

## **Chapter 3**

### **3.17. Synopsis**

This chapter of the DEIS provides a discussion and inventory of resources within each Unit Corridor Alternative. This Tier 1 EIS provides an inventory of resources as an order of magnitude of potential impacts that may result from the proposed Project in the Corridor Alternatives in each Unit.

#### **Project Environment - Resources and Potential Impacts**

The information in this chapter provides the basis for a comparison of the Build Alternative (Corridor Alternatives) in each of the three Baton Rouge Loop Units. Unit Corridor Alternatives by corridor section are shown in Chapter 2 in Table 2.1a, Table 2.1b, and Table 2.1c.

To provide consistency, analysis was performed on a Unit-by-Unit basis. Within each Unit, resources were inventoried by corridor section then by Corridor Alternative.

The No-Build Alternative is carried into the study as a baseline for establishing the potential environmental consequences of the Build Corridor Alternatives.

For purposes of the Baton Rouge Loop Tier 1 EIS, environmental resource data collection and evaluation was done on a desktop basis using existing published data and reports, internet site information, and GIS data. No field studies or surveys were conducted.

Land Cover - This section describes land cover/use for all three corridors.

#### **No-Build Alternative**

Under the No-Build Alternative, there would be no Baton Rouge Loop project-related impacts to land cover. However, other transportation improvement projects planned in the project area, discussed previously in Section 2.3.1, would potentially result in land cover impacts.

### **3.3. Socioeconomics**

#### **3.3.1. Setting**

The five-parish Baton Rouge Loop Project area has shown significant development and growth since 1990. Population in the five-parishes increased 13.7% between 1990 and 2000. It is estimated to increase by 21.0% between 2000 and 2010 for an overall projected growth of 37.6% between 1990 and 2010.

Based on US Census Bureau data, from April 1, 2000 to July 1, 2008, the Project area had a 10.93% population increase. Four of the five parishes were in the top twenty parishes for growth in the state during this period. Ascension Parish experienced the highest population growth in the state at 33.22%. Livingston Parish had the second highest growth rate with an estimated population growth of 30.98% in the same period as shown in Table 3.13.

This section has numerous charts and tables showing populations by parish, minority, and poverty. The consensus of these charts and tables were to estimate that potential population

impact in all Units, and alternatives, was not significant. That is the opinion of the engineers. I am sure that the citizens impacted will have a different view.

### **3.4. Parks, Recreation Areas, Wildlife Refuges, Community Facilities**

#### **3.4.1. Setting**

The Baton Rouge Loop Project area has multiple community facilities including parks operated by the five parishes, the Waddill Wildlife Refuge, various municipal and parish fire and police resources, and hundreds of schools, churches, and other resources in keeping with its urban, suburban, and rural setting. The majority of these resources are in proximity to population centers. The Waddill Wildlife Refuge is located in the Project

North Unit study area but is outside of any sections or alternatives. Exhibit 3-35 in Volume 2 shows parks and community facilities for the Project area.

#### **3.4.3.1. North Unit**

Tables 3.25 and Table 3.26 show the number of parks and community facilities by section and alternative in the North Unit. 3-21

These include:

§ Thirteen churches:

- o Saint Rock Church (historical), Saint Catherine Church, Community Bible Church, Sixty-eighth Avenue Baptist Church, Trinity Baptist Church, Jordan United Methodist Church, True Worship Christian Fellowship - N2,
- o Hooper Road Baptist Church - N3,
- o Evening Star Baptist Church - N9,
- o Lighthouse Church; Emmanuel Baptist Church,
- o Church of God of Prophecy - N10, and
- o True Light Church - N13.

§ Eight parks:

- o Scotlandville Park - N2,
- o Hooper Rd. Park - N3,
- o Cohn Preserve - N4,
- o Cohn Preserve, James Watson Park - N5,
- o Cohn Arboretum, Cohn Preserve - N6, and
- o Live Oak Ball Park - N12

§ One post office: Zion City - N2, and

§ Six cemeteries:

- o Westover Cemetery, Saint Catherine Cemetery, Benevolent Society Cemetery, unnamed cemetery - N2,
- o Amite Cemetery - N10, and
- o Judson Cemetery - N12

Table 3.26 shows Alternative ND has the least community facilities with 17, alternative NE has 18, alternative NA 19, and alternatives NB and NC the most with 20 each. Exhibits 3-36 to 3-38 in Volume 2 show parks and community facilities for the North Unit.

