

IV. Mitigation Strategy

A. Community Goals

Orange County, Carrboro, and Hillsborough planning goals are statements that set priorities for reducing susceptibility to natural and technological hazards. These goals serve as the basis for development of the more specific plan objectives and strategies. These goals are:

1. To reduce loss of human life.
2. To protect property and minimize damage.
3. To increase public awareness of risk and mitigation activities.
4. To minimize damage to public facilities, utilities, infrastructure.
5. To adopt local ordinances and plans that assist hazard mitigation planning.
6. To ensure that NFIP maps are available to property buyers so they may determine if property is located in or near a floodplain.
7. Decrease the community's vulnerability to future disasters.

These goals are broad based and can be revised to meet the future needs of the county. There are no goals that could potentially hinder hazard mitigation efforts. Furthermore, goals are reviewed by the Board of County Commissioners at their goal-setting retreat in December of each year. Existing goals are modified and new ones created as appropriate.

B. Mitigation Strategies

The strategies to meet the goals will be categorized into five different groups:

1. Prevention
2. Property Protection
3. Natural Resource Protection
4. Structural Projects
5. Public Information

This section of the update (Mitigation Strategies), as well as Appendices B, C, and D, list the existing and potential policies, practices, programs, regulations, and activities that Orange County, the Town of Carrboro, and the Town of Hillsborough (respectively by appendix order) currently enforce, have in place, or are considering. All of the activities listed should lessen the vulnerability of county residents, property owners, structures and future development to natural hazards.

A process for prioritization of identified hazard mitigation strategies was performed the same way for each of the participating jurisdictions. The Hazard Mitigation Team used the following criteria for prioritization of hazard mitigation strategies:

1. cost-benefit review
2. results of Hazard Identification Analysis
3. results of Vulnerability Assessment
4. results of Community Capability Assessment
5. effectiveness in meeting hazard mitigation goals and comprehensive plan goals

Cost-benefit review was given emphasis due to its possible use in environmental reviews for HMGP, FMA and other federal hazard mitigation projects.

With limited financial and staff resources to dedicate to hazard mitigation, it is essential that those hazards with the highest likelihood of occurrence and the greatest potential impact receive the highest investment of County resources. Through hazard identification and analysis and vulnerability assessment, it has been determined that Orange County, including the Town of Carrboro and Town of Hillsborough, is susceptible to the impact of certain natural hazards more so than others (as shown in the “Orange County Hazard Identification and Analysis” table located in a previous section).

Moderate and High Hazard Threats

Floods

Flooding is often associated with hurricanes and coastal storms (most often general flooding) as well as with severe summer storms (typically flash flooding). Floods are the easiest hazard to quantify and isolate as flooding occurs only in known locations. The severity of a flood is generally dependent upon the amount of rainfall and prior soil conditions (including ground cover).

Orange County, Carrboro, and Hillsborough all participate in FEMA’s National Flood Insurance Program (NFIP). At this time, none of the communities participate in the voluntary National Community Rating System (CRS) program. However, Orange County has begun assessing the feasibility of participating in the CRS and Carrboro intends to apply for the program in the near future. Orange County effectively disallows new construction in special flood hazard areas through provisions in the Zoning Ordinance relating to stream buffers. The Town of Carrboro allows very limited development within special flood hazard areas and all development must be constructed with a finished elevation above flood levels. In accordance with State regulations, The Town of Hillsborough allows construction within special flood hazard areas provided the finished elevation is above flood levels. None of the local governments are considering changes to these practices at this time. In addition, there are no repetitive loss structures within the partner jurisdictions.

