

TOWN OF RICHLANDS
Hazard Mitigation Plan
Annex 4
to the
Onslow County Hazard Mitigation Plan

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PREFACE (SEE [ONSLow COUNTY MJ-HMP](#))

I. INTRODUCTION

Background (See [Onslow County MJ-HMP](#))

Purpose (See *Onslow County MJ-HMP*)

Scope (See *Onslow County MJ-HMP*)

Authority (See *Onslow County MJ-HMP*)

Participants in the Planning Process

The 2015 update to the Onslow County Multi-Jurisdictional Hazard Mitigation Plan (MJHP) and accompanied Town of Richlands Annex started with a meeting of the Onslow County Hazard Mitigation Plan Advisory Committee, of which the Town of Richlands is a member. As the person designated responsible for updating the Town of Richlands Annex to the Onslow County Multi-Jurisdictional Hazard Mitigation Plan, the Town Administrator Gregg Whitehead participated in the advisory committee meetings which took place on February 13, 2014 and May 29, 2014 at the Onslow County Emergency Operations Center. The purpose of the advisory committee is to establish the process, timelines and provide for the discussion of issues and topics information necessary to complete the 2015 update. With guidance from the advisory committee, the Town Administrator Gregg Whitehead met with Police Chief Ron Lindig and Public Works Director Johnathan Jarman to receive and review the updated information relevant to the Town of Richlands Annex to the Onslow County MJHMP. The update to the Richlands Annex was accomplished in part to the grateful assistance provided by staff of the Onslow County GIS Department, the Onslow County Tax Office, the Onslow County Schools and other municipalities within the County who provide plan language improvements, mapping and property values.

The Town of Richlands Annex to the Onslow County MJHMP was submitted to the Richlands Board of Alderman on August 12, 2014 for review and was approved by a unanimous vote. The approved Richlands Annex was then submitted to Onslow County to be added to the Onslow County MJHMP for subsequent approval by NCDEM and FEMA. A public meeting on the complete update to the Onslow County MJHMP plan was held on September 5, 2014 at 6:00 PM at the Onslow County Emergency Operations Center. A public hearing to formally adopt by resolution the 2015 Update to the Onslow County MJHMP and the Town of Richlands Annex was held on and the both the complete Onslow County MJHMP and Town of Richlands Annex were adopted by a Resolution of the Richlands Board of Aldermen on, 2015.

The Planning Process

1. The Hazard Identification and Analysis Matrix

The Town of Richlands prepared the Hazard Identification and Analysis Matrix using the Onslow County-prepared matrix format. The Town of Richlands determined the priority to which each of hazards should be assigned. (See [Appendix A – Hazard Identification](#)).

2. Vulnerability Assessment

Using data from both the 2010 US Census and the Onslow County Tax Department the Town developed the number of buildings and property values in the various categories of the worksheet. The current condition data was developed using an average household size of 2.54 and current property valuation data (February 16, 2014). The projected condition data was developed using an average household size of 2.3. Populations of commercial buildings were determined by estimating that the average number of people populating a commercial establishment, which exist in all sizes Town wide, was six persons per building. For industrial, the average figure was estimated at four per site during any shift.

The population data provided pertaining to the three schools within Richlands was obtained from the Onslow County Board of Education. The replacement values assigned are approximate, and were obtained by using the structure values as shown on the Onslow County GIS website. The current values of municipally owned buildings were taken from current insurance policies.

The Town intends to avoid placement of public facilities in flood prone areas. The number and value of future vacant lots are not predictable because future Board of Aldermen annexation actions and annexation petitions from owners of property currently outside the Town limits drive this factor.

Town of Richlands infrastructure data was provided by the Public Works Department, using a value of \$151.00/linear foot. This value includes curb and gutter, stone, sidewalks, handicap ramps, asphalt and labor.

3. Capability Assessment

All existing policies and programs that might lend support to hazard mitigation were examined and are listed in Worksheet #2. Currently the capabilities available to the Town are the CAMA Land Use Plan, the Richlands Zoning Ordinance, the Richlands Subdivision Ordinance, and the Flood Damage Prevention Ordinance.

4. Interim Conclusions

During the development of the 2003 plan, a public information meeting was held on November 25, 2003, at the Richlands Town Hall to discuss the need for hazard mitigation, the process being followed in the development of the Onslow County plan and the Town of Richlands

Annex. The participants of that meeting agreed that the Town of Richland's predominant hazards are damage from hurricane winds and associated flooding. The community goals were established primarily to deal with hurricanes, their aftermath, and the need to bring life back to normal as soon as possible.

5. Values and Goals

The Town of Richlands has always striven to minimize storm damage, personal injury, and to expedite cleanup after storms.

6. Mitigation Strategies and Policies

The mitigation strategies were determined by considering what were currently being done and additional strategies that might be useful in accomplishing the goals.

7. Implementation Responsibilities

The responsible departments or individuals were established based on their general assignment during previous disasters.

8. Monitoring, Evaluating, and Reporting Progress

Most of the strategies were found to be ongoing activities or projects that have no beginning or end, programs that Town departments are always trying to improve. Some are "budget sensitive" so they are tied into budget years.

9. Revisions and Updates

The Town intends to have constant reviews of the programs underway but also to have an annual evaluation in which to consider new ideas or make "midcourse corrections".

Adoption of the Plan

Town Administrator Gregg Whitehead presented the 2015 Update of the Richlands Annex to the Onslow County Multi-Jurisdictional Hazard Mitigation Plan at a public meeting held on August 12, 2014 for review and approval of the Richlands Board of Aldermen. Subsequently, Gregg Whitehead, Town Administrator submitted the full plan to the Richlands Board of Aldermen, which approved a resolution adopting the full plan contingent upon the plan being adopted by the Onslow County Board of Commissioners and then being approved by North Carolina Emergency Management (NCEM) and the Federal Emergency Management Agency (FEMA) Region IV. The resolution adopting the plan can be found in [Attachment #2](#) to this annex.

II. COMMUNITY VALUES AND GOALS

The Town of Richland's predominant natural hazard is damage from hurricane winds associated flooding due to the proximity of Richlands to the coastline. Historically, the Town of Richlands has responded to hurricane events to a much

higher degree than any other natural disaster. As a result, the community goals were established primarily on hurricane events and their respective response needs and aftermath. The Town has always striven to minimize storm damage, personal injury, and to expedite cleanup after storms to minimize the loss of stress of such storms and to bring life back to normal as soon as possible. The Town's overall community focus and goals are:

- Prevent loss of life and personal injury from all natural hazards;
- Minimize the damage to public infrastructure resulting from natural hazards;
- Manage future development so that vulnerability of private property to natural hazards is reduced;
- Expedite post disaster clean-up, repair and reconstruction;
- Protect the fragile natural and scenic areas located along the White Oak River and tributary creeks.

To achieve the broad Town goals listed above, an analysis of these goals was conducted. See [Worksheet #1 - Community Goals Town of Richlands](#).

III. MITIGATION STRATEGIES AND POLICIES

A. Objectives

The Town of Richlands supports Onslow County in the attainment of its objectives and has similar goals and objectives (See Onslow County Multi-Jurisdictional Hazard Mitigation Plan, Hazard Mitigation Implementation Strategies).

Hazard Mitigation Implementation Strategies (See Section B below)	Objectives
1, 2, 12	Improve education and outreach to the community regarding flood hazards and flood mitigation
4	Improve storm water drainage in Richlands
5, 6, 7, 8, 9, 13	Support activities that will modify and make structures less susceptible to damage during natural hazard events
14	Access the resources and data available at the Planning and Inspections Departments of Onslow County relevant to the mitigation of natural hazards
3, 4, 10, 11	Provide effective evacuation prior to natural

General Hazard Mitigation Strategies

The following mitigation strategies have been decided upon based on approaches and ideas used in other jurisdictions and the County to achieve the stated objectives and goals. (See Onslow County Multi-Jurisdictional Hazard Mitigation Plan).