The East and South Units are presented in the same manner as the North. The charts used would not copy.

#### **Cultural Resources**

Setting - Gives a general description of the 5 parishes and the terrain contained in each.

#### **3.5.2 - Cultural Resources Terminology**

Describes the terminology used in defining the cultural resources identified in each Unit.

#### **North Unit**

Thirteen cultural resource surveys have been conducted within the fourteen corridor sections comprising the North Unit (see Appendix F)

This review indicates that twenty-three cultural resources are located within the fourteen North Unit sections: eight archaeological sites, nine historic period standing structures, and six historic period cemeteries. There are no NRHP listed properties within the fourteen North Unit corridor sections. Table 3.31 shows the resources by section.

Sections N1, N4, N5, N6, N7, N9, N13, and N14 have zero previously recorded cultural resources, while sections N7, N8, N10, and N11, have less than two cultural resources each. Sections N12 and N2 contain four and five cultural resources, respectively, while section N3 has ten cultural resources, comprised of eight historic period standing structures, one archaeological site, and one historic period cemetery.

Table 3.34 identifies the historic period cemeteries in the North Unit. Sections N1, N4 to N9, N11, N13, and N14 do not contain historic period cemeteries. Sections N3, N10, and N12 have one historic period cemetery each, while section N2 contains three - the Benevolent Society, Saint Catherine, and Westover Cemeteries.

#### **Section 4(f) / Section 6(f) Resources**

North Unit

North Unit

There are at least six Section 4(f) resources in the North Unit. Four of the resources are parks/recreation areas and two are preserves. Five of the six resources are owned by the Recreation and Park Commission for the Parish of East Baton Rouge (BREC). The sixth resource (a park) is owned by Livingston Parish. The resources by section are:

- o Scotlandville Park - N2
- o Hooper Road Park - N3
- o Cohn Nature Preserve - N4
- o Cohn Nature Preserve and James Watson Park - N5
- o Cohn Arboretum, Cohn Nature Preserve - N6, and
- o Live Oak Ball Park - N12

There are three Section 6(f) resources in the North Unit.

- o Scotlandville Park - N2
- o James Watson Park - N5, and
- o Cohn Arboretum - N6

Scotlandville Park, James Watson Park, and Cohn Arboretum are both 4(f) and 6(f) resources. One or more Section 4(f) and/or Section 6(f) resources are located in each of the five North Unit alternatives as shown in Table 3.44.

Alternative NA has the least 4(f) resources with two, alternatives B, NC, and ND have three 4(f) resources, and alternative NE has the most with four. Alternative NA has the least 6(f) resources with one. Alternatives NB, NC, ND, and NE each have two 6(f) resources.

While it is not plausible to identify impacts to all the Section 4(f) resources in the Project Units, it was feasible to identify those Section 4(f) resources that would not be impacted, as discussed in detail in Chapter 4. The 4(f) resources that would NOT be impacted are:

- North Unit
- o Cohn Preserve
- o James Watson Park
- o Cohn Arboretum
- o Live Oak Ball Park

### **3.7. Traffic and Transportation**

#### **3.7.1. Setting**

##### **3.7.1.1. Roadways**

The Baton Rouge Loop study area is served by Interstates, US highways, State Highways, and parish and local roads. Two interstates serve the Baton Rouge Loop study area I-10 and I-12.

Multiple Louisiana Routes traverse the Baton Rouge Loop study area including:

- o LA 415,
- o LA 1,
- o LA 67(Plank Road),
- o LA 408 (Hooper Road),
- o LA 410 (Blackwater Road),
- o LA 64 (Greenwell Spring Point Hudson Road),
- o LA 37 (Greenwell Springs Road),

- o LA 16, LA 1019 (Springfield Road),
- o LA 1024 (Cane Market Road),
- o LA 1025 (Arnold Road),
- o LA 447 (Walker North Road),
- o LA 449 (Corbin Road),
- o LA 75 (Bellevue Drive),
- o LA 30 (Nicholson Drive),
- o LA 74,
- o LA 73,
- o LA 44,
- o LA 22,
- o LA 431, and
- o LA 42.

