stormwater.ucf.edu/	• Extensive source of information related to stormwater management. • Provides links to research publications, presentations, and information on a myriad subjects related to stormwater management: greenroof, pervious pavements, pollution control using Biosorption Activated Media, soil erosion and sedimentation control, financing stormwater management and other topics.
	National	Handbook for Developing Watershed Plans to Protect and Restore Our Waters	http://water.epa.gov/polwaste/nps/upload/2008_04_18_NPS_watershed_handbook_handbook-2.pdf	•Provides detailed step by step guidance to develop a watershed based plan for stormwater pollution abatement. •Aid for 319 grant proposals.

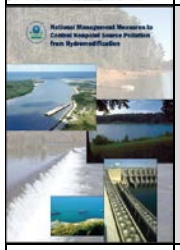
Forestry

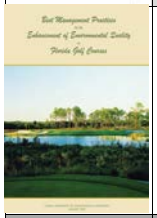
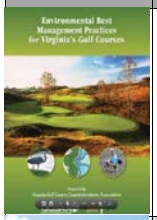
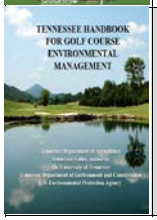
Image	State/National	Title	Weblink	Features
	NC	North Carolina Foresty Best Management Practices Manual to Protect Water Quality	http://ncforestservice.gov/publications/WQ0107/BMP_manual.pdf	• Provides a comprehensive collection of BMP recommendations for forestry activities (timber harvesting, site prep/tree planting, herbicide and fertilizer application, prescribed burnings, and burning) to acheive water quality goals (control & capture runoff, keep soil in place [reduce erosion], filter excess nutrients, and protect water quality conditions). • Contains specifications and references related to forestry BMPs.
	SC	SC BMPs for Forestry	http://www.state.sc.us/forest/bmpmanual.pdf	•Contains information on ways to minimize impacts from all aspects of forestry in SC. • Emphasizes reduced impacts to headwater streams. •Well organized with simple but effective visuals. •Includes identification of especially sensitive waters such as trout streams.
	GA	Georgia BMP for Forestry Manual	http://www.gfc.state.ga.us/resources/publications/BMPManualGA0609.pdf	• Targeted for landowners, foresters, timber buyers, loggers, site preparation and reforestation contractors, and others involved with silvicultural operations. • Provides comprehensive collection of BMP recommendations for forestry activities including planning for water quality, streamside management zones and special management areas; road location, construction, stream crossings maintenance, and retirement; timber harvesting; site prep and reforestation; management and protection; and additional management objectives. • Emphasizes protection of state's water resources through BMPs in controlling or minimizing soil erosion and stream sedimentation. • Provides extensive diagrams, photos and design and installation schematics. • Some chapters include BMP summaries, BMP decision trees, recommended measurements and spacing, and other resources.
	GA	Best Management Practices for Community Trees	http://athensclarkecounty.com/DocumentCenter/Home/View/280	• A technical guide intended for professional arborists, urban and community foresters, landscape architects, communities, homeowners, and tree care and landscape professionals involved with community tree management programs. • Comprehensive BMP guidance with diagrams, tables, figures and schematics on selection, placement, conservation, protection, maintenance, establishment, removal and replacement of trees. • Contains BMP chapters for tree selection and placement, tree care, and tree species selection. For each of these basic topics, site situations, tree care activities, benefits, and common mistakes are addressed and publications are provided. • Can be used as a project planning and implementation tool, a community education tool, and standards for community tree care.
	FL	Agricultural BMPs: Florida Dept of Ag	http://www.freshfromflorida.com/Divisions-Offices/Florida-Forest-Service/Our-Forests/Best-Management-Practices-BMP/Silviculture-BMP-Courtesy-Checks	•Excellent graphics describing best forestry practices. •Geared to the forestry professional. •Includes an appendix with technical measurement procedures. •Provides a list of places and the water quality standards that apply, including outstanding resource waters.

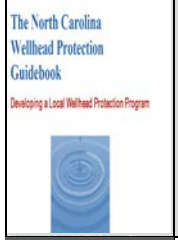
	National	National Management Measures to Control Nonpoint Source Pollution from Forestry	http://water.epa.gov/polwaste/nps/forestry/upload/2005_05_09_NPS_forestrymgmt_guidance.pdf	• Provides technical assistance to states, territories, authorized tribes; commercial and nonindustrial private forest owners and managers, and the public regarding the management measures reduce nonpoint source pollution from forestry activities. • Discusses management measures for forestry based the EPA's 1993 Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters.
	National	National Best Management Practices for Water Quality Management on National Forest System Lands	http://www.fs.fed.us/biology/resources/pubs/watershed/FS_National_Core_BMPs_April2012.pdf	•Federal guidlines for forestry on federal lands. •Special emphasis on logging road BMPs. •Also includes BMPs for mining and rangland.

