

Draft Environmental Assessment

**Louisiana State University  
Agricultural Center**

**Coastal Area Research Station  
Facilities Relocation to the  
Aquaculture Research Station  
East Baton Rouge Parish Louisiana**

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**FEMA**

U.S. Department of Homeland Security  
Federal Emergency Management Agency, Region VI  
Louisiana Recovery Office  
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## LIST OF ACRONYMS

APE	Area of Potential Effects
ARS	Aquaculture Research Station
BFE	Base Flood Elevation
CAA	Clean Air Act
CARS	Coastal Area Research Station
CBRA	Coastal Barrier Resources Act
CBRS	Coastal Barrier Resources System
CFR	Code of Federal Regulations
cm	Centimeter
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DFIRM	Digital Flood Insurance Rate Map
EA	Environmental Assessment
EFH	Essential Fish Habitat
EIS	Environmental Impact Statement
EO	Executive Order
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
FP&C	Facility Planning and Control
FPPA	Farmland Protection Policy Act
GOHSEP	Governor's Office of Homeland Security and Emergency Preparedness
HP	Historic Preservation
LDEQ	Louisiana Department of Environmental Quality
LDNR	Louisiana Department of Natural Resources
LGS	Louisiana Geological Survey
LSU	Louisiana State University
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWS	National Weather Service
PA	Public Assistance
RCRA	Resource Conservation and Recovery Act
SF	Square Foot
SFHA	Special Flood Hazard Area
SHPO	State Historic Preservation Office/Officer
USACE	United States Army Corps of Engineers
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

## 1.0 INTRODUCTION

### 1.1 Project Authority

Hurricane Katrina made landfall on August 29, 2005, in southeast Louisiana as a Category 3 storm. Maximum sustained winds at landfall were estimated at 120 miles per hour and were accompanied by strong and damaging storm surge well above normal high tide. President George W. Bush declared a major disaster for the State of Louisiana and signed a disaster declaration (FEMA-1603-DR-LA) on August 29, 2005, authorizing the Department of Homeland Security's Federal Emergency Management Agency (FEMA) to provide federal assistance in designated areas of Louisiana.