Intertwined within this network are parish roads and city streets. Interstate routes are especially congested during peak hours from a combination of commuter, traveler, and truck traffic. Once a traveler or commuter has exited the interstate highway, travel through the area consists of stop and start movement that further contributes to the interstate congestion. (I think that statement is a stretch. Even if were true the widening of the interstates is going to alleviate that problem if it ever existed.)

### **3.7.3. Build Alternative**

Traffic analysis for Unit Corridor Alternatives is discussed in Chapter 2, in Section 2.7.

### **3.8. Toll Economic Impacts**

The Baton Rouge Loop is proposed as a toll facility and would have an economic impact on the driving public upon opening and operation. However, at the Tier 1 EIS level, the project would not have toll economic impacts.

Nevertheless, potential future economic effects on individual households can be illustrated using the following scenario.

Assume the toll rate is \$ 0.15 per mile, the average household travels 12-miles one-way, and makes 250 round-trips per year. Under this scenario, the annual cost to use the Baton Rouge Loop would be approximately \$900.

A Baton Rouge Loop user with an annual household income equal to the 2007 median household income of the Project study area (\$45,500) would spend approximately 2% of household income on tolls. Households with incomes at the 2007 DHHS poverty guideline level of \$20,650 (for a family of four) would spend approximately 4.4% of household income on tolls or, roughly 2.4% more than the median household income user.

The direct economic impact of Baton Rouge Loop tolls would be higher for low-income users as the cost of paying tolls would represent a higher percentage of household income than for other users. Toll road users might reduce their personal economic impact of tolls by carpooling, where tolls would be divided among many travelers.

Low-income populations unable to afford the toll should experience no additional adverse economic impacts. This population group would continue using the existing and planned regional transportation.

With implementation of the Baton Rouge Loop, the existing regional transportation system (No-Build Alternative) is projected to show improved traffic and transportation conditions. This improvement would primarily be exhibited through congestion reduction and a reduction in overall travel time. This may have a positive economic impact for non-toll using low-income population drivers. The reduction in travel time could reduce fuel consumption, therefore reducing fuel cost resulting in more disposable income.

Additionally, this reduction in travel time has the potential to have a positive impact on "quality-of-life" considerations.

#### **Air Quality**

Due to the nonattainment classification of the five parish area, the Capital Region Planning Commission acting as the technical staff of the Baton Rouge MPO, and the LADOTD, in cooperation with the Louisiana Department of Environmental Quality, prepared a

transportation conformity analysis pursuant to state and federal conformity regulations (LAC 33:III.14.B and 40 CFR part 93, respectively).

### **3.9.3. Build Alternative**

Consultation with the Louisiana Division of FHWA determined that air quality conformity modeling for the Baton Rouge area does not need to include the Baton Rouge Loop Tier 1 EIS.

This is based on CFR 40 § 93.126 Exempt projects.

Notwithstanding the other requirements of this subpart, highway and transit projects of the types listed in table 2 of this section (of the CFR) are exempt from the requirement to determine conformity. Such projects may proceed toward implementation even in the absence of a conforming transportation plan and TIP. A particular action of the type listed in table 2 of this section is not exempt if the MPO in consultation with other agencies (see §93.105(c) (1) (iii)), the EPA, and the FHWA (in the case of a highway project) or the FTA (in the case of a transit project) concur that it has potentially adverse emissions impacts for any reason. States and MPOs must ensure that exempt projects do not interfere with TCM implementation.

Floodplains

### **3.10.3. Build Alternative**

The digital 100-year floodplain from Flood Insurance Rate Maps and Flood Hazard Boundary Maps were obtained and put into the Geographic Information System (GIS) database. This data combined with a map showing all of the streams in the Project area were overlaid with the various Unit corridor sections and 100-year floodplain area by section was calculated.

