

Changes to Land Use Regulations

While plans set the vision, that vision is implemented through land use regulations and ordinances. Regulations define what is allowed and what is required of new or expanded developments. As our understanding of the impacts of land use on water quality has increased, so has our knowledge of development practices that can minimize those impacts. NEMO programs are working to help communities ensure that their zoning and subdivision regulations reflect that knowledge.

- ▶ **Arizona:** Partially in response to AZ NEMO's education efforts in the Middle San Pedro Watershed, Cochise County developed an **ordinance addressing development and water availability**. The ordinance requires new subdivisions located outside a designated active management area have an adequate water supply in order for the subdivision to be approved. Cochise is the only county in the state to have adopted such a provision.
- ▶ **Colorado:** Follow-up surveys of local officials who participated in CO NEMO workshops indicate that **changes are being made to comprehensive plans and/or subdivision and zoning**. Some examples of changes being made or considered: using stormwater filter and storage systems in parking lots; utilizing low impact development techniques in subdivision design; green alleys; reductions in impervious surfaces; limitations on post-construction stormwater quantities; more attention to water quality features in landscaping; tree preservation ordinances; and expanding setbacks of development from water bodies.
- ▶ **Connecticut:** The town of North Stonington adopted a **comprehensive stormwater management regulation** that requires the use of innovative stormwater management techniques in any development that disturbs more than 1 acre of land. The city of Torrington **regulations require the use of low impact development** techniques for new development or redevelopment.

- ▶ **Connecticut:** Based on cooperative research between CT NEMO and the Department of Environmental Protection, the **first impervious cover-based total maximum daily load (TMDL) regulation in the nation** was approved for Eagleville Brook in Mansfield, Connecticut. CT NEMO is now working with multiple state and local partners to help the regulated communities create a water quality management plan to address the TMDL.



The town of Ocean View, Delaware passed a townwide wetlands buffer regulation to prevent construction within 25 feet of any wetland.

- ▶ **Delaware:** In response to a DE NEMO presentation on riparian buffers, the town of Ocean View passed a **townwide wetlands buffer regulation** that prevents construction of any kind within 25 feet of any wetland. The buffer zone must also be maintained in natural vegetation.

- ▶ **Georgia:** Rabun County is implementing a **unified development code that limits impervious surfaces in steep slope areas**, requires land-

scaped islands in commercial parking and improves tree protection. Specifically, the code limits impervious cover to 10 percent on lots with 40 percent or greater slope; reduces the number of parking spaces; limits the number of trees that can be removed (particularly on steep slopes); and requires



tree protection on construction sites, with physical barriers on saved trees. In addition, commercial and industrial sites have a 30-foot setback from streets with landscaping.

- ▶ **Indiana:** Porter County adopted a **watershed overlay district ordinance** that provides three riparian buffer zones for all streams and rivers in the county. The overlay district extends 500 feet on either side of the riverbank for major drainageways and high priority bodies of water. For major collectors, continually flowing drainways to major water bodies and small lakes, the district extends 300 feet on each side. For minor drainways and intermittent streams, the district extends 100 feet.



Porter County, Indiana adopted a watershed overlay district ordinance for all streams and rivers in the county. (Photo courtesy of Planning with POWER.)

- ▶ **Indiana:** Following two “Hillside Development” workshops by Planning with POWER (the IN NEMO effort) Dearborn County adopted a **hillside development ordinance** that requires additional geotechnical inspection and mitigation when building on steep slopes greater than 20 percent and under certain soil and geologic conditions. Additional retaining wall structures are now in place on recent developments along the Ohio River flood plain and other sensitive areas. The city of Aurora has passed a similar ordinance.
- ▶ **Kansas:** KS NEMO presentations to city of Lawrence staff and city commissioners about the impacts of impervious surfaces resulted in the redrawing of floodplain boundaries along streams and new **floodplain development restrictions**.
- ▶ **Maine:** After a ME NEMO presentation on open space subdivisions, the town council in Scarborough adopted **conservation subdivision design regulations** for subdivisions that contain wetlands. This ordinance allows cluster subdivisions and requires any subdivision with 1-plus acres of wetland on site, or impacting 4300 square feet of wetland, to be designed with clustered housing with a minimum of 50 percent of the area preserved in open space.
- ▶ **Maine:** Following a ME NEMO presentation on low impact development (LID), the town of York passed an **LID ordinance referendum** by a huge majority (2047 to 244). The ordinance states “Initially LID standards should be integrated into the town’s land use codes. As local experience is gained with LID practices, policies should be expanded to encourage or require LID design where appropriate.” The ballot referenced a ME NEMO publication.
- ▶ **Nevada:** Following a NV NEMO presentation in Douglas County, the county developed draft **design standards** and conducted a review of their codes, ordinances and standards to ensure compatibility with low impact development approaches. Similarly, Washoe County is conducting a **review of their codes, ordinances and design standards** and have required infiltration best management practices be incorporated into the design of parking lots.
- ▶ **New Hampshire:** The picturesque rural community of Deerfield made several changes to its land use regulations to protect water quality and community character. It increased **stream setbacks**, or buffers, to 100 feet along surface waters and wetlands, and required **open space set-asides** for new subdivisions.