In addition to the continued assessment and modifications of development regulations, Orange County and the Towns of Carrboro and Hillsborough, undertake activities to ensure continued compliance with the National Flood Insurance Program (NFIP). The County has identified every property within Orange County that is located wholly or partially located within a special flood hazard area, and has developed a program to flag those properties for added review when any development and/or construction activity is proposed on site. In addition, the County participates in an on-going map maintenance program through the North Carolina Division of Emergency Management. Every five years, staff works with emergency management specialists at the State level to ensure the special flood hazard area maps are as accurate and up to date as possible. Additionally, each jurisdiction makes NFIP maps available to persons interested in determining if properties are located in special flood hazard areas. Finally, County and municipal flood plain managers obtain a minimum of 16 hours of continuing education credits every two years to maintain Certified Floodplain Manager certifications.

High Winds (Severe Storms/Tornadoes/Nor'easter/Hurricanes)

Severe storms and tornadoes as well as hurricanes and coastal storms present high wind hazards. This hazard is mainly combated through building codes and construction. Enforcement of the current State building code and enhancement of the code in regards to wind resistance will prove the most beneficial in addressing high winds.

All of the local governments included in this hazard mitigation plan require new construction to be in accordance with the State building code which takes into account wind loading and resistance to other natural hazards. At this time, none of the local governments are considering changes to this practice.

Droughts and Heat Waves

In general, communities can have little influence or impact on mitigating the impact of droughts/heat waves on the local government level except through ensuring adequate water supplies for normal circumstances and through implementation of water conservation measures when drought conditions are imminent. Similarly, heat waves have wide ranging effects that are almost impossible to combat on a local government level. Communities, therefore, depend upon State and Federal agencies for assistance.

Representatives from the participating jurisdictions met in October 2005 to discuss the county's vulnerability to drought and heat waves. At that time, the group determined that additional actions were not necessary or feasible to reduce the area's vulnerability. Later, in 2007 in response to severe drought conditions in the county and beyond, elected officials approved resolutions and measures to encourage water conservation throughout the county. In addition, the County maintains a website (www.H2Orange.org) that discusses current conditions, water conservation, and drought relief programs for those in need.

Winter Storms and Freezes

Local governments also look to the State and to private utility companies for leadership in dealing with winter storms/freezes. The typical effects of snow and ice accumulation – loss of electrical power, phone, and cable service and treacherous road conditions - can be only minimally addressed at the local level. (The exceptions would be larger cities which have more snow/ice removal equipment and manpower and governments that own the local electrical distribution system.)

Orange County and the municipalities included in this plan address winter storms and freezes to the greatest extent they are able to with limited resources. Nothing can be done to prevent winter storms. However, the County and participating jurisdictions inform the public of potential impacts of severe weather systems and emergency services available to them. A significant storm or freeze will likely require State and other (i.e.: electric company) assistance. State DOT (Department of Transportation) staff and equipment clear snow and ice from the roadways using a priority system based on road usage.

Landslides

Landslides are most likely to occur when unusually heavy rain from hurricanes and intense rain storms soak the ground, reducing the ability of steep slopes to resist the downward pull of gravity. Certain types of soils are more susceptible to landslides than other soil types.

Landslide vulnerability can be decreased through adoption and enforcement of local land use regulations that limit development in areas susceptible to landslides due to soil types and slope. Such regulations are in place in Orange County and the Towns of Carrboro and Hillsborough.

Representatives from the participating jurisdictions met in October 2005 to discuss the county's vulnerability to landslides. At that time, the group determined that additional actions were not feasible to reduce the area's vulnerability.

Chemical Spills

Local governments generally look to State agencies for leadership in dealing with large chemical spills, especially because such spills are most likely to occur on State road right-of-way or along railroad right-of-way. Local governments do not generally have an extensive Hazardous Materials Team and rely on the State's Regional Response Team for assistance with hazardous materials.

Orange County's Emergency Services Department (which also serves the municipalities within the county), addresses vulnerability to chemical spills to the greatest extent they are able with limited resources. However, little can be done to prevent occurrences within the County. A large chemical spill occurring in the county would require State assistance to contain and remove the spill.