1. Richlands will develop, enhance, and implement education programs aimed at mitigating natural hazards, and reducing the risk to citizens, public agencies, private property owners, businesses, and schools. (Town Administrator; Ongoing).
2. Richlands will provide flood protection information to all property owners in Richlands through the use of a quarterly newsletter, utility bill, website, maps or other available methods. The information should include general identification of the local flood hazard, flood safety, flood insurance, property protection, etc. (Town Administrator, Town Clerk, Billing Clerk; Annually).
3. The Town will maintain a listing of streets that would serve as main evacuation routes in the event of a hurricane. (Police Department and Richlands Volunteer Fire Department; Ongoing).
4. Richlands will continue to maintain ditching along streets to facilitate drainage throughout town. (Public Works; Ongoing).
5. Richlands will continue enforcement of the Flood Damage Prevention Ordinance, which does not permit new solid waste disposal facilities, salvage yards and chemical storage facilities to be located in Special Flood Hazard Areas. (Town Administrator; Ongoing).
6. Richlands will ensure that new lift stations go in the electrical panels will be located above flood zone elevations as required by the Town's Flood Damage Prevention Ordinance. (Town Administrator; Ongoing).
7. Richlands will consider adding tie-down requirements for LP tanks and aboveground heating oil tanks that are in the flood hazard areas. (Planning Department; Ongoing).
8. Richlands will consider addressing the issue of corrosion of mobile home tie-downs through a public awareness campaign within the Town limits. This action is primarily in response to the tornado/ high wind hazard situations. (Town Administrator; Ongoing).
9. Richlands will consider address adding tie-down requirements for all sheds, garages, carports, etc., that do not have walls secured to the floor in a manner meeting the NC Building Code. This will be applied Town wide. (Planning Department; Ongoing).
10. Richlands will address the roads on private property within the town limits that are unable to accommodate emergency vehicles through a public

awareness campaign. (Town Administrator, Richlands Volunteer Fire Department; Ongoing).

11. Richlands will develop an evacuation strategy for hazardous material response which will be applied Town wide. (Police Department, Richlands Volunteer Fire Department; Ongoing).
12. Richlands will provide a list of contractors and consultants knowledgeable or experienced in retrofitting techniques and construction in flood zones to its citizens. (Planning/ Zoning Department; Ongoing).
13. The Town will rely on existing ordinances and land use controls to regulate development within the floodplain and update them as necessary. (Planning/Zoning Department; Ongoing).
14. The Town will access the resources and data available at the Planning and Inspections Department of Onslow County relevant to the mitigation of natural hazards and meet with the Onslow County annually to coordinate progress on Hazard Mitigation Plans. (Town Administrator; Ongoing/Annually).

Specific Hazard Mitigation Strategies

The Town of Richlands has continuously implemented and will continue to implement the following mitigation strategies:

1. Actions
 - a. To Counter Rising Water/ Flooding:
 - Richlands deals with beaver dams as the need arises.
 - Richlands has participated in the NFIP since 1987.
 - Duties of the Flood Plain Administrator have been assigned.
 - The Flood Damage Prevention Ordinance addresses freeboard.
 - The White Oak River LIDAR mapping has been completed. New DFIRMS are available.
 - Richlands addresses drainage issues as the need arises.
 - Local TV stations have sophisticated equipment to predict and accurately report weather. They are even able to pinpoint geographic areas. There is a special audible alert that precedes weather advisories.
 - State building codes establish specifications for construction.
 - State and CAMA buffer rules are enforced to improve the quality of storm water runoff.
 - Richlands removes debris as soon as possible after a heavy storm event.
 - Culverts and drains are kept free of debris.

- Richlands provides technical assistance to property owners regarding protecting their property.
 - Richlands has established laws which address Base Flood Elevations.
- b. To Counter High Winds:
- The Jones-Onslow Electric Membership Cooperative and Duke Progress provide electric power to the community and they have a continuous program of tree trimming.
 - Mobile home owners are educated via the radio and television when severe weather is threatening.
 - The National Weather Service monitors and reports wind speeds and storm conditions.
 - Local TV stations have sophisticated equipment to predict and accurately report weather. They are even able to pinpoint geographic areas. There is a special audible alert that precedes weather advisories.
 - Richlands removes debris as soon as possible after a high wind event utilizing city employees, volunteers, contractors, and other assistance.
- c. To Counter Winter Storms:
- The National Weather Service monitors and reports winter storms.
 - Local TV stations have sophisticated equipment to predict and accurately report weather. They are even able to pinpoint geographic areas. There is a special audible alert that precedes weather advisories.
 - Richlands clears roads on Town maintained street system and assists the State on State-maintained highways.
 - County Health Department and DSS provide information on heating assistance.
- d. To Counter Wildfire:
- The NC Forestry Service has an ongoing wildfire education program.
 - Daily District Readiness Plans (which report fire activity) are available to emergency personnel and the general public at http://www.dfr.state.nc.us/fire_control/fc_rpm.asp Fire risk is announced over the fire nets.
- e. To Counter Drought:
- The National Weather Service monitors and reports rainfall.

- ONWASA has a water conservation plan in effect.
 - Local TV stations have sophisticated equipment to predict and accurately report weather. They are even able to pinpoint geographical areas. There is a special audible alert that precedes weather advisories.
- f. Miscellaneous/ General:
- The County Health Department and State Division of Social Services both provide educational information and information on resources.
 - TV and radio stations continue to educate residents on various types of weather/ hazard events and offer suggestions for addressing.
 - The Richlands Zoning Ordinance addresses nonconforming buildings.
 - Duties of code enforcement officer incorporate mitigation strategies.
 - Police alert special needs population of need to evacuate.
 - Regulations exist and are enforced to prevent erosion of the land due to construction.
 - The Onslow County Schools continue to teach about and prepare children for disasters.
 - Mitigation strategies are incorporated into the environmental impact review of projects.

2. Policies

The policies that have been developed and that will be monitored and improved are shown below. They reinforce the mitigation strategies that are already being implemented and those that are planned.

- a. Make use of Richlands flood plain, parcel data, and aerial photographs in digital format. The Town of Richlands will need to rely on Onslow County GIS to furnish these data.
- b. Richlands will provide assistance to citizens about flood insurance, flood protection, flood plain management, and the natural and beneficial functions of flood plains. Many documents are available free of charge from the Federal Emergency Management Agency (FEMA).
- c. Continue to actively pursue State and Federal grant funds to assist in the hazard mitigation recommendations included in the plan.
- d. Richlands will continue to encourage projects undertaken by the Richlands Police Department, Richlands Volunteer Fire Department

the Public Works Department and ONWASA that will lessen the vulnerability of the Town and its residents to natural hazards.

- e. When projects are found to address hazard mitigation, the availability of State and Federal grant funds should be investigated that may assist the Town with the cost.
- f. Richlands will continue to update and use the existing Richlands Emergency Management Plan.
- g. Richlands will consider revising the Flood Damage Prevention Ordinance to ban and/or remove existing companies with hazardous material/ junkyards out of the flood plains.
- h. Richlands will support ONWASA on developing a comprehensive water shortage response plan.
- i. Richlands will support ONWASA's citizen education program on water conservation to include distribution of free water conservation kits to Town water customers when made available by ONWASA.
- j. The mitigation strategies will be reviewed at least yearly to evaluate progress and identify new strategies.
- k. Codes and adopted plans and how they will influence mitigation measures are listed below and described in [Appendix C – Capability Assessment](#) :
 - CAMA Land Use Plan
 - Zoning Ordinance
 - Building Codes and Inspections
 - Subdivision Ordinance
 - Storm Water Management
 - Floodplain Ordinance and NFIP

Geographic Planning Area

Two planning areas were identified where flood events regularly occur. These planning areas include areas around the Squires Run Creek, a tributary of the New River or areas very close to the FEMA established flood zones.

IV. IMPLEMENTATION

A. Process

The Richlands portion of the Onslow County Hazard Mitigation Plan will be implemented through the delegation of assignments by the Town Administrator, and as specified within this plan. In [Section III, Mitigation Strategies and Policies](#), 14 mitigation strategies are listed and assigned to specific departments or divisions. There are several established policies that support the goals and objectives of the Hazard Mitigation Plan. The policies

are shown on [Worksheet #4 – Community Mitigation Policy Summary – Town of Richland](#)).

It will be the responsibility of the Town Administrator, as he/ she sees fit, to ensure these actions are ultimately carried out no later than any target completion dates unless reasonable circumstances prevent their implementation (i.e. lack of funding availability). Otherwise the completion of each proposed mitigation action has been determined feasible within the timeframe allowed. It should be noted that a great many of these mitigation actions are intended to be ongoing without start or completion dates and are actually being accomplished as a normal part of a department's routine duties.

Funding Sources

Local funds obtained during the annual budgeting process, as well as grant funding will be explored to help offset the cost of implementing the hazard mitigation plan.

V. MONITORING, EVALUATING, AND REPORTING PROGRESS

A. Monitoring

Staff will be responsible for monitoring the implementation of this hazard mitigation plan annex. The review of the plan will take place annually and the results will be reported to the Town Administrator.

B. Evaluating

1. Benchmarks

The new tasks will be reviewed according to the schedule established for their accomplishment. Those activities already underway will be evaluated on an annual basis for continued effectiveness or viability.

2. Responsibility

a. Updating the Vulnerability Assessment

The vulnerability assessment ([Appendix B](#)) will be annually reviewed and updated.

b. Updating the Capability Assessment

The capability assessment ([Appendix C](#)) will be annually reviewed and updated.