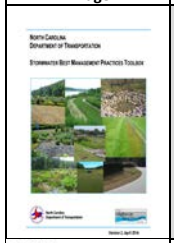
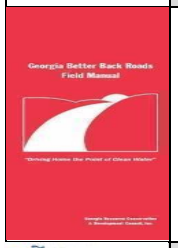
General

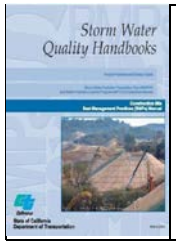
Image	State/National	Title	Weblink	Features
	NC	A Boaters Guide for Protection North Carolinas Coastal Resources	http://portal.ncdenr.org/c/document_library/get_file?uuid=1fcce0b0-739d-4d25-8cc2-e883c4ffb66a&groupId=38319	• Features tips for recreational boaters on how to handle their trash, cleaners, sewage, and petroleum and oil, and operate their boats in a way to protect coastal waters. Also, contains information on aquatic invasive species prevention.
	SC	A Citizen's guide to Stormwater Pond Maintenance	http://www.scdhec.gov/HomeAndEnvironment/Docs/ponds.pdf	•A stormwater pond maintenance guide for coastal homeowners. • Gives reccomendations for nutrient control, buffers, and aquatic plant management.
	GA	Manual for On-site Sewage Management Systems	http://dph.georgia.gov/sites/dph.georgia.gov/files/EnvHealth/Sewage/Manual/CompleteOnsiteManual.pdf	• Provides a comprehensive technical BMP reference to enhance public health protection regarding on-site sewage management systems. • Provides guidance on the following subjects: Department of Human Resources Public Health rules, general soil provisions, role and use of soils, technical design standards, site modifications, septage removal and disposal procedures, sewage flow schedules, field inspections, operation and maintenance, lot sizing, certification procedures, permits, and references. • Serves as an excellent source of information for professionals and individuals interested in the on-site sewage management program including health professionals, engineers, scientists, environmentalists, septic system installers and septic tank pumpers, soil consultants, home builders and land developers, and the public. • Each detailed section consists of numerous figures, diagrams, worksheets, checklists, tables and other resources and an extensive appendix with various resources and documents.
	GA	Hydromodification Best Management Practices for Coastal Georgia	http://marex.uga.edu/uploads/documents/Hydromod_Manual_Sept_2009.pdf	• Contains comprehensive BMP guidance and hydromodification challenges on three coastal water body types: shorelines and streambank stabilization, canals and ditches, and ponds, dams and impoundments. • BMPs address the following components: vegetative practices, engineered practices, integrated practices, riparian/vegetated buffer considerations, and maintenance. • Provides specifications for each recommended BMP, BMP summaries and recommended vegetation tables, photos, and regulatory program recommendations that summarize permitting considerations. • Serves as an addendum to the USEPA's National Management Measures to Control Nonpoint Source Pollution from Hydromodification guidance document and was coordinated in development with the Georgia Stormwater Management Manual (GSMM) and the Coastal Stormwater Supplement to the GSMM (CSS).
	FL	Florida Nonpoint Source: Best Management Practices, Public Information and Environmental Education Resources	http://www.dep.state.fl.us/water/nonpoint/pubs.htm	• Provides in electronic form publications on BMPs for urban and golf pollution prevention, agricultural, and silviculture. • BMPs address the following subjects residential landscapes, golf course maintenance, small-scale horse operations, application of livestock waste, agrichemical handling and farm equipment maintenance, blended fertilizer industry, hazardous waste management for agricultural pesticides.