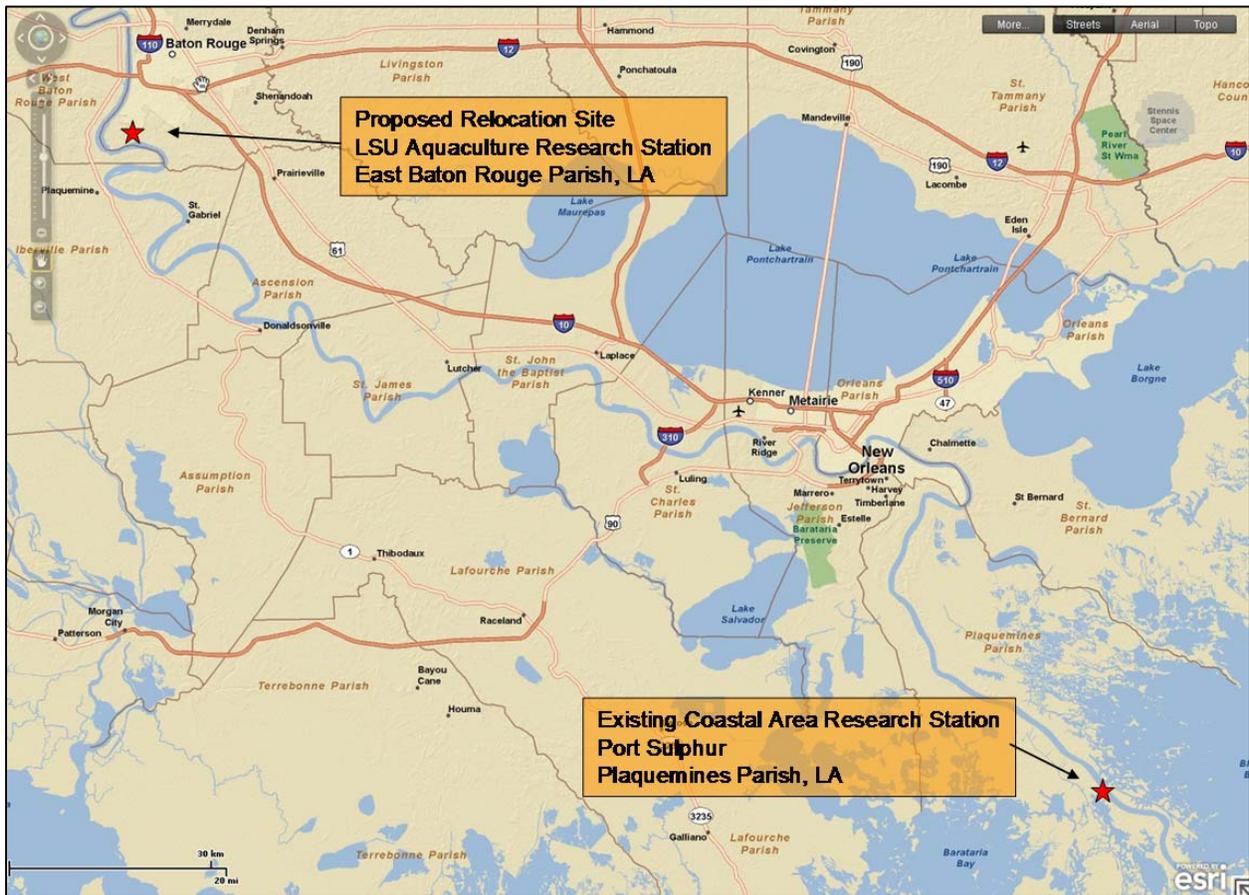
The State of Louisiana Facility Planning and Control (FP&C) requested through the State of Louisiana Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) that FEMA provide disaster assistance through the provision of federal grant funding pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), PL 93-288, as amended. Section 406 of the Stafford Act authorizes FEMA's Public Assistance (PA) Program to fund projects to repair, restore and replace facilities damaged as a result of the declared event.

FP&C was deemed eligible by FEMA for federal disaster public assistance as an eligible applicant serving the needs of the general public. Before Hurricane Katrina, the Louisiana State University (LSU) AgCenter Citrus Research Station in Port Sulphur, Louisiana in Plaquemines Parish provided facilities for research on citrus, mainly Satsuma and mandarin oranges, with some limited work on commercial vegetables, other fruits, and termites. The facility and its contents were damaged as a result of the declared event and FEMA has deemed them eligible for repair and/or replacement. The station has now been renamed the Coastal Area Research Station (CARS) to better reflect the post-storm expanded research emphasis planned.

The damaged CARS is located at 22193 Highway 23 in the town of Port Sulphur in Plaquemines Parish, Louisiana. The Station's initial focus was citrus research; however, it is now investigating coastal plants and the role these plants have in the state's fight against coastal erosion. Station researchers are investigating plant varieties such as smooth cordgrass and are trying to select and breed those plants that have the most beneficial characteristics and traits that will help protect or restore areas of the state that have experienced land loss. Facilities at the CARS included residential buildings, greenhouses, pump houses, a chemical storage building, a shop/storage building, an office, sheds, ponds, and other appurtenant facilities (LSU AgCenter, 2011).

FP&C determined that reconstruction of the facility to its predisaster configuration in its existing location would not best meet the needs of the community. Therefore, FP&C requested approval and federal grant funds for a change of location improved project to replace the eligible facilities with new facilities providing similar and new functions at a new location at the existing LSU Aquaculture Research Station (ARS) in East Baton Rouge Parish, approximately 105 miles to the northwest of the damaged facility (Figure 1).

The LSU ARS is one of 20 LSU AgCenter facilities across the state, which is part of the Louisiana Agricultural Experiment Station. Located on 178 acres south of the LSU A&M campus in Baton Rouge, the facility includes 146 experimental ponds totaling 100 surface acres. Scientists conduct research on catfish, oysters, alligators, baitfish, turtles, a variety of freshwater game fish, and crawfish. The goal of this facility is to make the aquaculture industry more competitive in the global economy (LSU AgCenter, 2011).