C. Public Involvement

The plan will be available on the Town web page and will be made available at the Richlands Town Hall for review. The Town will be receptive to public comment and recommended changes that may come from the Town's citizens.

D. Reporting

Staff will prepare the plan maintenance report annually, with the assistance of the Town Administrator. It will report each of the measures underway or

recommended and report on the effectiveness of the measure and make recommendations for changes.

VI. REVISIONS AND UPDATES

The Town Administrator will review the plan maintenance report and present any significant findings to the Board of Aldermen with any recommendations for interim updates and revisions that he/she considers advisable. As updates occur, the date, reason and responsible party should be noted. The entire plan will be updated on a five-year cycle and revisions submitted to the NCDEM and FEMA.

APPENDIX A: HAZARD IDENTIFICATION (SEE [ONSLow COUNTY MJ-HMP](#))

See attached [Worksheet #5 – Hazard Identification and Analysis Matrix](#) for Town of Richlands prioritization.

A. Hurricanes

Between the years 1953 and 2011, there have been 40 hurricanes that in some way, affected the Town of Richlands. 16 of these were significant enough that, nationally, they had some statistic such as deaths or damage value applied.

No hurricane striking the Town of Richlands has ever caused a recorded death. Property damage from high winds and falling trees has occurred. Flooding has caused minimal property damage during hurricane events. The major expense to the community has been for the removal of debris after such storms.

Tsunamis

In recorded history, there have never been any reports of tsunamis striking eastern North Carolina, so this is not considered a problem, even though the impact could be severe.

Flooding

Significant flooding in Richlands has not occurred often, and normally results from extreme rains, usually associated with a hurricanes and nor'easters.

Nor'easter

The last recorded nor'easter causing any damage in Richlands was in March 1993. The storm caused some tree limbs to down some power lines. No injuries were reported.

Tornado/ Extreme Storms

Although tornado warnings occur several times a year in eastern North Carolina, Richlands has had only one confirmed tornado hit. This storm, in March 2000, destroyed 1 mobile home. No injuries were reported. Severe thunderstorms are more frequent, though wind damage is rare. Winds from a severe thunderstorm in July 2002 downed some trees and limbs, damaging a mobile home. No injuries were reported.

Drought/ Heat Wave

Richlands is blessed with, on the average, adequate rainfall, and doesn't generally suffer from drought.

Wildfire

Richlands is susceptible to wildfires due to the proximity of the Hoffman Forest to the east. There have been no wildfires reported within the last 50 years in the Richlands Town limits.

Winter Storm/ Freezes

Over the past 30 years, severe winter storms/ freezes in Richlands have occurred, on average, every ten years. Less severe freezes occur almost every year but do not cause major problems.

Earthquake

There is no known record of seismic activity in Richlands.

Landslide

The coastal plain of North Carolina, which encompasses the Town of Richlands, is very close to being flat. There are no cuts into hills or along the coast to cause a landslide, so this is not considered a threat.

Dam/ Levee Failure

There are no manmade dams within the vicinity of Richlands.

Volcano

In recorded history, there has never been any evidence of a volcano, and therefore never an eruption.

This information is based on Town memories of long-time Town residents and employees, data taken from the National Weather Service, and the recorded history of this area. Because resources are limited, the Town has chosen to direct its efforts to mitigating damages caused by hurricanes, flooding, and nor'easters. The hazards associated with these events include high winds and flooding.

APPENDIX B: VULNERABILITY ASSESSMENT

A. Narrative Summary:

The data in this appendix was taken from county tax maps, GIS databases, insurance records, Federal census data, and Town records. Other data was taken from the personal knowledge of the Town's long time citizens.

1. Major Physical Features in the Town of Richlands

The Town of Richlands is located in the northwestern part of Onslow County in southeastern North Carolina. Richlands is geographically one of the highest elevated areas of the county. The main drainage outlet for Richlands is Squires Run Creek, a minor tributary of the New River, which runs along the eastern boundary of the Town. Richlands is located approximately 12 miles from the City of Jacksonville, the main urban center of Onslow County and approximately 35 miles from the coastline of the Atlantic Ocean.

There are approximately 10.9 miles of Town-maintained streets and approximately 5.3 miles of the NCDOT maintained roads located in the Town limits.

Of the 1.3 square miles in the Town, approximately 60% is designated as urban-developed. 80% of the urban-developed land is designated for residential. Approximately 40% of the total land in Richlands is

designated as undeveloped land. The undeveloped land in Town is used primarily for agricultural purposes.

2. Critical Facilities and Public Buildings

There is no list regarding what should be considered a “critical facility.” However, for purposes of this mitigation plan, The Town of Richlands considers critical facilities to be those structures from which essential services and functions for the continuation of public safety actions and disaster recovery are performed or provided. These facilities are considered essential to the health, safety, and viability of the community.

The inventory of critical facilities has been compiled using best available data from the Richlands Administration, the Richlands Police Department, and the Public Works Department. Where possible, they have been shown on the Critical Facilities Map of Richlands.

These facilities include the supporting “life-line” infrastructure essential to the mission of critical facilities. For mitigation planning purposes, all critical facilities will be classified according to the following categories and numbered priority scales:

LEVEL 1: Must not lose operational capability

- Richlands Town Hall (Emergency Operations Facility)
- Richlands Police Department
- Richlands VFD
- Richlands High School (Designated Emergency Shelter)
- Water Wells and Water Storage Tower (ONWASA operated)
- Wastewater Treatment Facility (ONWASA operated)
- Wastewater Pump Lift Stations (ONWASA operated)

A major goal of the Town of Richlands is for these facilities to remain operational throughout any disaster in order to continuously provide vital public services.

LEVEL 2: Must be operational within 24 hours of event

- Major roads and bridges
- Major government buildings
- Emergency shelters

Initially the functions normally provided by Level 2 facilities may be provided by Level 1 facilities until these Level 2 facilities are once again operational. If they cannot be operational within 24 hours, some of their functions will be transferred.

Richlands Critical Facilities List:

Richlands Town Hall (EOC)	302 South Wilmington Street
Richlands Volunteer Fire Department	113 North Wilmington Street
Richlands High School (Primary Shelter)	8100 Richlands Highway
Water Well #1	Franck Street
Water Tower/ Well #2	Cox Street
Public Works Facility	Jimmy Powell Lane
Wastewater Treatment Facility	Jimmy Powell Lane
Trexler Middle School (backup storm shelter)	201 East Foy Street

1. Community Exposure to all Hazards

Only flooding can generally be considered site-specific, because it occurs in the areas adjacent to the Squires Run Creek, a minor tributary of the New River. These are the areas most susceptible to flooding. All other hazards that Richlands may be subject to are not site-specific, but may occur throughout the Town of Richlands.

2. Repetitive Loss Structures

According to the National Flood Insurance Program, there are no repetitive-loss structures in the Town of Richlands. Only one structure is currently located within a designated flood hazard area. The structure predates the NFIP.

3. Geographic Planning Areas and Demographics for Each Hazard

a. Documentation of Loss Estimates (See [Onslow County MJ-HMP](#))

b. Geographic Planning Areas Process

The geographic planning areas were selected based on the types of hazards that have been experienced during the last fifty years and where the damage was located.

c. Geographic Planning Areas Hazards

The actual hazards are also based on the experience of the community.

d. Geographic Planning Areas Present and Future Vulnerabilities

The only vulnerabilities that can be anticipated are along a minor drainage tributary. This is the only fixed point where damage has occurred due to specific known events – flooding due to hurricanes.

4. Geographic Planning Area Vulnerability Assessment

As described elsewhere, the primary hazards for which the Town needs to plan for and does plan for are hurricanes and associated flooding. The major activity and public expenditures that are associated with these events are debris cleanup and disposal. Experience in this community has taught most to build high enough to avoid floodwaters. Public structures certainly observe this restriction except for those types of structures that must be in those locations (such as sewerage lift stations). In those cases, all possible precautions are taken to avoid or at least minimize damage and enable the facility to be quickly restored to operation. See [Worksheet #6 – Geographic Planning Area Vulnerability Assessment – Town Wide \(Town of Richlands\)](#).

APPENDIX C: CAPABILITY ASSESSMENT

A. Existing Policies and Programs

1. CAMA Land Use Plan

The CAMA Land Use Plan is intended to fulfill the CAMA requirements for the preparation of a Core CAMA Land Use Plan. The CAMA Land Use Plan was previously updated in December 1999. For the 2009, 10 year update, the Town of Richlands elected to be part of the Onslow County CAMA Land Use Plan. There is currently a pending update to the plan, dated April 2009. The plan was developed to protect natural resources and to insure effective and efficient use of infrastructure. This plan is formally adopted by the Board of Aldermen and approved by the State.

2. Zoning Ordinance

The Town of Richlands Zoning Ordinance protects property values and natural resources. This is formally adopted by the Board of Aldermen. A revised Zoning Ordinance was adopted on April 9, 2013.

