

# The More Things Change, the More They Remain the Same

**LIVING AND DYING IN CANCER ALLEY (1990 TO 2023)**



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# Background of Louisiana and DSCEJ: Community Struggle in Cancer Alley

*The Mississippi River Chemical Corridor, or Cancer Alley, produced one-fifth of the United States' petrochemicals and transformed one of the poorest, slowest-growing sections of Louisiana into working-class communities, causing a continued increase in toxic substances being absorbed in the corridor and once being called a "massive human experiment." To this day, Louisiana is consistently ranked among the states with the highest rates of cancer as a cause of death, with heart attack as the only one above it in 2019 and 2020, according to the Centers for Disease Control.*

Cancer Alley's journey to this point began when Louisiana transitioned from an agricultural and fishing economy to oil exploration in the early 1900s. The Mississippi River was ideal for petrochemical facilities due to its access to barges and chemical waste disposal. This was additionally supported by an industrial property tax exemption and expansion through perpetual extensions of tax breaks. In the 1950s, the oil-based economy employed 87,200 residents. By the 1970s, the corridor hosted 136 petrochemical plants and seven oil refineries within 85 miles—nearly one plant or refinery for every half mile of the river. This led to doubling the number of Louisianans (at 165,000) working within the industry, and industrial taxes accounted for one of every three tax dollars collected by the state. In the 1990s, the petrochemical industry, with five percent of the state's population employed, only paid \$530 million in state taxes. This represents a small fraction of the exempted taxes, yet it continued to strongly influence legislation and elections within the state. However, efforts to reduce tax exemptions and strengthen environmental regulation continued to be attempted.

The Deep South Center for Environmental Justice was founded in 1992 to respond to the toxic threats of industrial pollution along the Mississippi River Chemical Corridor. The Center sought to

assist in the development of African American leadership and build the capacity of communities to respond to these threats— and to effectively participate in the decision-making processes affecting their health, environment, and economy. This included:

- A community advisory board known as the Mississippi River Avatar Board, comprised of representatives from community organizations, met monthly.
- A robust community education and training program funded by the U.S. Environmental Protection Agency was designed and implemented over three years.
- Educating communities to understand and access scientific and technical information and research.
- Empowered community members to speak for themselves and equipped them with skills to navigate the complicated systems within agencies regulating pollution and industrial operations.

These efforts laid the groundwork for building and sustaining the environmental justice movement in Louisiana. Several of the board members went on to lead community struggles that achieved notable environmental justice victories.

# Geographical Mapping

To cultivate visualization of the issues within the Corridor, focusing on showcasing the area's collective facilities, DSCEJ created maps in 1990 centered on the number of facilities in relation to the minority percentage in the Corridor. The maps displayed the facilities that reported Toxic Release Inventory (TRI). TRI is a report of facilities' toxic release inventory, data about managing chemical waste through environmental releases (into the air, water, and land), recycling, energy recovery, treatment, and disposal. This must be reported once the facility has reached a certain threshold in emissions and waste levels. These maps show a demographically disproportionate distribution of facilities within the area. The maps of nine parishes (Ascension, East Baton Rouge, Iberville, Jefferson, Orleans, St. Charles, St. James, St. John the Baptist, and West Baton Rouge) in the corridor showed that most of the facility locations in 1990 were in Census tracts with minority populations of 40% to 60%. Few facilities were located in areas with a 0 to 20 percent minority population in four of the nine parishes (East Baton Rouge, Jefferson, Orleans, and St. Charles). Additionally, there is a clustering of facilities with three or more in one area, potentially providing more waste and emissions within the immediate area. The facilities are primarily located along the Mississippi River but expand into some of the parishes' inner lands. These maps can be found in [Appendix I](#).