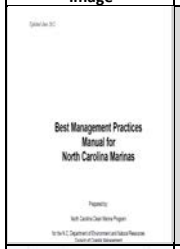
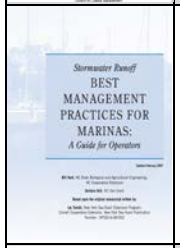
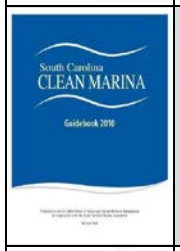
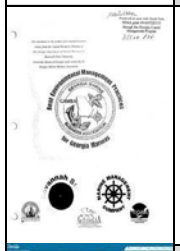
	National	International Stormwater Database	http://www.bmpdatabase.org/	•Authoritative source for BMP pollutant removal assessment. •Comprehensive for urban BMPs. Agricultural will be added. •Tools provided to enhance database searches
	National	USEPA National Management Measures to Control Nonpoint Source Pollution from Hydromodification	http://water.epa.gov/polwaste/nps/upload/Hydromod_all_web.pdf	• Developed to provide extensive guidance, techniques and tools for better, less intrusive BMP methods of implementing and maintaining hydromodification projects and activities while reducing associated nonpoint source pollution. • Covers technical information on types of NPS pollution, watershed-level assessment and application, and BMP practices on channelization and channel modification, dams, and streambank and shoreline erosion. • Discusses available models and assessment approaches and additional dam removal information (including permitting requirements, process, and techniques for dam removal).
	National	USEPA National Management Measures to Protect and Restore Wetlands and Riparian Areas for the Abatement of Nonpoint Source Pollution	http://water.epa.gov/polwaste/nps/wetmeasures/	• Gives guidance and techniques to protect and/or restore wetlands and riparian areas to help better protect water quality. • Provides for links to EPA wetlands and state wetland managers.
	Other States			
	VA	Chesapeake Bay Program: Watershed Implementation Plan Tools	http://www.chesapeakebay.net/about/programs/watershed_implementation_plan_tools/	•Emphasis is on regional watershed management. •Emphasis on nutrient control in the Chesapeake Watershed. •Includes modeling tools, and detailed BMP efficiency evaluations.
	CA	California Coastal Commission's Resources for Local Governemnts Home	http://www.coastal.ca.gov/la/water_quality.html	• California Coastal Commission's hot topics webpage related to water quality. It contains links to publications, policies and ordinances, and resources that focus on local coastal nonpoint source programs in California. The links provide information on a model urban runoff program California municipalities with populations under 10,000; California's nonpoint source program strategy and implementation plan; a review of the implementation of a local coastal program; and BMPs and other water quality resources.

Golf Course				
Image	**State/National**	**Title**	**Weblink**	**Features**
	NC	Stormwater Wetands for Golf Courses	http://www.bae.ncsu.edu/extension/ext-publications/water/protecting/ag-765-stormwater-golf-course.pdf	• A North Carolina Cooperative Extension Service publication targeted toward golf course designers and superintendents involved in golf course wetlands projects. • Discusses wetland planning, hydrologic considerations, and design recommendations for constructing stormwater wetlands. • Describes a stormwater wetlands demonstration project on a golf course near the Albemarle Sound in North Carolina to show the effect of these wetlands nutrient loading and stormwater runoff volumes. • Provides frequently asked questions, references, companion fact sheets, and related websites.
	NC	Water Quality and Golf Course for Superintendents	http://www.turffiles.ncsu.edu/PDFFiles/000803/wqwm154.pdf	• A North Carolina Cooperative Extension Service publication that describes some of the BMPs applicable for the creation, protection, and maintenance of a golf course to preserve and protect water resources. • Targeted toward golf course superintendents, golf course builders, greens committee members and others concerned with golf courses.
	GA	Best Management Practices and Water-Use Efficiency/Conservation Plan for Golf Courses: Template and Guidelines	www.commodities.caes.uga.edu/turfgrass/georgiaturf/Water/Articles/BMPs_Water_Cons_09.pdf	• Provides a detailed template for golf course superintendents and club officials to develop a site-specific BMP plan for water-use efficiency and water conservation for their golf course facility. • Provides a step-by-step process with concepts and background information to review current water management practices and identify opportunities for improvement in water-use efficiency/conservation for the club facility, including course, general grounds, clubhouse, maintenance facility, etc. • Includes BMP guidance on setting the goal, planning process, water conservation approach, site assessment/information collection for informed decision-making and BMPs for water-efficiency and conservation. • Provides cost and benefit review and statement and numerous appendices covering outline of planning process and components, state or water district BMPs, drought characteristics of turfgrass, and benefits of turfgrass and turfgrass sites.
	FL	Best Management Practices for the Enhancement of Environmental Quality on Florida's Golf Courses	http://www.dep.state.fl.us/water/nonpoint/docs/nonpoint/glfbmp07.pdf	•Very comprehensive, 136 pages •Chapter 1: Environmental Concepts •Chapter 2: Environmental Monitoring •Chapter 3: Design and Construction •Chapter 4: Irrigation •Chapter 5: Nutrition and Fertilization •Chapter 6: Cultural Practices for Golf Turf •Chapter 7: Lake and Aquatic Plant Management •Chapter 8: Turfgrass Pest Management •Chapter 9: Pesticide Management •Chapter 10: Maintenance Operations
	Other States			
	VA	Environmental Best Management Practices for Virginia's Golf Courses	http://www.vgcsa.org/sites/images/373/VirginiaBMP.pdf	•Attractive well organized layout. •Detailed guidance on irrigation rates with evapotranspiration factors. •Provides guidance for monitoring course waterbodies. •Adoption may be enhanced due to publication by the trade organization. •Very detailed info on fertilizer attributes as well as application rates. •Cites regulations where required advises BMPs even if not required by regulations.
	TN	Tennessee Handbook for Golf Course Environmental Management	http://tennesseeturf.utk.edu/pdffiles/golfcourseenvironmgmt.pdf	• Provides multi-disciplinary information, data, and references for golf course fertility and pesticide operations in Tennessee. • Contains chapters on environmental management issues for golf course management, recommended management practices for topics such as hazardous and operational waste, materials, stormwater, turfgrass, wildlife habitat and water quality buffers.