C. Ordinances and Actions

Per the Action Items list included in the adopted Orange County Hazard Mitigation Plan, representatives from the participating jurisdictions met in October 2005 to discuss the county's vulnerability to drought, heat waves, and landslides. At that time, the group determined that additional actions were not feasible or necessary to reduce the area's vulnerability. Later, in 2007 in response to severe drought conditions in the county and beyond, elected officials approved resolutions and measures to encourage water conservation throughout the county. In addition, the County maintains a website (www.H2Orange.org) that discusses current conditions, water conservation, and drought relief programs for those in need.

1. Orange County

The following provides a summary of ordinances that Orange County is currently involved in or has completed relevant to hazard mitigation. Review processes related to the ordinances are thorough and overlapping.

Legal Capability

The North Carolina General Statutes grant Orange County and the Towns of Carrboro and Hillsborough the general police powers reserved for local governments. This confers the legal authority to enact and enforce local ordinances which define, prohibit, regulate or abate acts, omissions or conditions detrimental to the health, safety and welfare of the people and to define and abate nuisances (including public health nuisances).

Floodplain Management Ordinance

Orange County participates in the National Flood Insurance Program (NFIP) and complies with all related regulatory requirements. The ordinance is enforced through requirements set forth by the County's zoning ordinance. It provides a means for prohibiting or restricting development within special flood hazard areas. This ordinance seeks to prevent property loss, insure human safety, and enable the safe and natural flow of streams. The Current Planning Division of the Planning and Inspections Department reviews development proposals for consistency with the ordinance.

Stormwater Ordinance

Riparian Area Protection within the Neuse River Basin: The purpose of the County in adopting the Neuse River Basin regulations is to protect the County's streams, wetlands, and floodplains; to protect the water quality of the County's watercourses, reservoirs, lakes, and ponds; to protect the County's riparian and aquatic ecosystems; reduce Nitrogen laden runoff to the Neuse by 30%; and to provide environmentally sound use of the County's land resources. The Sedimentation and Erosion control Division of the Planning and Inspections Department is responsible for this ordinance.

404 Wetlands

404 wetlands are areas covered by water or that have waterlogged soils for long periods during the growing season. Plants growing in wetlands are capable of living in soils lacking oxygen for at least part of the growing season. Some wetlands, such as swamps, are obvious. Others are sometimes difficult to identify because they may be dry during part of the year. Wetlands include, but are not limited to, bottomlands, forest, swamps, pocosins, pine savannas, bogs, marshes, and wet meadows.

Section 404 of the Clean Water Act requires that anyone interested in depositing dredged or fill material into "waters of the United States," including wetlands, must apply for and receive a permit for such activities.

Erosion and Sedimentation Controls

Soil erosion is and has been a serious problem in the Piedmont of North Carolina, resulting in land degradation and water quality deterioration. The Orange County Soil Erosion and Sedimentation Control Ordinance, adopted in 1975 and since amended, provides the legal means by which the adverse impacts of land disturbing development activities can be minimized. The Ordinance regulates the clearing, grading, excavation, filling and manipulation of the earth and the moving and storing of waters in order to: control and prevent accelerated soil erosion and sedimentation, prevent the pollution of water, prevent damage to public and private property, maintain the balance of nature, prevent the obstruction of natural and artificial drainageways, inhibit flooding and reduce the undermining of roads and other transportation facilities. Before a construction permit is granted, a developer must submit an erosion and sedimentation control plan to the County's Erosion Control Officer. These plans include the

type of soils present at the site, the topography and location of nearby streams, erosion control measures to be taken during construction, and the operation and maintenance of any structural controls during the life of the project. The Sedimentation and Erosion Control Division of the Planning and Inspections Department is responsible for countywide enforcement of this ordinance, including the incorporated towns.

North Carolina State Building Code

Orange County has adopted the North Carolina Building Code (International Building Code with North Carolina Amendments) and the North Carolina Residential Code (International Residential Code with North Carolina Amendments). The NCBC and the NCRC (Chapters 16 and Chapter 3) include provisions for requiring specific information regarding structural loads and design loads to include seismic, wind, flood, snow and combination loading. These designs tabulate the total horizontal and vertical forces that are assumed to act on a building in relation to different wind areas, exposures and wind speeds as exposed to building frameworks and cladding. The Inspections Division of the Planning and Inspections Department is responsible for enforcement of the referenced building codes.