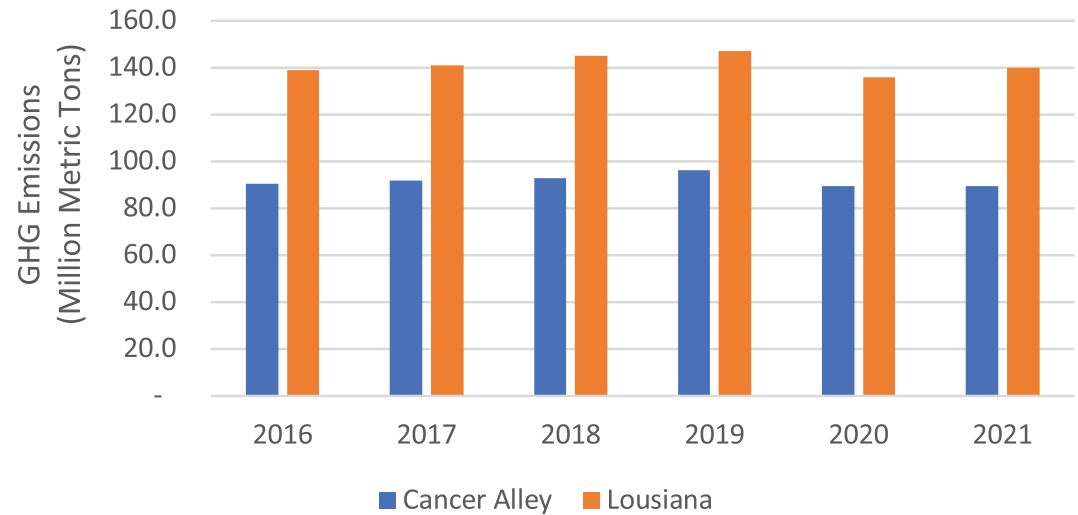
DSCEJ has updated the 1990 maps to include Toxic Release Inventory (TRI) reported total air emissions and Greenhouse Gases (GHG) total emissions in relation to poverty and minority percentages to determine if there has been a change in the facilities' relation to marginalized, underserved, and overburdened by pollution in the Corridor from 2016 to 2021. Calcasieu parish was included in the project due to the increase in pollution in the parish on par with Cancer Alley.

As of 2020, the parishes have a total population of 1.7 million, an average minority population of around 45%, and 18% of the population below the poverty line. There are 170 facilities (consisting of oil refineries, plastics plants, and chemical facilities) reporting TRI and 149 reporting GHG emissions. The Corridor produces 217 million pounds of total air emissions in TRI reports and 522 million MTCO2 emissions. Most facilities are located in Calcasieu, with 30 facilities reporting GHG and 35 reporting TRI and are relatively in the same area. GHG emissions are the highest in St. Charles from the ten parishes reviewed for this study. Ascension had the highest total air emission from TRI yearly, while it was steadily decreasing, but reported 79 million MTCO2 during the six years. Orleans parish had the highest minority and poverty percentage, with 65% and 25%, respectively.

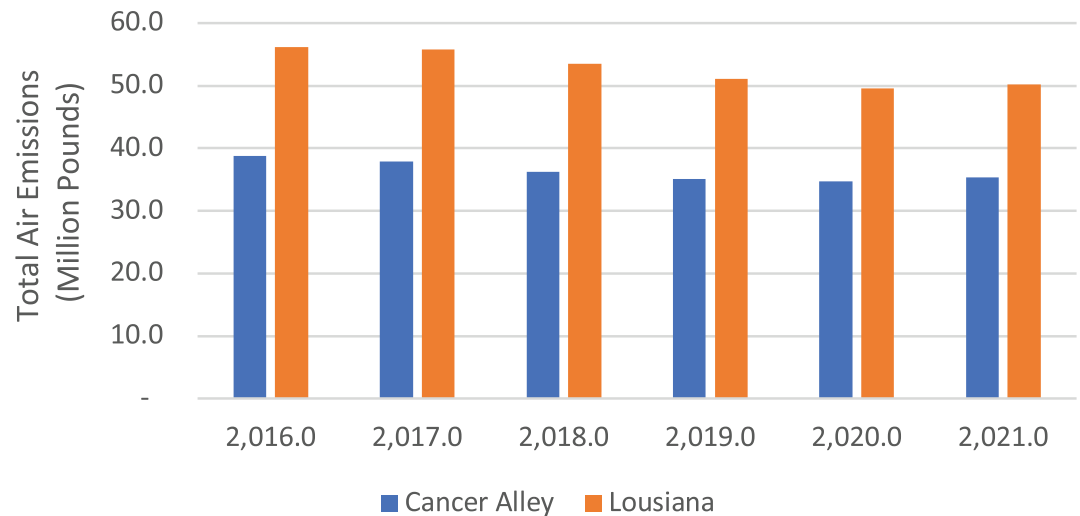
There has been an overall decrease in GHG and TRI total air emissions from 2016 to 2021. However, these facilities produce the majority of the emissions for the state. In 2020, there were 57 parishes reporting TRI, with a total of 372 facilities. The Corridor had 46% of those facilities reporting TRI. Ascension had the highest total air emission at 12 million lbs shadowing the other parishes with the second highest at 6 million lbs. There were 501 GHG facilities, with 30% of the facilities in the Corridor producing 66% of the state's emissions. Graphs showing the Corridor emissions against the state is shown below in Figure 1 and 2. As of 2020, the majority of facilities are still located in areas of minority and low-income areas. Louisiana's minority population was 42.9% in 2020 and 18.6% below the poverty line. From 2016 to 2021, the facilities are predominately areas with minority and poverty populations higher than in Louisiana. Within a 2-mile radius of the facilities, 6% of the parish's poverty population and 17% to 18% of the minority were affected by the facilities' air emissions in 2020.