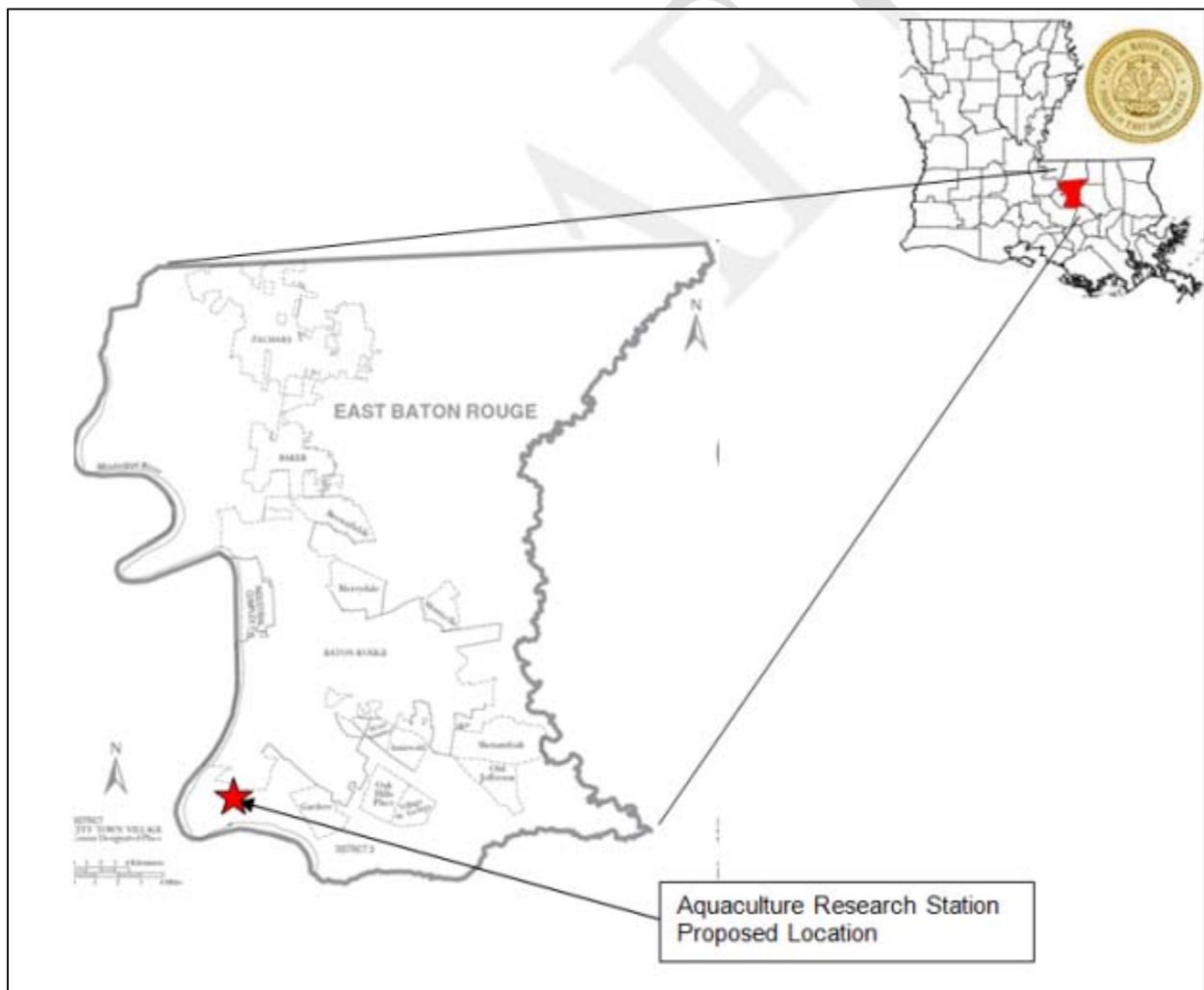
**Figure 1 - Coastal Area Research Station Change of Location Alternate Project**

In accordance with 44 Code of Federal Regulation (CFR) for FEMA, Subpart B – Agency Implementing Procedures, Section 10.9, an Environmental Assessment (EA) is being prepared pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President’s Council on Environmental Quality (40 CFR Parts 1500-1508). This EA will determine if the proposed relocation of the CARS facilities will have the potential for significant adverse effects on the quality of the human and natural environment at or near the LSU ARS. The results of this EA are being used to make a decision whether to initiate preparation of an Environmental Impact Statement (EIS) or to prepare a Finding of No Significant Impact (FONSI).