Zoning

The Zoning Ordinance is the major legal tool for implementing the Land Use Element of the Orange County Comprehensive Plan. The Zoning Ordinance serves as the means to achieve the desired relationship between land uses; to prevent incompatible land use associations; and to encourage and provide incentives for the more compact and efficient land use patterns delineated in the plan.

Simply stated, zoning is the division of a jurisdiction into different districts and the regulation of population density, buildings and land use intensity, lot coverage, and building heights and setbacks within those districts. Most zoning ordinances divide land uses into three general categories of residential, commercial, and industrial use and specify the areas (or districts) where each of these uses is permitted. Zoning ordinances consist of maps and written text.

The stated purpose of the Orange County Zoning Ordinance is to accomplish compatible development of the land within Orange County in a manner which will best promote the health, safety, and general welfare, as well as to provide for efficiency and economy in the process of development; to make adequate provisions for traffic; to secure safety from fire, panic, and other hazards; to provide for light and air; to prevent the overcrowding of land; to avoid undue concentration of populations; to facilitate the adequate provision of transportation, water, sewerage, schools, parks, and other public requirements; to provide for the protection of the surface and underground water resources of the County, and to provide for efficient use of renewable and non-renewable sources of energy; to promote desirable living conditions and the sustained stability of neighborhoods; to protect property against blight and depreciation and for other purposes in accordance with the comprehensive plan for the County. The Current Planning Division of the Planning and Inspections Department has primary responsibility for implementation and enforcement of the zoning ordinance.

Through zoning provisions related to stream buffering, Orange County's Zoning Ordinance effectively prohibits new construction in special flood hazard areas.

Subdivision Regulations

Subdivision Regulations govern the conversion of raw land for intensive residential use. This implementation tool is particularly necessary to coordinate existing development and potential future development with proposed development. As the interest of the developer is generally short term, the application of subdivision regulations protects not only the individual homeowner, but also the general public by providing for a review process which suggests and facilitates coordination of the proposal with the long range specifications of the plan. By providing an opportunity for negotiation it likewise allows for the potential coordination of public and private activities.

The purpose of the Orange County Subdivision Regulations is to guide and regulate the subdivision of land for sale or building development in order to insure the public health, safety, and welfare, and to provide for the sound use of land. The regulations are designed to insure adequate planning of street systems; to avoid overcrowding of land, prevent fire, panic, and other dangers; insure that water and sewage systems be safe and adequate; to prevent flood damage; to facilitate an orderly use of land; to insure the proper legal description and monumenting of subdivided land; and to encourage the proper management of Orange County's natural resources.

It is the expressed purpose of the regulations to provide for, in addition to the above, the protection of water resources in Orange County, through the use, alone or in combination, of buffer zones, varying lot sizes, slope restrictions, vegetation, or other equally effective techniques. Innovative techniques on the part of the developer are encouraged where these techniques can be shown to be as effective as the specific requirements of the Ordinance. The Current Planning Division of the Planning and Inspections Department has primary responsibility for implementation of the subdivision regulations and reviews development proposals for consistency with the regulations.

Water Restriction

In the event of severe drought which has caused reservoir levels to decrease to dangerous levels and damages agricultural production, mandatory water restrictions on residential and commercial uses can be put into effect. These and other conservation methods are employed in a gradual time frame so that business and residents are not suddenly struck with severe restrictions that undermine commercial and agricultural efforts. Concurrently, the three public water suppliers to Orange County citizens (Orange Water and Sewer Authority, Hillsborough Municipal, and Orange Alamance Water Service) have been working diligently to increase reservoir capacity to better avoid and mitigate against drought conditions.