3. Building Codes and Inspections

The Town of Richlands has adopted a Minimum Housing Code and contracts with the Onslow County Code Enforcement Department to provide all building inspections within the Town limits.

4. Subdivision Ordinance

The Town of Richlands Subdivision Ordinance addresses the suitability of land for development and provides for runoff control. This ordinance is adopted by the Board of Aldermen. A revised Subdivision Ordinance was adopted on November 21, 2000.

5. Storm Water Management

Richlands is currently in the process of reviewing the need to adopt a comprehensive Storm Water Management Plan and applying for an NPDES permit, which provides for education, public information, and

maintenance of drainage-ways, which reduce the chance for blockages and the attendant flooding. This is a Federal and State initiative and the Town program must be adopted by the Board of Aldermen and approved by State regulatory authorities.

6. Flood Damage Prevention Ordinance and NFIP

The Flood Damage Prevention Ordinance is a key component of the NFIP and prevents development that could be damaged by flooding. The ordinance provides for a floodway area that will allow the maximum amount of floodwaters to pass through an area unimpeded and help reduce future flood damage. A revised Flood Damage Prevention Ordinance was adopted by the Board of Aldermen on November 3, 2005 and the Town Richlands has been a member of the NFIP since 1987.

Jurisdictional Capability

1. Legal

The legislative authority of the Richlands Board of Aldermen, a local government, is described in *Appendix C* of the Town of Richlands Hazard Mitigation Plan.

2. Fiscal

Past history has shown that grants for these purposes are difficult to get through the approval process for a municipality so local funds are anticipated to be the source of funds for hazard mitigation.

3. Political

The “local political climate” is difficult to assess. This is because, in Richlands, there is a municipal election every two years and each new Board has its own goals and desires. When true value or benefit is shown when compared to costs, Boards will support mitigation measures.

4. Technical

The Town has the technical ability to develop the necessary ordinances, regulations or change existing rules to meet the needs of hazard mitigation.

5. Institutional

The Town has the professional staff either to accomplish the tasks shown or to contract the work to be done and monitored.

Analysis of Capability

After gathering the preceding capability information, the data was analyzed and evaluated. The analyzed and evaluated data provided the framework for developing the Town’s recommendations for specific mitigation actions. The data draws attention to special opportunities currently viable for the Town to capitalize upon, and identifies shortfalls in the Town’s jurisdiction's capabilities.

Worksheet #7 – Community Capability Assessment – Town of Richlands

provides a summary of the Town's existing policies, programs, and their effectiveness at mitigating natural hazards. In general, this assessment shows that the Town has been committed to mitigating the effects of natural hazards but in response to recent storm events, additional action may need to be taken.

An acceptability assessment is a useful analytical step, which can help the Town of Richlands both prioritize and focus limited resources on the most critical of its mitigation needs. Having reviewed which natural hazards pose the greatest threats, the capability of the Town to respond, and the particular areas within the Town's planning jurisdiction that are most vulnerable, the Town can then decide whether this level of risk is acceptable. Town officials and planners can use these conclusions to focus local mitigation efforts on those areas where they are most critically needed, thus making the most of limited financial personnel, and material resources. Conclusions can also help determine whether it is necessary to increase the area's capability in certain areas to reduce its vulnerability

WORKSHEET #1: COMMUNITY GOALS TOWN OF RICHLANDS

Goal Category (General; Future Development; Existing Structures; Public Education & Outreach; Redevelopment; Natural Resource Protection)	Goal Statements (Include source reference)	New or Existing Goal (Circle One)		Hazard Threat Addressed (type of hazard and/or location)
1. General	Reduce loss of life and personal injury from natural hazards.	New		All Hazards
2. Existing Structures	Minimize the damage to public infrastructure resulting from natural hazards.	New	Existing	All Hazards
3. Future Development	Manage future development so that vulnerability of private property to natural hazards is reduced.	New	Existing	All Hazards
4. General	Expedite post-disaster clean up, repair and construction.	New	Existing	All Hazards
5. Natural Resource Protection	Protect the fragile natural and scenic areas located along the White Oak River and our canals/creeks/tributaries	New	Existing	All Hazards
6. Public Education & Outreach	Develop, enhance, and implement education programs aimed at mitigating natural hazards and reducing risk	New	Existing	All Hazards

WORKSHEET #2: GEOGRAPHIC PLANNING AREA POLICIES TOWN OF RICHLANDS

Policy	Type(s) of Hazard This Policy will Target	Funding	Responsible Party/ Start & Completion Date	Benchmarks and Indicators of Progress	Priority (High, Medium, Low)
Continue to actively pursue State and Federal grant funds to assist in the hazard mitigation recommendations included in the plan.	All Hazards	Town of Richlands General Fund \$ Unknown	All departments review grant notifications as they become public, determining need and eligibility. Ongoing	This is an ongoing activity	Medium
Richlands will continue to encourage projects undertaken by the Richlands Police Dept, Richlands VFD, the Richlands Public Works Dept and ONWASA that will lessen the vulnerability of the Town and its residents to natural hazards.	All Hazards	Town of Richlands General Fund/ONWASA \$ Unknown	All Departments Ongoing	As ideas come forth through networking, etc., they are evaluated, and either the project is undertaken or funding is sought.	Medium
Continue to update and use the existing Richlands Emergency Management Plan.	All Hazards	Town of Richlands General Fund \$ Unknown	Town Administrator and Board of Aldermen Ongoing	The plan is reviewed annually. Changes are made as they are found necessary.	Medium
The mitigation strategies will be reviewed annually to evaluate progress on the mitigation strategies selected and identify new strategies.	All Hazards	Town of Richlands General Fund \$ Unknown	All Departments Annually	The plan is reviewed annually. Changes are made as they are found necessary.	Medium
Richlands will evaluate the current building and development forms for evidence that they identify and address mitigation strategies.	All Hazards	Town of Richlands General Fund \$ Unknown	Planning/ Zoning Department Annually	Identify issues and revise forms	Medium

WORKSHEET #3: GEOGRAPHIC PLANNING AREA POLICIES (FLOODING) TOWN OF RICHLANDS

Policy	Type(s) of Hazard This Policy will Target	Funding	Responsible Party/ Start & Completion Date	Benchmarks and Indicators of Progress	Priority (High, Medium, Low)
Make use of Richlands flood plain, parcel data, and aerial photographs in digital format. Onslow County GIS will assist in this.	Flooding	Town of Richlands General Fund \$ Unknown	Planning/ Zoning Department Ongoing	Work is performed in coordination with Onslow County GIS Department. Data is constantly checked for accuracy and completeness	High
Richlands will continue to maintain documents about flood insurance, flood protection, flood plain management, and natural and beneficial functions of flood plains. Many documents are available free of charge from FEMA.	Flooding	Town of Richlands General Fund \$ Unknown	Planning/ Zoning Department Ongoing	Annual review of available documents	Medium
Richlands will consider revising the Flood Prevention Ordinance to ban and/or remove existing companies with hazardous material/ junkyards out of the flood plains	Flooding	Town of Richlands General Fund \$ Unknown	Planning/ Zoning Department Ongoing	Approval of Ordinance Changes	Low

Worksheet #4: Community Mitigation Policy Summary Town of Richlands

Policy	Geographic Planning Area	Type(s) of Hazard This Policy will Target	Funding	Responsible Party/ Start & Completion Date	Benchmarks and Indicators of Progress	Priority (High, Medium, Low)
<p>Make use of Richlands flood plain, parcel data, and aerial photographs in digital format. Onslow County GIS will assist in this.</p>	<p>Flood Hazard Areas</p>	<p>Flooding</p>	<p>Town of Richlands General Fund \$ Unknown</p>	<p>Planning/ Zoning Department Ongoing</p>	<p>Work is performed in coordination with Onslow County GIS Department. Data is checked for accuracy and completeness.</p>	<p>High</p>
<p>Richlands will continue to maintain documents about flood insurance, flood protection, flood plain management, and natural and beneficial functions of flood plains. Many documents are available free of charge from the Federal Emergency Management Agency (FEMA).</p>	<p>Flood Hazard Areas</p>	<p>Flooding</p>	<p>Town of Richlands General Fund \$ Unknown</p>	<p>Planning/ Zoning Department Ongoing</p>	<p>Annual review of available documents.</p>	<p>Medium</p>
<p>Continue to actively pursue State and Federal grant funds to assist in the hazard mitigation recommendations included in the plan.</p>	<p>Town Wide</p>	<p>All Hazards</p>	<p>Town of Richlands General Fund \$ Unknown</p>	<p>All departments review grant notifications as they become public, determining need and eligibility. Ongoing.</p>	<p>This is an ongoing activity.</p>	<p>Low</p>