## 1.2 Area Description

East Baton Rouge Parish/the City of Baton Rouge (a consolidated City-Parish government) is located in southeast Louisiana along the eastern bank of the Mississippi River. Baton Rouge is the seat of the state capitol, home to two state universities (Louisiana State and Southern A&M), and is a major port (farthest inland deep-water port on the Mississippi River) and leading industrial center. The parish contains an area of approximately 470 square miles with an estimated 2010 census population of approximately 440,171 people residing in 166,543 households (U.S. Census Bureau QuickFacts, 2012). There are currently three incorporated areas within the parish including the Cities of Baton Rouge, Baker, and Zachary (FEMA 2008a).

The parish is bordered by two rivers; the Mississippi River borders the west side of the parish and the Amite River borders the east. Parishes surrounding East Baton Rouge are Ascension, East Feliciana, Iberville, St. Helena, Livingston, West Baton Rouge, and West Feliciana.



**Figure 2 – East Baton Rouge Parish and the Proposed Reconstruction Location (Wikipedia, 2011)**

The climate for the parish is humid subtropical but is subject to significant polar influences during winter months. Prevailing southerly winds create a strong maritime character. This movement from the Gulf of Mexico provides a source of abundant moisture and rainfall. The average annual rainfall for Baton Rouge is approximately 63 inches. The monthly rainfall is fairly evenly distributed; however, the wettest month is July averaging approximately 6.1 inches of rainfall with October being the driest averaging approximately 3.8 inches of rain (FEMA, 2008a).

The climate of East Baton Rouge is greatly influenced by the Gulf of Mexico, which gives the area its semitropical marine character. During the fall, winter, and spring, heavy rainfall can result from frontal storms caused by the interaction of warm, moist Gulf air and cold dry air from approaching fronts out of the northwest. Intense convective storms are triggered in the summer by a combination of daytime heating and the Gulf moisture. While East Baton Rouge Parish is located approximately 200 miles inland from the Gulf, hurricanes and tropical storms still pose a significant flooding threat.

### **1.3 Project Location**

The proposed project site is located in the southwest corner of East Baton Rouge Parish at 2410 Ben Hur Road in the Duncan Point area along the east bank of the Mississippi River (Main Aquaculture Center Building - Latitude 30.367533, Longitude -91.182056). The site is bordered on the south and southeast by pasture lands, on the southwest and west by wetland forests, on the east by cultivated farm lands, and on the north and northwest by small lakes and single family homes of the Laurel Lakes Subdivision. Land use in the vicinity (within one mile) includes the Warren and Grace Farr Park, the Louisiana State School for the Deaf, the LSU Golf Course, and the LSU Fire Training Center each approximately one mile from the proposed action (Figure 3, Area Topography and Figure 4, Aerial Photograph).



**Figure 3 - LSU Aquaculture Research Station Area Topography (esri® ArcGIS, 2011)**



**Figure 4 - LSU Aquaculture Research Station Site Aerial Photograph with Proposed Action Area Highlighted (esri® ArcGIS, 2011)**

#### **1.4 Purpose and Need for the Proposed Action**

The objective of the FEMA PA Grant Program is to provide assistance to State, Tribal and local governments, and certain types of private nonprofit organizations so that communities can quickly respond to and recover from major disasters or emergencies declared by the President. Through the PA Program, FEMA provides supplemental federal disaster grant assistance for debris removal, emergency protective measures, and the repair, replacement, or restoration of disaster-damaged, publicly owned facilities and the facilities of certain private nonprofit organizations. The PA Program also encourages protection of these damaged facilities from future events by providing assistance for hazard mitigation measures during the recovery process.