Existing Mitigation Efforts

Orange County has participated in the Federal Emergency Management Agency (FEMA) Buyout Program. This program allows local governments to purchase homes that have a

history of being flooded several times. One of the most recent buyouts was in the Heritage Hills Subdivision in the southern portion of Orange County.

Financial Resources

Orange County, including the Town of Carrboro and Town of Hillsborough, will seek funds, when available, for Hazard Mitigation studies and implementation of programs. Potential funding sources include (but are not limited to) programs administered by or through NC Emergency Management, the Division of Community Assistance, and the Hurricane Redevelopment Center.

ACTION ITEMS: Orange County efforts currently underway that affect natural hazard mitigation

***Note: relocated from another section of adopted plan**

1. Update of Land Use Element of Comprehensive Plan

The Land Use Element of the Comprehensive Plan was first adopted September 2, 1981, and has been amended numerous times since adoption. Preparation of a new Land Use Element is currently under way by the Orange County Planning Department Staff.

The Comprehensive Plan is expected to re-solidify policies that restrict development in hazard areas such as floodplains and steep slopes. In addition, the update will likely recommend policies that lower density in rural areas.

If policies such as these are adopted and implemented, vulnerability to hazards such as flooding, landslides, and wildfires should be further reduced.

Responsibility: Orange County Planning and Inspections

Target Date for Completion: by the end of 2004

Status: The Orange County 2030 Comprehensive Plan update was adopted by the Orange County BOCC November 18, 2008. The updated comprehensive plan maintains the County's position on restricting development in hazard areas.

2. Unified Development Ordinance (UDO)

The County's land use ordinances (Zoning, Economic Development District Design Manual, Hillsborough Economic Development District Design Manual, Subdivision, Flood Damage Prevention, Soil Erosion and Sedimentation Control, Storm Water Management, and Environmental Impact) are to be combined into one UDO. Rewrite to occur after update of the Land Use Element of the Comprehensive Plan.

The UDO will implement the policies outlined in the Comprehensive Plan. Implementation of the types of policies likely to be included in the Comprehensive Plan update should reduce vulnerability to such hazards such as flooding, landslides, and wildfires.

Responsibility: Orange County Planning and Inspections

Target Date for Completion: FY 04-05

Status: To date, the Unified Development Ordinance (UDO) has not been completed. It is anticipated to be completed mid to late 2010.

3. Floodplain Mapping Projects

Orange County continues to work with State and Federal agencies to complete new floodplain mapping within its jurisdiction.

Orange County development regulations do not permit new structures to be constructed in floodplain areas.

Responsibility: Orange County Planning and Inspections

Target Date for completion: Unknown

Status: The new FEMA FIRMs became effective February 2, 2007. The County continues to work with State and Federal agencies on map maintenance within the jurisdiction.

4. Decrease Density in Protected Water Supply Watersheds

Current reviews of existing housing densities in protected water supply watersheds are being performed. This work will most likely be connected with the preparation of the new Land Use Element of the Comprehensive Plan.

Reducing density in rural areas should reduce vulnerability to several hazards, including wildfires.

Responsibility: Orange County Planning and Inspections

Target Date for Completion: FY 2004-05

Status: With the adoption of the 2030 Comprehensive Plan, densities in the critical watershed areas will not be increased.

Analysis

Complete removal of risk from several identified hazards is realistically not possible to achieve. For example, tornados can occur anywhere in the region, so restricting development in an area where a tornado had “touched down” in the past is not likely an effective mitigation measure for this hazard. A more effective mitigation measure would be to enforce wind velocity provisions in building codes, which Orange County does. Even so, a very strong tornado would be expected to damage or destroy some

structures; it is the risk people take when living in a region of the country where tornado activity is likely.

Mitigation measures for hazards such as earthquakes are available, but because the risk of an earthquake in this region of the country is relatively low, the costs involved to mitigate against a low-risk hazard would increase the cost burden to higher than acceptable levels. For example, building codes similar to those enforced in California, a state with a much greater earthquake risk, could be adopted and enforced but the substantially higher engineering and construction costs make it difficult to justify mitigating against the hazard in Orange County, North Carolina.