#### **3.10.3.1. North Unit**

Floodplain resources were tabulated for the fourteen sections in the North Unit - Table 3.46. Review of the 100-year floodplain data in the North Unit sections identified a total of 11,987.3 acres of floodplain. Section N7 has the highest percentage -100%, while Section N2 has the least at - 3.2%. A summary of all 100-year floodplain in the five North Unit Corridor Alternatives is shown in Table 3.47. Alternatives NC and NE have the largest percentage of 100-year floodplain while Alternative NA has the smallest. Exhibits 3-70 to 3-72 in Volume 2 show North Unit floodplains.

All East Unit Corridor Alternatives have a substantial amount of 100-year floodplain. Alternative EC has the largest percentage at 82.6% and Alternative EF has the least at 79.5%.

Exhibits 3-82 to 3-85 in Volume 2 show East Unit floodplains.

A summary of all 100-year floodplain data identified within the 18 South Unit Corridor Alternatives is included in Table 3.49. Review of the 100-year floodplain data within the Corridor Alternatives of the South Unit identified a total of 190,252.5 acres of 100-year floodplain. Corridor Alternatives SA, SM, and SC have the biggest percentage of 100-year floodplain greater than 60%, while alternatives SL and SH have the least, approximately 44%.

Exhibits 3-87 to 3-89 in Volume 2 show North Unit wetlands and hydric soils.

### **3.13. Navigation & Navigable Waters**

#### **3.13.1. Setting**

Navigable waters of the United States in the Baton Rouge Loop study area are: 1) Lower Mississippi River, 2) Gulf Intracoastal Waterway Morgan City - Port Allen route, 3) Amite River, 4) Bayou Plaquemine, and 5) Bayou Manchac. Of these five, four are crossed by

potential corridors. Bayou Manchac is not crossed by any potential corridors. Both the Amite River and the Bayou Manchac have very little commercial traffic. However, they are extensively used for recreational purposes. The lower 37 miles on the Amite River is navigable while Bayou Manchac is navigable below Highway 61. Exhibit 3-69 in Volume 2 shows Project area waterbodies including the navigable waters.

### **3.13.3. Build Alternative**

Potential project effects to navigable waters and navigation, and particularly Mississippi River navigation was identified by the 8th Coast Guard District as an area of concern, early in the Tier 1 EIS. The Project Team working with the Coast Guard, and deep draft and tow maritime groups determined that three of the four proposed Mississippi River crossing locations should have navigation modeling.

#### **3.13.3.1. North Unit**

The North Unit has one navigable waterway crossing with section N2 crossing the Lower Mississippi River (LMR) at mile marker (MM) 233.8 just south of the existing US190 Bridge. Exhibits 3-70 to 3-72 in Volume 2 show the location of the North Unit Mississippi River crossing.

### **3.14. Threatened or Endangered Species**

#### **3.14.1. Setting**

A listing of current threatened and endangered (T&E) species by parish for the Baton Rouge Loop study area is shown below in Table 3.70. There are five Federal threatened or endangered species presumed or known to have occurred in three of the five parishes- Ascension, Livingston, and East Baton Rouge. West Baton Rouge and Iberville had no Federally Listed species.

The inflated heelsplitter is a large freshwater mussel. Their habitat consists of flowing rivers with stable sand or silt bottoms. They are filter feeders that extract plankton and detritus by pumping water through their siphons. The range of the inflated heelsplitter consists of Alabama, Louisiana, and Mississippi.

The gulf sturgeon lives in all saltwater habitats, except during the winter when it is found in rivers that empty into the Gulf of Mexico. Gulf sturgeons are bottom feeders and primary prey items include insects, crustaceans, mollusks, annelids (worms), and small fishes. They are found from the Mississippi River delta east to Suwannee River, Florida. In Louisiana, most occurrence records have been in the Pearl, Bogue Chitto, and Tchefuncte Rivers. They are likely to be found also in any large river located within the Lake Pontchartrain drainage.

The red-cockaded woodpeckers' habitat consists of longleaf pine forests, mixed pine-upland hardwood forests with little or no hardwood midstory.

The pallid sturgeons' habitat consists of large rivers in Southeast United States, preferring the main channels of excessively turbid rivers in areas with strong currents over firm sandy bottom.