- **New York:** Based on NY NEMO recommendations, communities have made changes to their **erosion and sediment control and post-construction design specifications**, as well as site plan review procedures and inspections. The changes have included an **ordinance for retention of rainwater** from new driveways in Great Neck; **erosion and sediment controls for construction projects** smaller than 1 acre in Sea Cliff; **tree protection requirements** during construction activities in Roslyn Harbor; and erosion and sediment controls in Manorhaven.



New York NEMO recommendations are changing how runoff is addressed in new developments. (Photo courtesy of NY Sea Grant NEMO.)

- **New York:** Nassau County strengthened its **drainage requirements** for development, re-development and the subdivision of land. Developers are responsible for providing storage for 8 inches of runoff from the subdivision’s tributary area, whether from onsite or offsite sources. The county also encourages low impact development techniques in its subdivision requirements.

- **Rhode Island:** The town of Cumberland developed a **water resources overlay district** to protect drinking water supply watersheds, wellhead protection areas and groundwater aquifers. In addition to restricting use of hazardous materials and underground storage tanks in source areas, the proposed ordinance establishes buffers to wetlands and surface waters, limits impervious cover, and requires use of low impact stormwater management controls for new construction and redevelopment.

- **Rhode Island:** RI NEMO documented the need for enhanced wetland buffer protection in South Kingstown based on current research findings and

watershed assessments that RI NEMO conducted for the coastal ponds. As a result, the town strengthened its **wetland buffer ordinance** with additional standards for approval of special use permits where buffer alteration is unavoidable, including use of advanced wastewater treatment systems and control of stormwater runoff volume.

- **Rhode Island:** After town staff and planning board members attended RI NEMO workshops on groundwater protection, the town of Coventry, Rhode Island adopted a **private well protection ordinance** that ensures new wells are properly constructed and provide safe yield before a building permit is issued.



Rockport County residents playing the “chips” game at a county fair. (Photo courtesy of TX NEMO.)

- **Texas:** After several training sessions on natural area preservation and compact growth in the coastal community of Rockport and Aransas County, and an extensive community survey conducted at two county fairs; local

decision makers are using compact growth to accommodate the projected growth on Live Oak Peninsula. An **overlay district** was formed as a result of this project for the older, “heritage” section of town that enables much denser development than previously allowable.

- **Vermont:** After VT NEMO conducted a buildout assessment on their proposed zoning plan and its effects on a town brook, the town of Colchester added language within their **parking regulations** encouraging infiltration of stormwater in landscaped areas within parking lots.



Spotlight on Tennessee

In Tennessee, like much of the Southeast, the pace of development is challenging the staff, expertise and capacity of local governments to manage growth in economically and environmentally beneficial ways. Growing concern for water quality combined with new statewide stormwater regulations have motivated community leaders to re-examine land use policies and the relationship between land use and the protection of water quality and water supply. Tennessee Growth Readiness (the TN NEMO effort) is designed to help these decision makers manage growth while protecting water resources and the quality of life in their communities.

A primary focus of Tennessee Growth Readiness is to help communities evaluate their land use codes and ordinances for their capacity to meet water quality goals. Using the Center for Watershed Protection's *Codes and Ordinances Worksheet*, Tennessee Growth Readiness helps communities identify areas in their regulations that can be improved to better protect water quality and other natural resources.

To date, Tennessee Growth Readiness has helped over 200 communities evaluate their land use codes and ordinances and pursue changes. Approximately 45 percent of these communities have either made or are in the process of making changes to their codes and ordinances.

For example, **Columbia, Tennessee** adopted a **zoning ordinance** that has provisions for buffers, tree preservation, enhanced visual quality, open space requirements and smart growth techniques. In addition, a **tree preservation plan** is required which includes: (1) inventory of existing vegetation, (2) footprints of buildings, roads and retaining walls, (3) location of existing and proposed utility services, (4) boundaries of all required buffer planting areas and (5) a detailed drawing of tree protection zones. They also have provisions for clustering and open space requirements, and limits for impervious cover for planned unit developments.

Similarly, **Marshall County, Tennessee** passed a **change in their zoning requirements** to include decentralized sewer systems. The County Board of Utilities will receive the deed to the system from the developer. In return, the developer will be allowed **reduced lot sizes** of 15,000 square feet, with the condition that 10 percent of the total land area must be retained in green space. Meanwhile, the planning commission approved a preliminary plat for a subdivision of 335 acres, 99 of which will be retained in **green space**.

Tennessee Growth Readiness's efforts have also had an impact on communities in neighboring states. **Tazewell County, Virginia** is working on revising its land use practices and ordinances using recommendations from Tennessee Growth Readiness. The town made several changes to its zoning ordinances, including **reducing parking space requirements**. Tennessee Growth Readiness's recommendations were also incorporated into a **total maximum daily load implementation plan** for sediment being developed by the Virginia Department of Environmental Quality in conjunction with local citizens and agency partners. This plan represents a significant step forward in the implementation of changes to local codes and ordinances.