Groundwater Protection				
Image	**State/National**	**Title**	**Weblink**	**Features**
	NC	The North Carolina Wellhead Protection Guidebook	http://www.ncwater.org/files/swap/guidance/FullText.pdf	• Targeted toward North Carolina communities who wish to prevent contamination of their public water supply well. • Lays out the steps and resources to develop a well head management (WHM) plan. • Includes a sample WHM plan.
	FL	Protecting Florida's Springs: Landuse Planning Strategies and Best Management Practices	http://www.dep.state.fl.us/springs/reports/files/springsmanual_2002.pdf	• Includes the following chapter topics: introduction to springs; comprehensive planning strategies for spring protection; development design and management strategies, golf course siting, design and management; and agriculture and silviculture BMPs. • Each chapter contains additional information resources. • Very good graphics and a bibliography for each chapter.
	FL	Springs Implementation Guidebook	http://www.dep.state.fl.us/springs/reports/files/springsimplementguide.pdf	• A companion to *Protecting Florida's Springs: Land Use Planning Strategies and Best Management Practices* . • Provides information to Florida local governments in amending their local comprehensive plans and implementing those amendments with land development regulations to protect Florida's springs. • Contains an extensive bibliography on more detailed information about springs and specific issues related to springs.

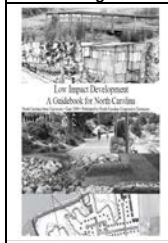
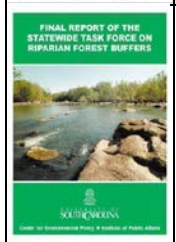
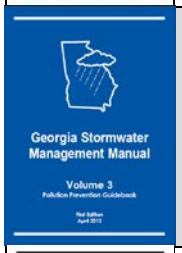
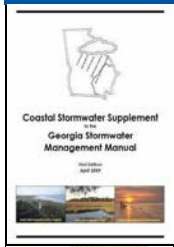
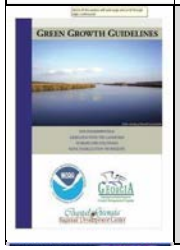
Highway				
Image	**State/National**	**Title**	**Weblink**	**Features**
	NC	North Carolina Department of Transportation Stormwater Best Management Practices Toolbox	for an electronic copy contact NCDOT at (919)707-6700	• Toolbox is primarily targeted to highway design engineers and regional planners throughout NC's Department of Transportation. User should have a foundation in hydrologic and hydraulic principles and highway drainage design. • Provides stormwater controls and design guidance for highway and transportation facility applications. • Post-construction SCs and further evaluation of pollutant removal potential will be addressed in future versions of this toolbox. • Includes figures and color photos of SCs, references for state, federal, and academia resources related to stormwater management for transportation facilities.
	SC	Evaluation of Four Structural BMPs for Highway Runoff in Beaufort and Colleton Counties	http://pubs.usgs.gov/sir/2008/5150/pdf/sir20085150.pdf	•USGS technical study evaluating the pollutant removal effectiveness of four BMPs in coastal SC. •Measured flow weighted inflow and outflow of stormwater over a 20 month period.
No photo avaliable	GA	GDOT Office of Design Policy and Support Post-Construction BMPs	https://www.dot.ga.gov/doingbusiness/PoliciesManuals/roads/NPDES/GDOT%20Guidelines%20for%20Design%20of%20Post-Construction%20BMPs.pdf	• All new highway infrastructure projects located in the MS4 Permitted Areas must meet the requirements of the GADNR EPD General NPDES Stormwater Permit No. GAR041000 which regulates new and existing point source discharges of stormwater from roadways and facilities owned and/or operated by GDOT to water of the State of GA. • The BMP guidelines are meant to be used by design engineers to identify GADOT project conditions where post-construction BMPs are required, and to provide design criteria appropriate for design of these structures. • The Standard Design criteria which must be satisfied at each point discharge location includes stormwater runoff quality and reduction, stream channel protection, overbank protection, and extreme flood protection. • The GDOT MS4 Guidelines identifies the Georgia Stormwater Management Manual and the Coastal Stormwater Supplement as primary design references. • The GADOT guidelines are provided to clarify, and in some cases, supplement Georgia Bluebook guidance for application to the highway environment