Worksheet #4: Community Mitigation Policy Summary Town of Richlands - Cont:

Policy	Geographic Planning Area	Type(s) of Hazard This Policy will Target	Funding	Responsible Party/ Start & Completion Date	Benchmarks and Indicators of Progress	Priority (High, Medium, Low)
Richlands will continue to encourage projects undertaken by the Richlands Police Dept, Richlands VFD, the Richlands Public Works Dept and ONWASA that will lessen the vulnerability of the Town and its residents to natural hazards.	Town Wide	All Hazards	Town of Richlands General Fund/ONWASA \$ Unknown	All Departments Ongoing	As ideas come forth through networking, etc., they are evaluated, and either the project is undertaken or funding is sought.	Medium
Continue to update and use the existing Richlands Emergency Management Plan.	Town Wide	All Hazards	Town of Richlands General Fund \$ Unknown	Town Administrator and Board of Aldermen Ongoing	The plan is reviewed annually. Changes are made as they are found necessary.	Medium
The mitigation strategies will be reviewed annually to evaluate progress on the mitigation strategies selected and identify new strategies.	Town Wide	All Hazards	Town of Richlands General Fund \$ Unknown	All Departments Annually	The plan is reviewed annually. Changes are made as they are found necessary.	Medium
Richlands will evaluate the current building and development forms for evidence that they identify and address mitigation strategies.	Town wide	All Hazards	Town of Richlands General Fund \$ Unknown	Planning/ Zoning Department Annually	Identify issues and revise forms	Medium

Worksheet #4: Community Mitigation Policy Summary Town of Richlands - Cont:

Policy	Geographic Planning Area	Type(s) of Hazard This Policy will Target	Funding	Responsible Party/ Start & Completion Date	Benchmarks and Indicators of Progress	Priority (High, Medium, Low)
Richlands will consider revising the Flood Prevention Ordinance to ban and/or remove existing companies with hazardous material/ junkyards out of the flood plains	Flood Hazard Areas	Flooding	Town of Richlands General Fund \$ Unknown	Planning/ Zoning Department Ongoing	Approval of Ordinance Changes	Low

WORKSHEET #5: HAZARD IDENTIFICATION AND ANALYSIS MATRIX

Hurricanes and Coastal Storms	3	4	3	24	1	Local Records
Landslide	1	1	1	2	7	Local Records
Tornado/Extreme Storms	3	3	3	18	3	Local Records
Tsunamis	1	1	1	2	6	Local Records
Wildfire	2	1	1	3	5	Local Records
Winter Storm	2	2	1	6	4	Local Records
	<u>Likelihood of Occurrence</u> 1 = Unlikely <1% probability or less than one chance in next 100 years. 2 = Possible 1-10% probability next year or at least one chance in next 100 years. 3 = Likely 10-100% probability, or at least one chance in next 10 years. 4 = Highly Likely near 100% chance of occurrence in next year.	<u>Intensity Rating</u> 1 = Low 2 = Mild 3 = Moderate 4 = Severe	<u>Potential Impact</u> 1 = Negligible <10% - Minor injuries; minimal quality of life impact; critical facilities and services shutdown <24 hours. 2 = Limited 10-25% - Some injuries; critical facilities shutdown for > 1 week. 3 = Critical 25-50% - multiple severe injuries; critical facilities shutdown for 2 weeks. 4 = Catastrophic >50% - multiple deaths; facilities shutdown > 30 days	<u>Total</u> (Occurrence + Impact) * (Intensity) = Hazard Mitigation Value	<u>Conclusions</u> Mitigation Priority in order of potential adverse consequences of the hazard. "1" being the most adverse and decreasing in ranking order after that.	

WORKSHEET #6: GEOGRAPHIC PLANNING AREA VULNERABILITY ASSESSMENT TOWN OF RICHLANDS

Hazards: Drought, Heat Wave, Earthquake, Hurricanes and Coastal Flooding, Tornado/ Extreme Storms, Tsunamis and Nor'easters

Current Conditions				Potential Future Conditions (2015)		
Type of Development	Number of Existing Private Buildings	Current Value	Current Number of People	Projected Number of Private Buildings	Projected Value	Projected Number of People
Single-Family Residential	677	\$98,224,510	1,018	958	\$138,921,667	1291
Multi-Family Residential	62	\$6,272,520	119	82	\$8,245,329	178
Commercial	130	\$53,729,850	498	135	\$55,589,729	558
Industrial	--	--	--	--	--	--
Other	40	\$1,500,700	--	37	\$1,388,148	--
<i>Subtotal</i>	<i>909</i>	<i>\$159,727,580</i>	<i>1635</i>	<i>1211</i>	<i>\$204,144,872</i>	<i>2027</i>

Worksheet #6: GPA Vulnerability Assessment Town of Richlands - Cont:

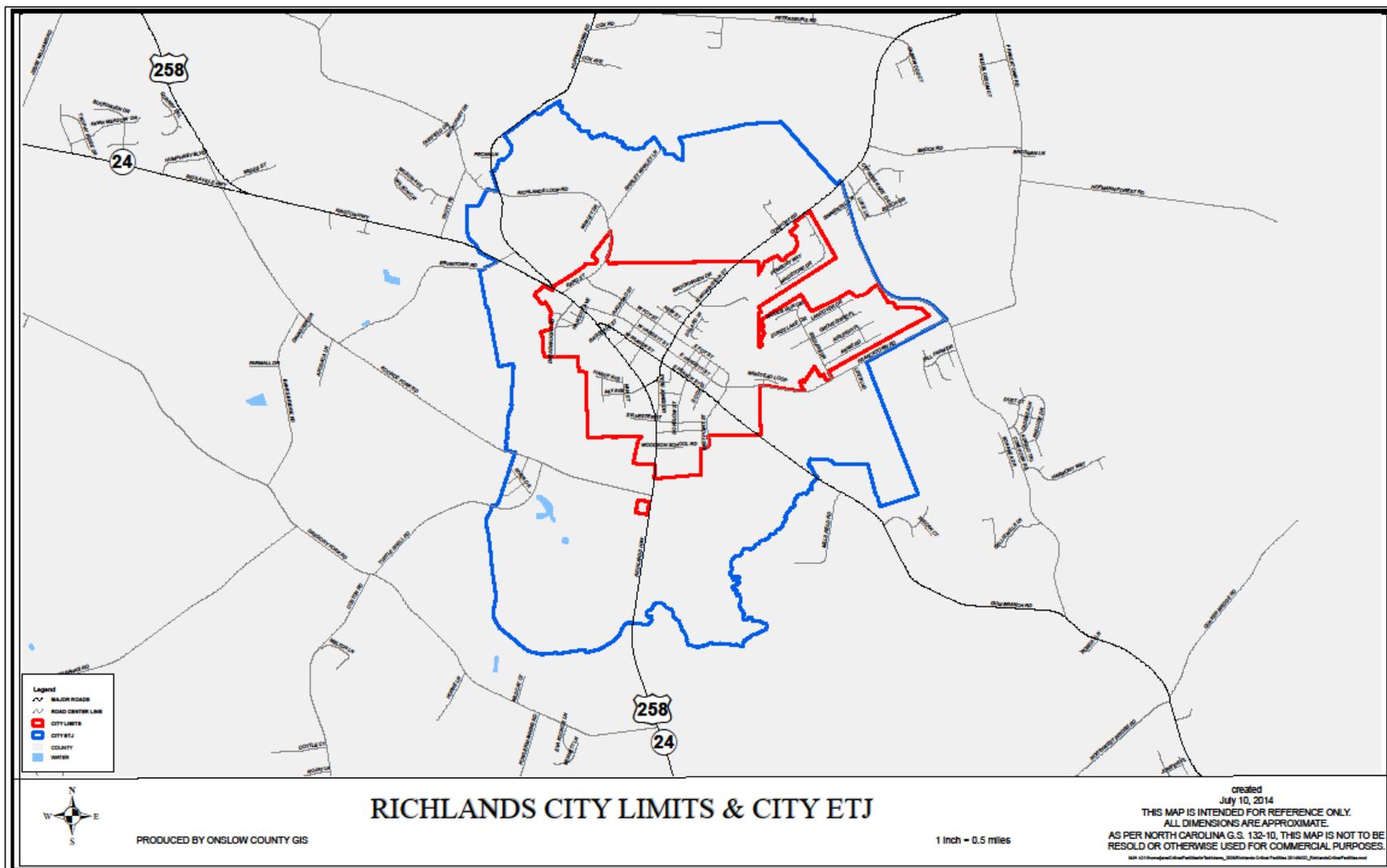
Current Conditions				Potential Future Conditions (2015)		
Type of Development	Number of Existing Public Buildings and Critical Facilities	Current Value	Current Number of People	Projected Number of Public Buildings and Critical Facilities	Projected Replacement Value	Projected Number of People
ONWASA * Sewage Treatment Plant	1	Unknown	Unknown	1	Unknown	Unknown
ONWASA* Water Wells & Tower	3	Unknown	0	Unknown	Unknown	0
ONWASA* Sewer Lift Stations	7	Unknown	0	Unknown	Unknown	0
Schools	3	\$53,203,127	3044	3	\$63,759,301	3118
Infrastructure (roads, drainage, etc.)	10.91 street miles	\$8,698,324	N/A	12.1 street miles	\$9,647,088	N/A
Fire Station	1	\$591,350	35	1	\$653,087	35
Government Offices: Town Hall, Police & Public Works	3	\$815,480	12	2	\$900,616	15
Subtotal		\$63,308,281	3091		\$74,960,092	3168
TOTAL:	18 structures, 10.91 miles of streets	\$223,035,861	4,726	7 Structures, 12.1 miles of streets	\$279,104,964	5,195