The devastation to the CARS and surrounding area caused by Hurricane Katrina and the subsequent need to rebuild forced a change in the focus of research and therefore, the Master Plan for the Research Station programs. In response to this change, a committee was formed and a Master Plan for the station was developed that involves rebuilding in the existing CARS location only those facilities necessary in this coastal area and rebuilding other facilities at the LSU ARS in Baton Rouge. It was decided that in order to mitigate future flood and storm losses,

several of the CARS facilities would be moved to a less hurricane and storm prone area. A change of location improved project has been requested to reconstruct the replacement facilities at the LSU ARS location at 2410 Ben Hur Rd, Baton Rouge, Louisiana.

The proposed action seeks to restore lost functions of the CARS in Port Sulphur, Louisiana and to utilize available grant funding for improvements and new functions including coastal plant ponds, a holding pond, greenhouses, sand beds, an equipment storage building, a work/storage building, a research plot layout area/can yard, and all associated utilities and appurtenances. The action seeks to develop the LSU ARS site in accordance with a Master Plan, which meets the goals of the LSU ARS.

This project would support implementation of the long-term community recovery plan, ensure community cohesiveness, and eliminate gaps in the resources available to ensure follow-through of recovery and hazard mitigation efforts.

## **2.0 ALTERNATIVES CONSIDERED**

### **2.1 Alternative 1 - No Action**

With the no action alternative, there would be no replacement of the damaged and destroyed facilities and appurtenances. As a result, the applicant would have diminished capabilities and resources due to the loss of the function of the facilities. Facilities would remain in a damaged condition, which would represent a risk to the community.

### **2.2 Alternative 2 – Reconstruct at an Alternate Location – Proposed Action**

The proposed action is for construction of new facilities at a site approximately 105 miles northwest of the original location at the LSU ARS in Baton Rouge. LSU ARS designed the replacement facilities in accordance with an approved Master Plan (Figure 5). The proposed facilities to be funded under this action include construction of a one acre holding pond, sixteen 10,000 square foot (sf) coastal plant ponds, two 3,000 sf greenhouses, a 9,180 sf work/storage building, a 6,000 sf equipment storage building, a can yard, two half acre sand beds, and associated site utilities (electrical, sewer, water, and wastewater). Additionally, the project action will require demolition of the Aqua Fish Machine Shop, site grading, excavation, roadways, signage, fencing, aggregate and concrete paving, and walkways.



**Figure 5 - LSU Aquaculture Research Station Master Plan**

In addition, the proposed action includes the replacement of the contents lost by the CARS including materials, furniture, heat/mechanical components and miscellaneous interior appurtenant systems.