	GA	Georgia Better Backroads Field Manual	https://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Better_Back_Roads_Field_Manual_May_2009.pdf	• Provides general information on BMPs to minimize sedimentation from roads and ditch banks, but is not intended to be a design manual for construction or material specifications. • Addresses specific individual BMPs regarding road surface conditions and maintenance operations, road drainage issues, slope stabilization and erosion control, and road materials and additives. • BMPs include description, photo(s), bulleted general comments and bulleted better practices as well as some additional photos, sketches, diagrams, figures and tables that provide criteria, guidance, and illustrations. • Brief and concise overview to assist in tackling the second ranked cause of sediment loading in the state.
	FL	Florida Department of Transportation-Construction	http://www.dot.state.fl.us/construction/Engineers/Environment/Environment.shtm	• This website contains links on the following environmental topics: Stormwater Pollution Prevention for Construction Activities (link is broken); and State of Florida Erosion & Sediment Control Designer & Reviewer Manual. This manual contains links to FL Stormwater NPDES Requirements, guidance on FL's stormwater permitting, narrative rational for the reasons for installing BMPs, and detailed BMP design schematics as well as photos. It has a special appendix for coastal considerations.
	Other States			

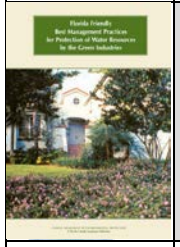
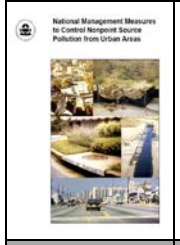
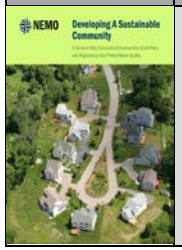
	CA	Caltrans: Stormwater Quality Handbooks	http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf	•Highly detailed and comprehensive information on Highway BMPs. •Site stabilization standards are covered in detail. •Provides guidance for development of transportation SWPPPs.

Marina				
Image	**State/National**	**Title**	**Weblink**	**Features**
	NC	Best Management Practices for North Carolina Marinas	http://portal.ncdenr.org/c/document_library/get_file?uuid=2e95543d-5153-4195-a333-1f585ae3c9cc&groupId=38319	• This NC Department of Environment and Natural Resources publication follows the national BMP manual with additions to include specific NC permitting requirements. • Targeted toward marine operators and boaters. • Includes section on stormwater.
	NC	Stormwater Best Management Practices for Marinas: An Operators Guide	http://portal.ncdenr.org/c/document_library/get_file?uuid=5ce3f6a1-0ff1-4aad-ad23-0a93f7408122&groupId=38319	• Designed as a guide to provide available source control and stormwater treatment BMPs for specific sites. Costs associated with identified BMPs and innovative paint removal techniques are also discussed. • Well organized layout. • Uses photos to demonstrate issues and practices. Includes basic stormwater bmps in marina applications.
	SC	SC Clean Marina Guidebook 2010	http://www.scdhec.gov/administration/library/CR-006968.pdf	•Includes boatyards as well as marinas. •Gives instruction on where to report spills. •References regulatory codes. •Comprehensive list of potential pollution sources associated with marinas including fish waste and pet waste. • Includes section on commissioning and decommissioning engines as well as impacts from upland engines.
	GA	Best Environmental Management Practices for Georgia Marinas	http://infohouse.p2ric.org/ref/36/35524.pdf	• Provides information and example BMP programs necessary for marina managers to understand, implement and oversee BMPs pertinent to activities at their facility. The BMP programs discussed in this manual address fuel and oil spill response operations, fuel dock, solid waste, hazardous and non-hazardous waste, pumpout station operation, and emergency preparedness and response. • Contains information regarding pollutants generated by marinas, their characteristics, fates, and environmental consequences.
	FL	Clean Marina Action Plan Guidebook: FL	http://www.dep.state.fl.us/cleanmarina/resources.htm	• Addresses boatyards as well as marinas. • Many photos used for illustrative purposes, but not very high resolution. • Good graphic of the environmental effects of leaking sewage. • Very detailed description of environmental concerns with a practical solution for most.