** ONWASA is currently involved in a Capital Lease Agreement with the Town of Richlands regarding the operation and maintenance of the water and sewer utilities in the town. Though these facilities are located in the Town's jurisdiction, the Town would not be responsible for the funding repair if damages occurred.*

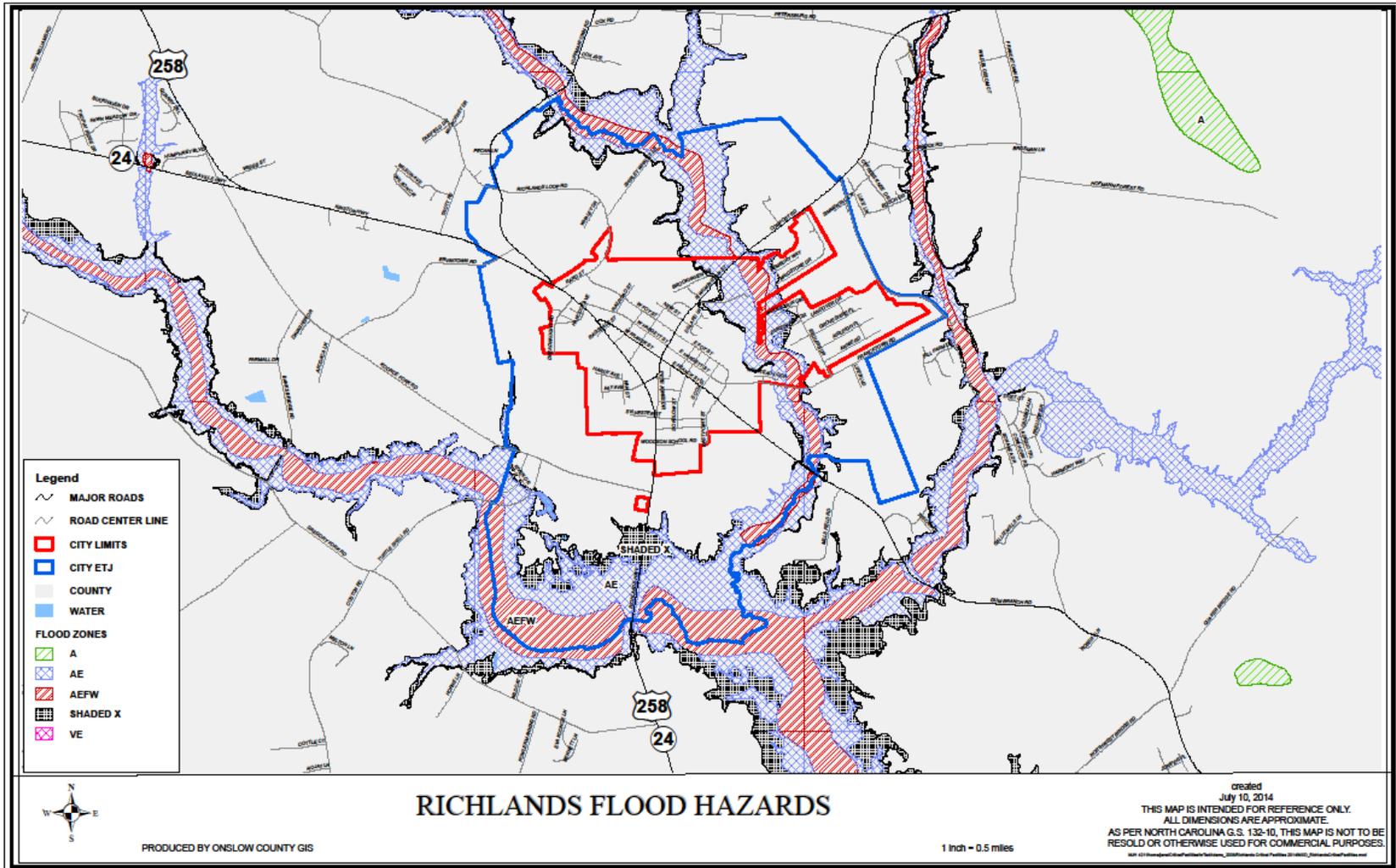
WORKSHEET #7: COMMUNITY CAPABILITY ASSESSMENT TOWN OF RICHLANDS

Policies and Programs	Policy/ Program Status	Document Reference	Effectiveness of Mitigation	Rationale for Effectiveness	Recommendations for Incorporating Into Hazard Mitigation Strategy
CAMA Land Use Plan	Existing	Town of Richlands 1999 Land Use Plan Update Adopted October 19, 2009	Medium	Protect natural resources; insure effective and efficient use of infrastructure	Continue to enforce State standards
Zoning Ordinance	Existing	Town of Richlands Zoning Ordinance Revised April 9, 2013	Medium	Protect property values, natural resources, and minimize hazards.	Continue to enforce Town Ordinance
Building Codes and Inspections	Existing	Town of Richlands Minimum Housing Code Adopted May 19, 1987	High	Provides construction standards that protect building and homes.	Continue to enforce State and Town standards
Subdivision Ordinance	Existing	Town of Richlands Subdivision Ordinance Revised Nov. 21, 2000	Medium	Addresses the suitability of land for development and provides for development standards.	Continue to enforce Town standards
Storm Water Management	Potential	To be developed in the future.	Medium	Provides for effective storm water runoff control	Develop and adopt program
Flood Damage Prevention Ordinance	Existing	Town of Richlands Flood Damage Prevention Ordinance Adopted Nov. 3, 2005	High	Addresses loss prevention related to flood events.	Continue to enforce Town Ordinance

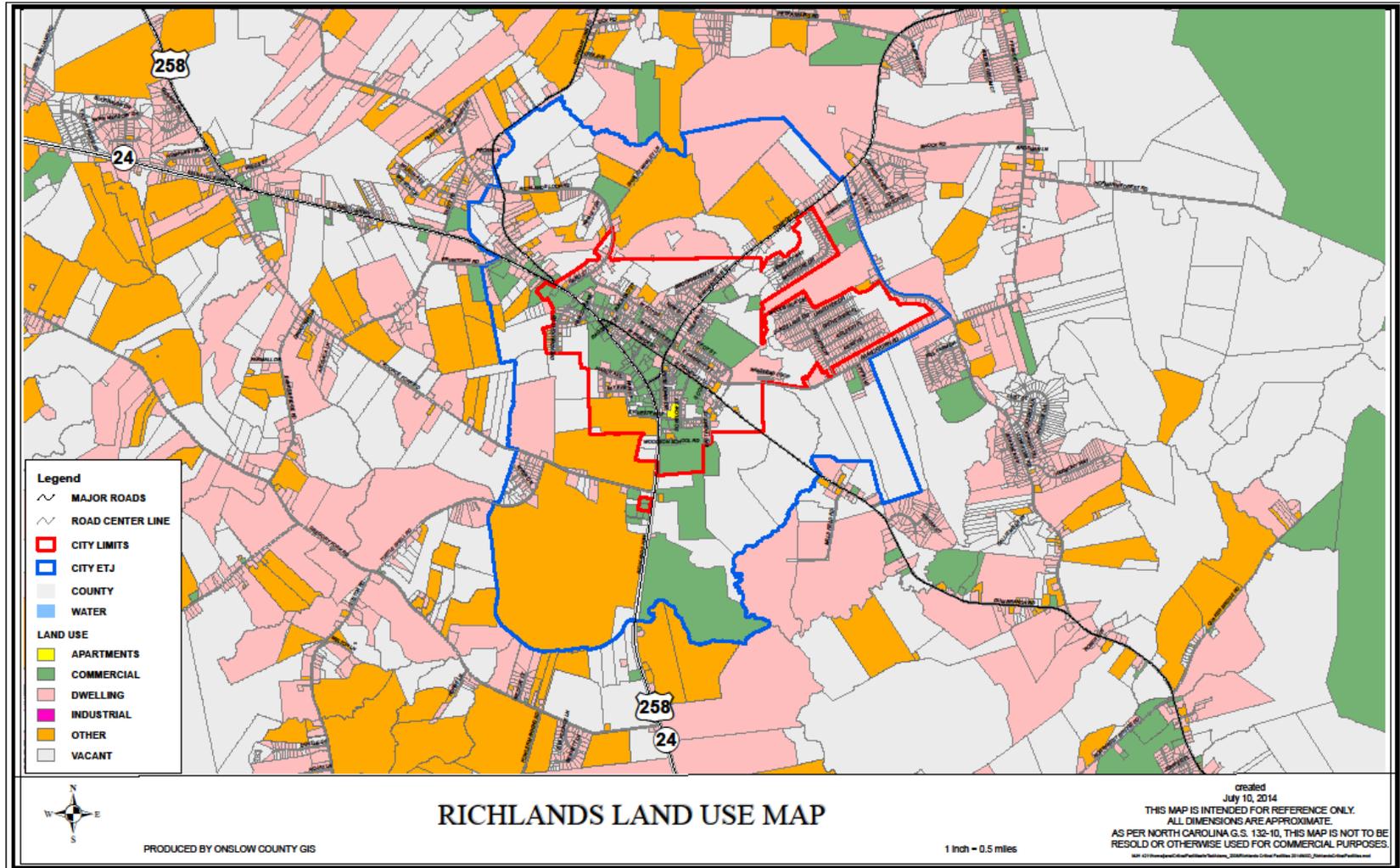
RICHLANDS CITY LIMITS & CITY ETJ - MAP #1