The following are summaries of the new maps and comparisons to the 1990 map. These maps can be found in [Appendix II](#).

### Greenhouse Gases Emissions 2016 - 2021



### Toxic Release Inventory 2016 - 2021



# Ascension

*In 2020, Ascension had a population of 126,500, with a minority population of 28%, and 11% of the population was below the poverty line.*

## TOXIC RELEASE INVENTORY

Regarding TRI-reported air emissions, Ascension has the highest amount, with 79.27 million lbs from 2016 to 2021 and an average of 13.2 million lbs per year. The parish's highest emission year, with 13.86 million lbs, was 2018. This could result from increased facilities from 20 to 22 during this time. However, there was a 512,042.96 lb decrease in total air emissions from 2018 to 2021. The highest emitting facility, emitting over 50% of Ascension's total air emissions, is CF Industries Nitrogen, LLC, with 51.28 million lbs and an average of 8.5 million lbs annually. Of the 25 facilities, three reported no reported air emissions, and five reported less than 2,000 lbs from 2016 to 2021.

## GREENHOUSE GASES

Ascension had 96.10 million MTCO<sub>2</sub> of GHG emissions from 2016 to 2021. There was an increase in GHG in the parish by 1.70 million MTCO<sub>2</sub> from 2016 to 2021, with one new facility opening in 2020. The highest GHG emission year is 2019, with 17.3 million MTCO<sub>2</sub>. CF Industries Nitrogen, LLC, is also the highest emitting facility in GHG, with 53.5 million MTCO<sub>2</sub>, 56% of the parish's overall emissions from 2016 to 2021. In 2020, these facilities affected approximately 6% of the minority population within 2 miles of GHG facilities and 1% of the population below the poverty line in the parish.

## FACILITY LOCATION

In 1990, Ascension only had TRI-reporting facilities in Census tracts with a minority population above 40%. From 2016 to 2021, TRI reporting facilities were located primarily in areas with 25% to 50% minority and 1% to 5% below the poverty line, except for CF Industries Nitrogen, LLC being in an area with a below-poverty line population of 27.1% and 62% minority. On average, these facilities are 0.24 miles from each other and the furthest at 0.8 miles from another facility. GHG facilities were in the same area as TRI facilities—however, the average distance between GHG facilities was 0.29 miles, and the furthest gap at 1.36 miles.

# Calcasieu

*Calcasieu was not initially included in this study but was added due to increased facilities within the parish. Calcasieu had 216,785 residents in 2020, with a minority population of 29%, and 18% of the population was below the poverty line.*

## TOXIC RELEASE INVENTORY

The TRI-reported facilities in Calcasieu ranged from 28 to 31 from 2016 to 2021, and three facilities did not report TRI air emissions. During this time, 40.59 million lbs of total air emissions were reported for TRI-reporting facilities. The highest year for TRI-reported total air emissions was 2021, with 7.93 million lbs. These emissions affected approximately 11% of the minority population and 5% of the population below the poverty line in the parish within 2 miles in 2020. Firestone Polymers, LLC was the highest reporting facility, with 7.54 million lbs of air emissions reported for TRI from 2016 to 2021.

## GREENHOUSE GASES

The parish had the highest GHG emissions, with 116.33 million MTCO<sub>2</sub> in GHG emissions from 2016 to 2021. The number of facilities increased from 2016 to 2021 from 29 to 35, and six reported no GHG emissions. The highest emitting year was 2021, with 20.86 million MTCO<sub>2</sub> in GHG emissions. Citgo Petroleum Corp - Lake Charles Manufacturing Complex produced 23% of the parish's GHG emissions. Greenhouses have been steadily increasing in the parish, with a spike in 2019 at 17 million MTCO<sub>2</sub>. These emissions affected approximately 5% of the minority population and 2% of the population below the poverty line in the parish within 2 miles.

## FACILITY LOCATION

The TRI-reported facilities are primarily in the same areas as GHG-reported facilities, except GHG-reported facilities have expanded to the northwest of the parish since 2017 into areas with 15 to 25% below the poverty line. From 2016 to 2021, GHG reporting facilities were located primarily in areas with up to 25% minority and 5% to 10% below the poverty line. On average, these facilities are 0.75 miles from each other and the furthest at 7.87 miles from another facility. The average distance between TRI facilities is 0.25 miles, and the most distant gap is 2.46 miles.