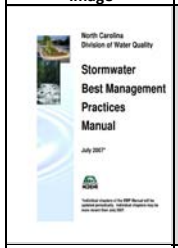
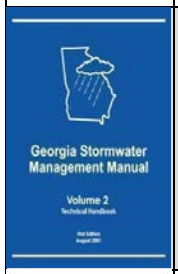
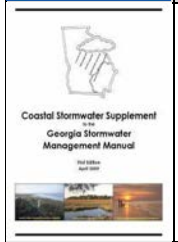
	National	National Management Measures Guidance to Control Nonpoint Source Pollution from Marinas and Recreational Boating	http://water.epa.gov/polwaste/nps/marinas/mmsp_index.cfm	• EPA's management measures guidance to reduce nonpoint source pollution of surface waters from marinas and recreational boating with descriptions of known BMPs to achieve them. • Covers diverse nonpoint source pollutants from marina and recreational boating. • Primarily targeted toward state program managers and marina managers. • Provides links to additional relevant information.
	National	Best Management Practices for Marinas November 2012	http://www.epa.gov/region2/p2/documents/best_management_practices_marina_facilities.pdf	• Highlights EPA -accepted practices for improving the performance of marinas in reducing water pollution. • Targeted toward marina facility owners and managers. • Provides BMPs for a variety of issues related to a marina facility including fuel management, facility cleaning and maintenance, boat maintenance, recycling and waste management, landscaping, and clean boating. Stormwater Non-Structural Practices and Stormwater Structural Best Management Practices are also discussed in this document. • Reference section contains sources of information from EPA Region 2 States –New York, New Jersey, Puerto Rico, and U.S. Virgin Islands on techniques, resources, and equipment to reduce pollution at marina facilities.

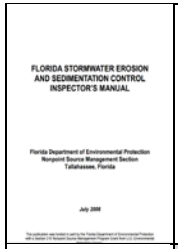
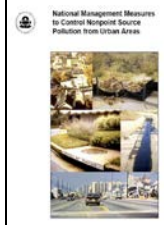
Urban Preventative