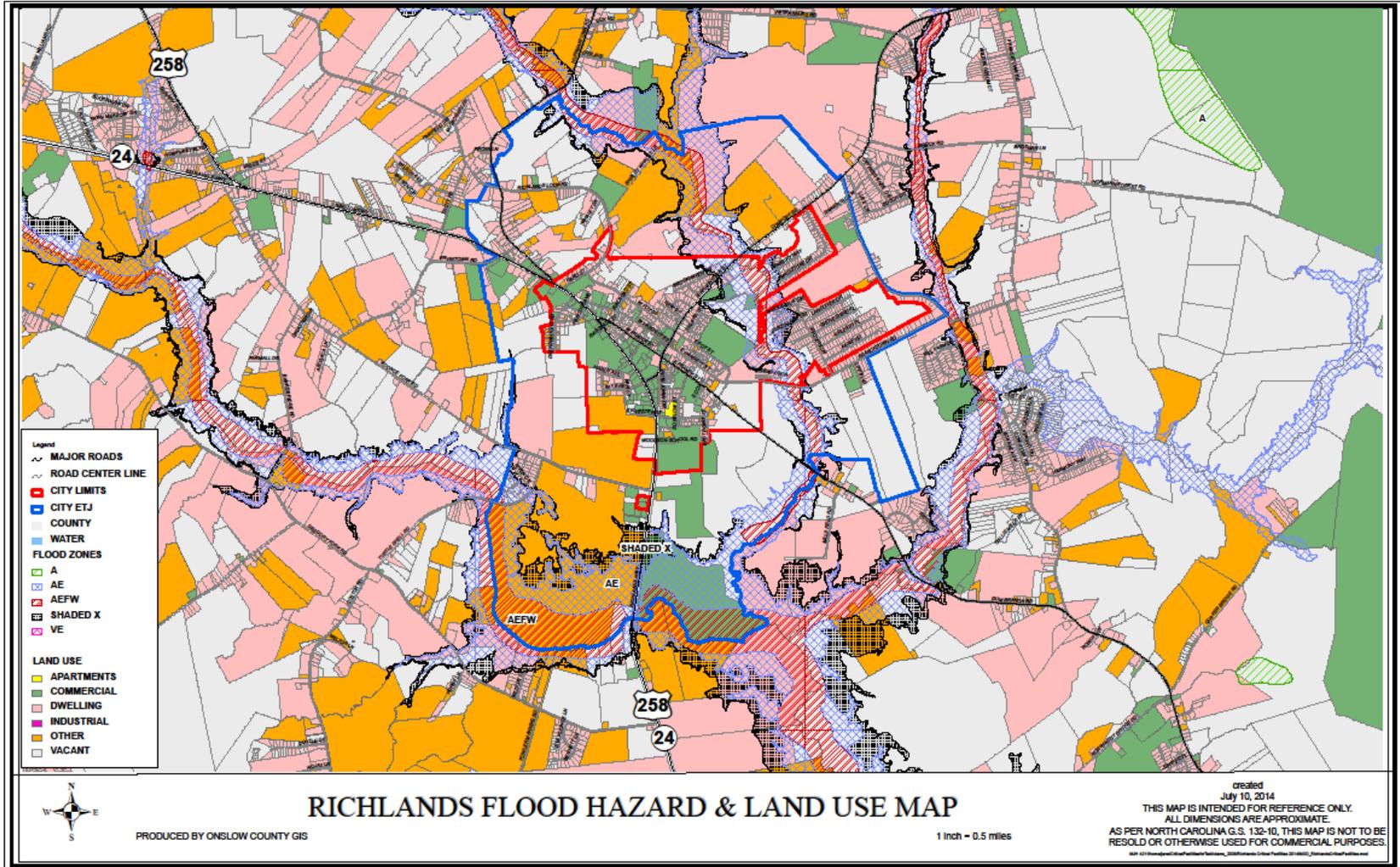
RICHLANDS FLOOD HAZARDS - MAP # 2



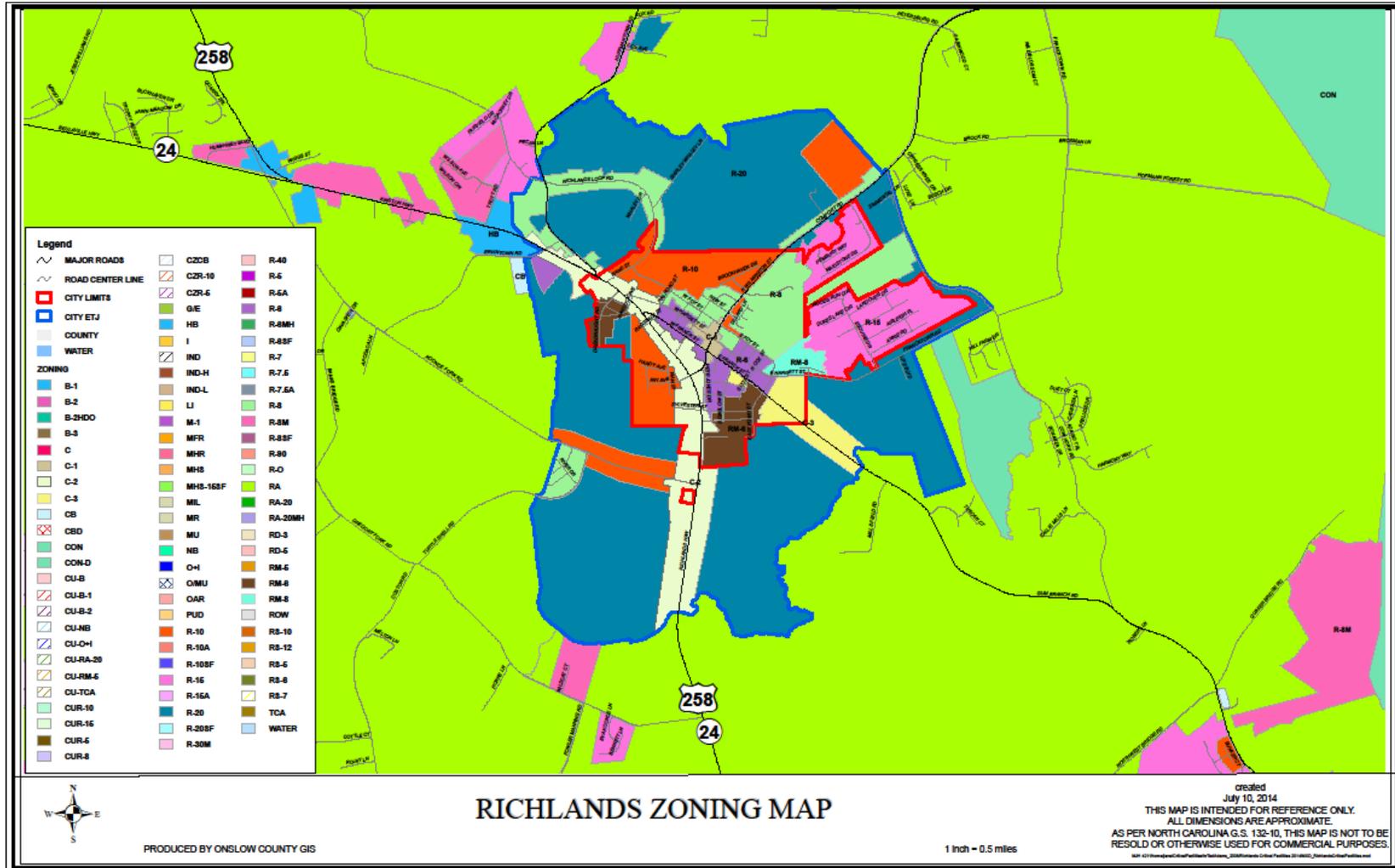
RICHLANDS LAND USE - MAP # 3



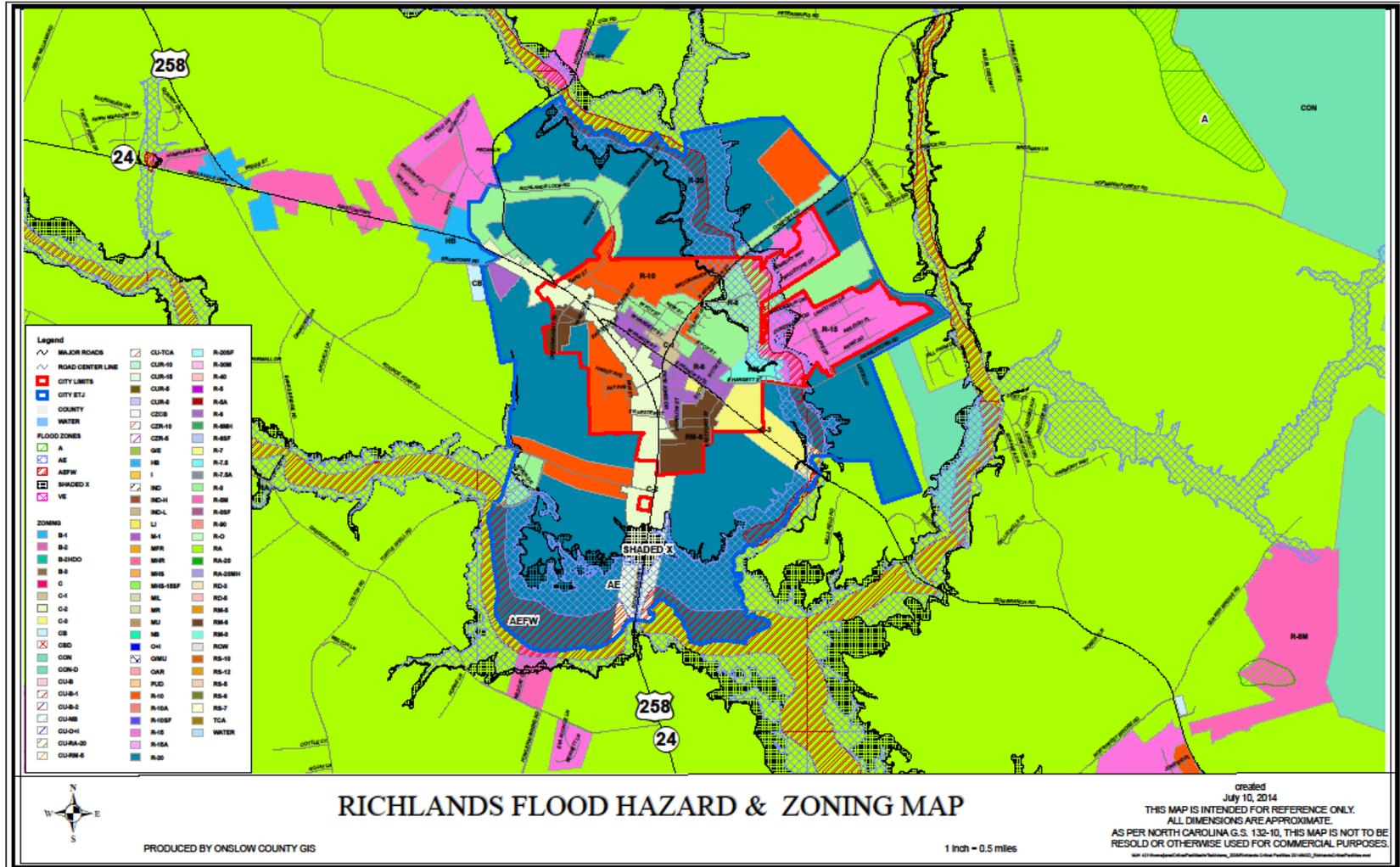
RICHLANDS FLOOD HAZARD & LAND USE - MAP # 4