The bald eagles' suitable habitat is primarily near large open bodies of water that provide suitable hunting ground and old-growth cypress trees used for nesting. In Louisiana, they nest primarily in southeastern coastal parishes.

The Alabama shad is found along sand and gravel bars in medium to large freshwater rivers and at sea.

#### **3.14.4. Build Alternative**

Table 3.71 shows the identified T&E species by Unit for the proposed Project.

The Amite River is designated Important Mussel Habitat. Portions of the North Unit sections N3, N8, N10, N11, and N1 cross the Amite River in the designated Important Mussel Habitat.

#### **3.14.4.1. North Unit**

All North Unit Corridor Alternatives have the potential to have seven of the T&E species identified, and critical or important habitat for three species.

##### **Waste Sites**

Twenty-six waste sites/active facilities are located within the 14 corridor sections comprising the North Unit. Eighteen of the facilities identified are active facilities that could potentially have associated waste units/ environmental issues although the exact location of the waste unit/ environmental issue within the facility may not be known. The remaining facilities are one Solid Waste site, one RCRA site, one landfill, two State Hazardous sites, and four LUSTs. Because all North Unit Corridor Alternatives include section N2, all would have a high count of known and potential waste sites.

#### **3.16.4. Potential Indirect Impacts**

The following discussion presents a general overview of potential indirect impacts of the Baton Rouge Loop project based on the location of corridor alternatives as well as existing land uses and current development pressures in areas that may be affected by project implementation. Prediction of potential indirect impacts involves a high level of uncertainty since these impacts are a function of a host of complex factors that are often not related to highway project development. In addition, since the size of the Baton Rouge Loop Project dictates that it must be built in segments over a period of years, the type, magnitude, and location of indirect impacts resulting from project construction would be dependent on several factors. This includes the implementation plan (i.e. where and when each segment would be built) as well as the siting of interchanges, which further increases the level of uncertainty in assessing possible indirect effects.

In general, the level of uncertainty in IEA can be reduced when there are land use controls and/or comprehensive plans that provide some degree of predictability about future development. However, such controls currently are not widespread in the study area. Options for controlling growth under various future scenarios, including areawide planning and zoning controls, are being explored under the separate CAEA study described previously. The recommendations from this study, if implemented, could have a major influence on the magnitude and extent of indirect impacts arising from project construction.

As mentioned above, IEA for highway projects generally focuses on changes in land use and secondary development resulting, in part, from increased accessibility and reduced travel times offered by new or improved roadways. Undeveloped lands that are subject to secondary development pressures resulting from highway projects are frequently in agricultural use.

#### **3.16.4.2. Build Alternative**

The following sections address potential indirect effects on specific land use/land cover resources, namely agricultural lands, wetlands, and floodplains, that comprise the corridor alternatives. The area of influence that may experience indirect impacts from Baton Rouge Loop construction would extend well beyond the corridor alternative limits, so this analysis should be used only as an indication of resource impacts beyond the limits of the corridor sections.

##### **North Unit**

Each of the five North Unit alternatives (NA, NB, NC, ND, and NE) is partially located in Livingston, East Baton Rouge, and West Baton Rouge Parishes. Development pressures are high in each of these parishes, but particularly in Livingston Parish. Between 24% and

33% of the alignment of each North Unit corridor alternative would be located in Livingston Parish. Based on GIS land use/land cover data presented previously in this EIS, these corridor alternatives contain approximately 80% undeveloped lands. It might be anticipated that the North Unit corridor alternatives may support secondary development in response to current pressures if this portion of the project is constructed in the near term (i.e. in an early phase of the project implementation).

The undeveloped lands within the limits of the corridor alternatives that are not converted to new highway right-of-way may be susceptible to secondary development at or near planned interchanges. Undeveloped lands beyond these limits may also be subject to development in the short term. Approximately one-third of each alternative is comprised of wetlands, roughly, 40% is comprised of floodplains, and approximately 34% of the corridor alternatives consist of agricultural lands. Secondary development would likely occur first on sites near the highway that have minimum constraints, but such sites are scarce or nonexistent in the immediate vicinity of North Unit corridor alternatives. As a result, secondary development, and especially development that might be concentrated near interchanges, appears to have a high probability of affecting these resources.