Image	State/National	Title	Weblink	Features
	NC	Low Impact Development: A Guidebook for North Carolina-2009	http://www.ces.ncsu.edu/depts/agecon/WECO/lid/documents/NC_LID_Guidebook.pdf	• Very comprehensive guidance on approaches to land development and stormwater management. • Targeted toward local government officials. • Provides case studies on low impact development (LID) sites on the North Carolina coast. • Complements NC's Stormwater Best Management Practices Manual.
	SC	SC Riparian Buffers Task Force Final Report	info@dhec.sc.gov	•Detailed specifications and reccomendations for various buffer types. •Product of multi-agency-multi stakeholder concensus building project.
	GA	Volume 3: Pollution Prevention Handbook of the Georgia Stormwater Management Manual	http://atlantaregional.com/environment/georgia-stormwater-manual	• Official portion of GA stormwater manual which consists of comprehensive three volume set on stormwater management policy (Vol 1), technical design standards (Vol 2), and pollution prevention (Vol 3). • The Pollution Prevention Guidebook is a compendium of stormwater pollution prevention and control measures for use by local jurisdictions, business, industry, institutions and the public.
	GA	Coastal Stormwater Supplement to the Georgia Stormwater Management Manual	http://epd.georgia.gov/georgia-epd-coastal-stormwater-supplement-stormwater-management-manual	• Provides Georgia's 24 coastal counties with comprehensive guidance on an integrated, green infrastructure-based approach to natural resource protection, stormwater management, and site planning and design. • Provides guidance for watershed and site-scale natural resource protection and shifts post-construction stormwater management efforts to prevention of stormwater runoff from new and existing development. • Prevents and reduces post-construction stormwater runoff rates and volumes through the use of better site planning techniques, better site design techniques, and low impact development (LID) practices. • Advances protection of coastal GA's state-designated high priority terrestrial and aquatic habitats and animals from negative impacts of land development and nonpoint source pollution. Includes information on challenges for BMPs due to coastal conditions and soils. • Primarily targeted to managers, professionals, developers, contractors and local communities in implementing coastal stormwater management programs for polluted runoff.
	GA	Green Growth Guidelines	www.coastalgadnr.org/cm/green/guide	• Provides comprehensive guidance on low impact development (LID) and stormwater management techniques. • Demonstrates in detail with map exhibits how site fingerprinting (low impact land planning process) uses GIS mapping to avoid and minimize environmental impacts while integrating natural features and existing environmental conditions of site into the development concept. • Provides comprehensive guidance on designing with the landform green growth practices (land planning which integrates the natural features of the site). • Compares economic, environmental and social benefits of green growth practices when compared to more traditional, conventional residential subdivision development approaches. • Provides low impact bank stabilization BMPs used to protect and stabilize coastal streambanks from erosion. • Intended for the coastal development community.

	FL	Florida Friendly Landscaping	http://fyn.ifas.ufl.edu/homeowners/publications.htm	• Intended for the homeowner and landscaping professionals. • Provides the standards for new landscaping and conversion of older sites to more environmentally friendly practices. • Incorporates multi-media instruction modules. • Highlights the 9 Principles now enshrined in state law (373.185 FS). 3 main audiences, homeowner (FYN), builders, developers, and community managers (FYN B&D) and landscaping professionals (GI-BMP). FYN Handbook and plant guide are written for laypersons, and very popular. The Program also has model CCRs for new and existing developments.
	FL	Florida Friendly Best Management Practices for Protection of Water Resources by the Green Industries	http://fyn.ifas.ufl.edu/pdf/grn-ind-bmp-en-12-2008.pdf	• Targeted more towards the professional landscaping and greens-keeping personnel. • Provides detailed nutrient minimization calculations. The GI-BMP program began as a voluntary educational effort , but has grown to be mandatory by state law starting in 2014. It is a holistic manual for the lawn, landscaping, and pest control industries, addressing environmental effects of design and plant selection, irrigation, fertilization, cultural practices like mowing, mulching and pruning, and pest/weed control and how the interrelate to save time labor, and money while protecting water quality and pleasing the customer.
	National	National Management Measures to Control Nonpoint Source Pollution from Urban Areas	http://water.epa.gov/polwaste/nps/agriculture/upload/agmm.zip	• This EPA document provides guidance to States, Territories, authorized Tribes, and the public regarding management measures to reduce nonpoint source pollution from urban activities. • Contains detailed chapters on most aspects of urban watershed management including watershed assessment and protection, site development, new development runoff treatment, new and existing on-site wastewater treatment systems, bridges and highways, construction site erosion, sediment and chemical control, pollution prevention, existing development, operation and maintenance, and program effectiveness.
	Other States			
	CT	Non point source Education for Municipal Officials	http://nemo.uconn.edu/publications/LIDPub.pdf	•Targeted toward elected and municipal officials. •Aid for low impact development(LID) planning. •Design advice for larger developments as well as at the site level. •Includes photographs of installed LID techniques.