### **2.3 Alternative 3 – Reconstruct at Original Sites – Alternative Eliminated from Further Consideration**

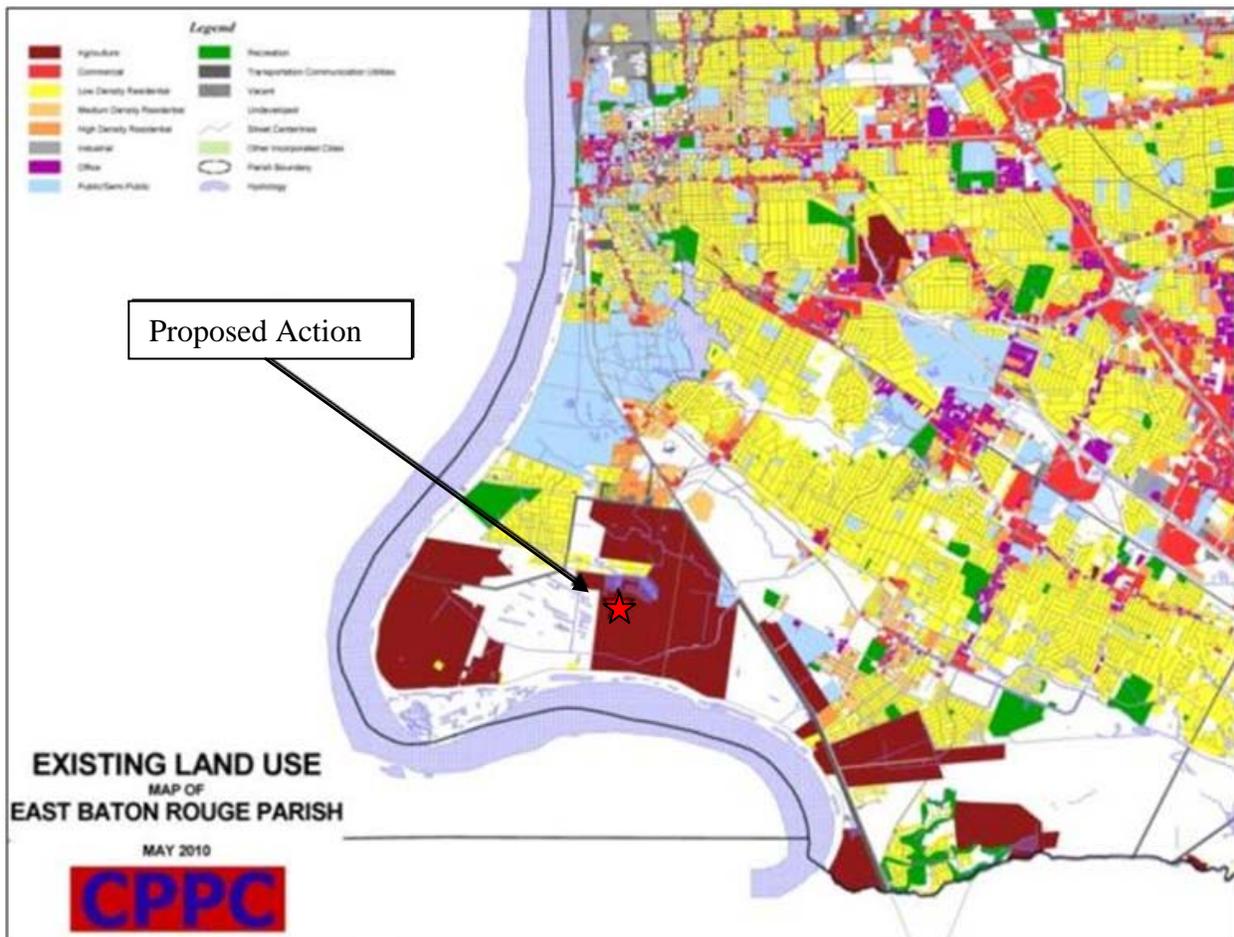
This alternative would rebuild the damaged and destroyed CARS facilities at the original site to pre-disaster configuration, function, and capacity. Grading of the site would be necessary to prepare for reconstruction. The facility would be constructed within the respective original footprint and would include improvements for meeting current codes and standards (e.g., American with Disabilities Act, building codes, local floodplain ordinances, etc.).

The damaged facilities sites are/were located in a coastal high hazard special flood hazard area (i.e., V Zone). An available site outside the coastal high hazard area was identified that was available and met the needs of the project. For the above reason, community leaders have determined the alternative to replace the facilities at the original site is not practicable, desirable, or feasible and therefore, will not be carried forward for further analysis in this draft EA.

### 3.0 AFFECTED ENVIRONMENT AND IMPACTS

#### 3.1 Land Use and Zoning

East Baton Rouge Parish consists of about 22.5 percent developed land. About 3.5 percent of the developed land is established and new commercial; 2.3 percent is industrial; and 16.7 percent is residential (BRCPPC, 2010).



**Figure 6 - East Baton Rouge Existing Land Use near the Proposed Action (Baton Rouge City Parish Planning Commission, 2010)**

The City-Parish is divided into land use categories which establish the type of land uses that can occur within individual zones (Figure 6). The purpose is to group together land uses that are compatible while keeping separate those uses which are not compatible. The East Baton Rouge Zoning Ordinance was incorporated into the Unified Development Code (the Code), a single document that is a consolidation of all of parish regulations and ordinances related to land use and development. The Code is effective throughout the Parish, except within the city limits of Baker and Zachary, which have their own zoning regulations.