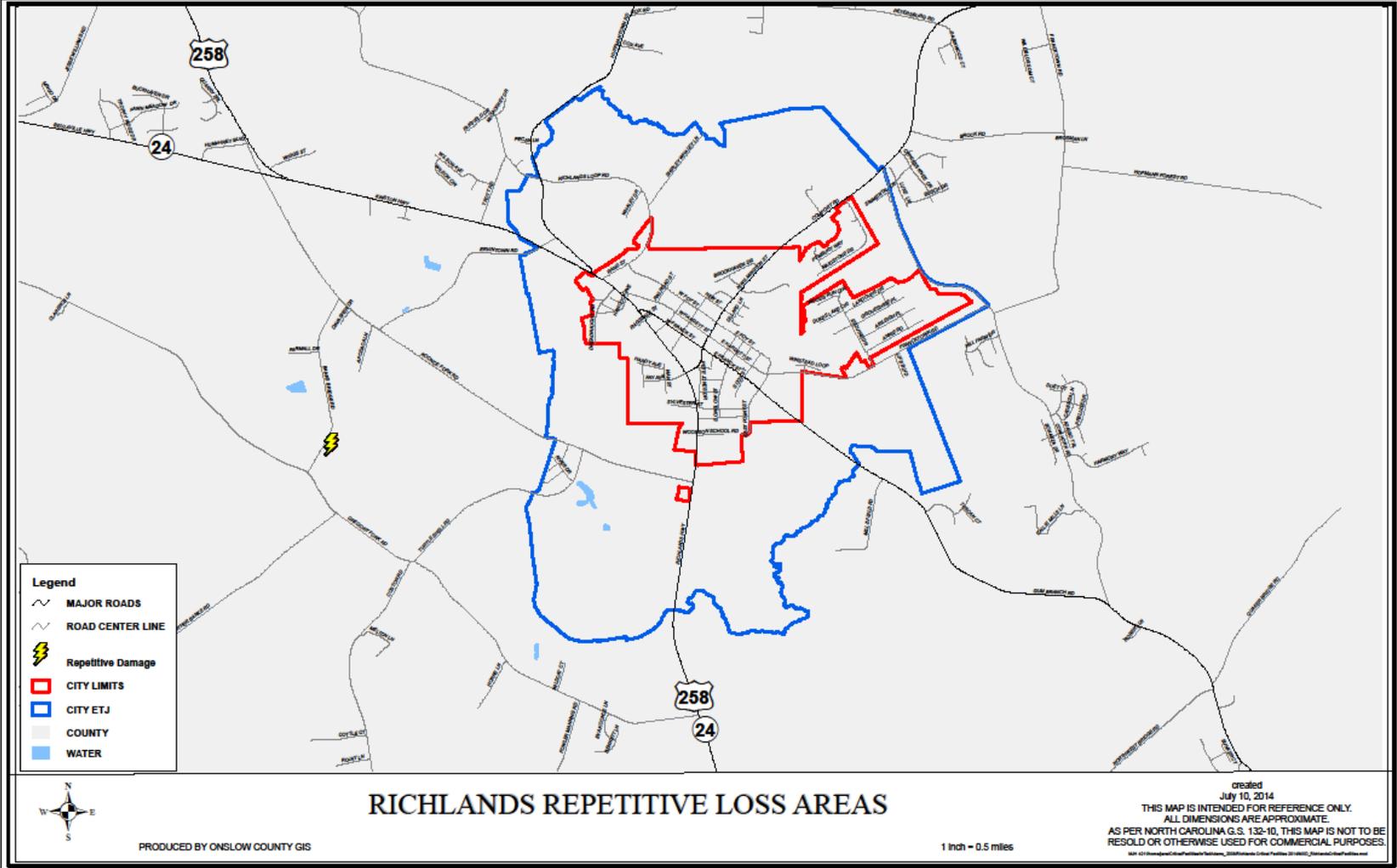
RICHLANDS ZONING - MAP # 5



RICHLANDS FLOOD HAZARD & ZONING - MAP # 6



RICHLANDS REPETITIVE LOSS AREAS - MAP # 7



RICHLANDS FLOOD HAZARD and REPETITIVE LOSS AREAS - MAP # 8