Urban Treatment

Image	State/National	Title	Weblink	Features
	NC	North Carolina Stormwater Best Management Practices	http://portal.ncdenr.org/web/lr/bmp-manual	• Official BMP guidance on stormwater management in NC. • Has stormwater management guidance for development in NC's 20 coastal counties. • Discusses stormwater BMPs that would meet stormwater provisions in NC regulations and Session Laws, their design criteria, and pollutant removal efficiencies. • Describes several stormwater calculation methods. • Contains chapters on: selecting the right BMP, common BMP design elements, landscape and soil composition specifications, and BMP maintenance. • Has an abundance of information presented through figures, tables, and calculations. • Includes updates to individual chapters.
	SC	Beaufort County Stormwater and BMP Design Manual	http://www.bcgov.net/departments/Engineering-and-Infrastructure/stormwater-management/documents/Misc/beaufort_manual_mar2012.pdf	•Coastal SC local government's official BMP guidance. •Has summary of fed, state, local, and coastal zone regulations. •Includes roadway construction BMPs and design considerations for planners and engineers. •Has BMP guidance for new development based on projected impervious surface. •Detailed charts of effective site imperviousness using various BMPs including LID and green roofs. •Numerous calculation worksheets to assess proposed BMPs effectiveness for individual pollutants. •Antidegradation formulas. • Includes tables for pollutant loading by land use as well as pollutant removal % for individual BMPs.
	GA	Georgia Stormwater Management Manual	http://atlantaregional.com/environment/georgia-stormwater-manual	• Official GA stormwater manual consists of comprehensive three volume set on stormwater management policy (Vol 1), technical design standards (Vol 2), and pollution prevention (Vol 3). • Stormwater Policy Guidebook provides guidance for local jurisdictions on the basic principles of effective urban stormwater management including regulatory requirements, local programs, implementing requirements for development, watershed-based and floodplain planning, stormwater operations and maintenance, pollution prevention, and information tools. • Technical Handbook provides guidance on the techniques and measures that can be implemented to meet a set of stormwater management minimum standards for new development and redevelopment including sustainable site design and stormwater management BMPs (planning and design, hydrology, structural control, drainage system design, and numerous appendices). Vol. 2 is intended for site planners, engineers, contractors, local plan reviewers and inspectors on required on-site measures. • The Pollution Prevention Guidebook is a compendium of stormwater pollution prevention and control measures for use by local jurisdictions, business, industry, institutions and the public.
	GA	Coastal Stormwater Supplement to Georgia Stormwater Management Manual	http://epd.georgia.gov/georgia-epd-coastal-stormwater-supplement-stormwater-management-manual	• Provides Georgia's 24 coastal counties with comprehensive guidance on an integrated, green infrastructure-based approach to natural resource protection, stormwater management, and site planning and design. • Provides guidance for watershed and site-scale natural resource protection and shifts post-construction stormwater management efforts to prevention of stormwater runoff from new and existing development. • Prevents and reduces post-construction stormwater runoff rates and volumes through the use of better site planning techniques, better site design techniques, and low impact development (LID) practices. • Advances protection of coastal GA's state-designated high priority terrestrial and aquatic habitats and animals from negative impacts of land development and nonpoint source pollution. Includes information on challenges for BMPs due to coastal conditions and soils. • Primarily targeted to managers, professionals, developers, contractors and local communities in implementing coastal stormwater management programs for polluted runoff.
	FL	Florida Sediment and Erosion Control: Designer and Reviewer Manual	http://www.dot.state.fl.us/rddesign/Drainage/files/Erosion-Sediment-Control.pdf	• Technical guide for basic erosion control for the engineer. • Contains detailed formulae, blueprint examples, and diagrams.

	FL	Florida Sediment and Erosion Control:Inspectors Manual	http://www.dep.state.fl.us/water/nonpoint/docs/erosion/erosion-inspectors-manual.pdf	• Contains a good primer for the fundamentals of erosion and erosion control. • Contains very comprehensive, classic schematics with photos. • Includes training and maintenance standards. • Good for the engineer and/or technician in the field. • Has a good glossary of terms.
	National	National Management Measures to Control Nonpoint Source Pollution from Urban Areas	http://water.epa.gov/polwaste/nps/urban/upload/urban_guidance.pdf	• This EPA document provides guidance to States, Territories, authorized Tribes, and the public regarding management measures to reduce nonpoint source pollution from urban activities. • Contains detailed chapters on most aspects of urban watershed management including watershed assessment and protection, site development, new development runoff treatment, new and existing on-site wastewater treatment systems, bridges and highways, construction site erosion, sediment and chemical control, pollution prevention, existing development, operation and maintenance, and program effectiveness.
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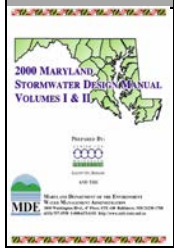	MD	Maryland Stormwater BMP Manual	http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/MarylandStormwaterDesignManual/Pages/programs/waterprograms/sedimentandstormwater/stormwater_design/index.aspx	•Maryland's BMP manual of reference. •Contains a procedure for incorporating future new and innovative BMPs into the manual. •Detailed guidance for landscaping BMPs for long term stability and maintenance. •Highly technical plans and formulae for individual BMP designs.