Orange County has been proactive in mitigating against the hazards to which it is most susceptible, namely flooding and landslides, by prohibiting construction of new structures in floodplain areas and limiting construction in areas of steep slopes.

2. Town of Carrboro

ACTION ITEMS: TOWN OF CARRBORO, N.C. LOCAL MITIGATION STRATEGIES

New or Revised Initiatives	Local Responsibility	Target Dates for Completion	Comment
<p>The programs, policies, ordinances and goals listed in the previous section serve the town’s hazard mitigation needs quite well and provide a comprehensive approach toward hazard mitigation. This section includes a list of new programs, goals, ordinances, or approaches that the Town may wish to undertake in the future to further reinforce its ability to mitigate natural hazards. In addition to the forgoing, the Town of Carrboro supports the goals listed in <i>Orange County’s Hazard Mitigation Plan</i>. The Town of Carrboro, as a member of the Orange County Hazard Mitigation Team, will coordinate with Orange County to reevaluate and update its hazard mitigation planning component at least once every five years or sooner as deemed appropriate by the Orange County Planning Director.</p>			<p>Revised update period: 2010-2015</p>
<ul style="list-style-type: none"> Community Rating System The National Flood Insurance Program’s (NFIP) Community Rating System (CRS) was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. The National Flood Insurance Reform Act of 1994 codified the Community 	Town of Carrboro Planning Department	12-2002	<p>REVISED The CRS application was not submitted during the initial planning period as envisioned. The</p>

New or Revised Initiatives	Local Responsibility	Target Dates for Completion	Comment
<p>Rating System in the NFIP. Under the CRS, flood insurance premium rates are adjusted to reflect the reduced flood risk resulting from community activities that meet the three goals of the CRS: (1) reduce flood losses; (2) facilitate accurate insurance rating; and (3) promote the awareness of flood insurance. The Community Rating System administered by the Insurance Services Office, Inc. (ISO), provides communities that complete their application requirements with an insurance rating. The town of Carrboro intends to submit an application to the ISO for an insurance rating that will benefit owners of flood prone property.</p>			<p>planning department intends to complete the CRS application during the upcoming 2010 planning period.</p>
<p>• Floodplain Mapping Projects The Town of Carrboro will continue to monitor ongoing efforts by the State and the Army Corps of Engineers to complete new floodplain mapping for the planning area. Local staff resources will be needed to implement and encourage the completion of these activities.</p>	<p>Town of Carrboro Planning Department and Town Engineer and the Town of Chapel Hill, Engineering Department</p>	<p>Ongoing</p>	<p>COMPLETE Digital flood insurance rate maps (DFIRM) dated February 2, 2007 were adopted by reference on January 16, 2007 under section 15-251.2 of the Carrboro Land Use Ordinance.</p>
<p>• Greenways The Town needs assistance and support for the development of greenways and parklands dedicated to public use along streams and easements. The Town will seek to secure funding from federal, state and local sources to implement the Town's greenway system, which will in turn mitigate flood hazards.</p>	<p>Town of Carrboro Planning Department and Recreation Department</p>	<p>Ongoing</p>	<p>UNDERWAY -2003 greenways bond approved -MPO funding approved for planning Bolin and Morgan Creek greenways -2007 Greenways Commission established -2008 Greenways Inc retained to prepare the Bolin Creek Greenway plan and Coulter, Jewell and Thames retained to prepare a plan for the Morgan Creek Greenway 2009 Greenway Concept Plans</p>

New or Revised Initiatives	Local Responsibility	Target Dates for Completion	Comment
			completed with implementation slated for the upcoming mitigation planning period.
<ul style="list-style-type: none"> Underground Utilities The Town of Carrboro requires new developments to install electric, cable and telephone wires underground. The older neighborhoods are served by overhead utilities and services fail when fallen trees and or tree limbs break lines. It would be beneficial to locate these utilities underground since the Town has experienced lengthy power outages during ice storms or major storm events such as Hurricane Fran. Retrofitting above ground utilities by placing them underground is beyond the financial means of the town and could only be accomplished with resources from the utilities and/or with state and federal assistance. 	Town of Carrboro Planning Department and Public Works Department Public Utilities	Ongoing	<u>ONGOING</u> No assistance obtained during the reporting period; the staff will continue to seek assistance to accomplish this task.

3. Town of Hillsborough

ACTION ITEMS: Town Of Hillsborough Local Mitigation Strategies

New or Revised Initiatives	Local Responsibility	Target Dates for Completion	Comment
<p>The programs, policies, ordinances and goals listed in this section serve as the Town's Hazard Mitigation needs and provide a comprehensive approach toward hazard mitigation. This section includes a list of new programs; goals, ordinances, or approaches that the Town may wish to under in the future to further reinforce its ability to mitigate natural hazards.</p>			
<ul style="list-style-type: none"> Loss Prevention The Town of Hillsborough has experienced previous damage or losses at older facilities located where natural hazards are reasonable to expect. The Town plans to take the following steps to limit future losses: 		Ongoing	
<ul style="list-style-type: none"> Relocate the Motor Pool operation to a non-flood prone site. This is a sizable project generally beyond the Town's financial 	Public Works Department	Facility Design-FY04	Offer made on an existing building

New or Revised Initiatives	Local Responsibility	Target Dates for Completion	Comment
capabilities in the next 10 years. Funding assistance is needed.		Construction-FY05	new building. Move in Dec 09
Relocation of sewer pump stations in critical areas.	Engineering Dept.	Ongoing	Ongoing 75% complete
Relocation of raw water intake pumps at Ben Johnston Lake (raise above flood levels).	Engineering Dept.	FY04	Completed FY05
Work with Tree Board, Public Works, and Utilities to ensure that dangerous situations are addressed timely.	Public Works Dept.	Ongoing	Ongoing
Work with State efforts to study hydrology and map/designate any new flood prone areas.	Planning Dept.	FY05	Ongoing
Amend Flood Plain Ordinance to prohibit building and land disturbance in floodplain	Planning Dept.	Post FY05	Completed FY06
• Preparedness and Education		Ongoing	Ongoing
Adopt local operations plan that details which Town functions will be maintained, and how we will keep the public informed.	Town Manager	End of FY05	Completed June 2007
Look at alternative electrical sources (generators, etc.), for each Town administrative facility and determine what level needs to be maintained and where.	Town Management Team	End of FY05	Completed FY05
Prepare sewer pump stations for easy generator connection	Engineering Dept.	End of FY03	Completed FY04
Install generators at most serious pump station locations	Engineering Dept.	End of FY05	Completed FY05
Outfitting the Water Plant with a generator.	Engineering Dept.	FY04	Completed FY04
Outfitting the Sewer Plant with a generator.	Engineering Dept.	Approx. FY10	Approx. FY10 Redundant connection to power grid in Place.

4. Draft Statement of Commitment to Mitigating Impacts of Natural Hazards

Through the act of developing and adopting a Hazard Mitigation Plan, Orange County and the participating municipalities (Carrboro and Hillsborough) are committing to continuing to develop and engage in programs, activities and practices that can be implemented at the local government level in a fiscally feasible manner to help to mitigate the impacts of future natural hazards.

The local governments intend to create a process by which the requirements of this hazard mitigation plan will be incorporated into other local plans. During the planning process for new and updated planning documents, such as a comprehensive plan, land use plan, capital improvements plan, or emergency management plan, to name a few examples, the local planner will provide a copy of the hazard mitigation plan to each respective advisory committee member. The local planner will recommend the advisory committee members to ensure that all goals and strategies of new and updated local planning documents are consistent with the hazard mitigation plan and will not contribute to increased hazards in the jurisdiction.