# East Baton Rouge

*East Baton Rouge had a minority population of 53%, and 19% was below the poverty line in 2020.*

## TOXIC RELEASE INVENTORY

The TRI-reported facilities ranged from 23 to 28 facilities from 2016 to 2021. Eight facilities did not report TRI air emissions. During this time, 25.16 million lbs of total air emissions were reported for TRI-reporting facilities. The highest year for TRI-reported total air emissions was 2016, with 5.29 million lbs; however, there has been a steady decrease. These emissions affected approximately 14% of the minority population and 4% of the population below the poverty line in the parish within 2 miles in 2020. ExxonMobil Baton Rouge Chemical Plant (Part) was the highest reporting facility, with a total of 8.74 million LB air emissions reported for TRI. This facility produced 36% of the parish's overall emissions.

## GREENHOUSE GASES

The parish had 18 to 20 GHG facilities with 65.37 million MTCO<sub>2</sub> in GHG emissions from 2016 to 2021. There was a 2.56 million MTCO<sub>2</sub> decrease in greenhouse gas emissions from 2016 to 2021. One facility did not report any GHG emissions. The highest emitting year was in 2018, with 11.71 million MTCO<sub>2</sub> in GHG emissions. These emissions affected approximately 20% of the minority population and 8% of the population below the poverty line in the parish within 2 miles. Another ExxonMobil plant had the highest GHG emissions, with ExxonMobil Baton Rouge Refinery and Chemical Plant emitting 36.72 million MTCO<sub>2</sub> of GHG from 2016 to 2021.

## FACILITY LOCATION

In 1990, East Baton Rouge had most of the facilities within a Census tract with a 60 to 100% minority population, with only 5 in areas with a minority population of 0 to 20%. The parish also had many facilities clustered within Census tracts with an 80 to 100% minority population. From 2016 to 2021, GHG reporting facilities were located primarily in areas with 25% to 70% minority and above 10% below the poverty line. On average, these facilities are 0.74 miles from each other and the furthest at 3.33 miles from another facility. TRI facilities were in the same area as GHG facilities—however, the average distance between TRI facilities was 0.48 miles, and the furthest gap at 4.67 miles.

# Iberville

*Iberville had a population of 30,241, a minority population of 50%, and 23% were below the poverty line in 2020.*

## TOXIC RELEASE INVENTORY

The TRI-reported facilities in Iberville ranged from 22 to 24 from 2016 to 2021. Three facilities did not report TRI air emissions. During this time, 36.53 million lbs of total air emissions were reported for TRI-reporting facilities. The highest year for TRI-reported total air emissions was 2021, with 6.61 million lbs. There has been a steady increase in emissions since 2016. These emissions affected approximately 21% of the minority population and 5% of the population below the poverty line in the parish within 2 miles in 2020. Flopam, Inc produced 46% of the parish's overall emissions, with a total air emission of 16.78 million lbs.

## GREENHOUSE GASES

The parish had 15 GHG facilities with 51.95 million MTCO<sub>2</sub> in GHG emissions from 2016 to 2021. There was a 3.18 million MTCO<sub>2</sub> in greenhouse gases decrease in emissions from 2016 to 2021. The highest emitting year was in 2017, with 9.62 million MTCO<sub>2</sub> in GHG emissions. These emissions affected approximately 23% of the minority population and 6% of the population below the poverty line in the parish within 2 miles. Plaquemine Cogen Facility had the highest GHG emissions within the six years, with 17.74 million MTCO<sub>2</sub>.

## FACILITY LOCATION

Most GHG and TRI facilities are located in the 50% to 75% minority population and 10 to 25% below the poverty line areas, with only one facility in 23 to 100% below the poverty line. There is significant clustering of facilities which did not change from 1990 when there were several clusters of facilities with the largest concentration of facilities within a tract with a high minority population. On average, TRI facilities are 0.22 miles from each other and the furthest at 0.91 miles from another facility. TRI facilities were in the same area as GHG facilities—however, the average distance between TRI facilities was 0.33 miles, and the furthest gap was 1.35 miles.

# Jefferson

*The parish had a minority population of 36%, 18% was below the poverty line, and a total population of 440,781 in 2020.*

## TOXIC RELEASE INVENTORY

The TRI-reported facilities in the parish ranged from 11 to 16 from 2016 to 2021. Two facilities did not report TRI air emissions. During this time, 3.68 million lbs of total air emissions were reported for TRI-reporting facilities. The highest year for TRI-reported total air emissions was 2020, with 715,693.25 lbs. There have been increases and decreases from 2016 to 2020 in the total air emission; however, there is a 131,650.59 lbs decrease from 2016 to 2021. These emissions affected approximately 35% of the minority population and 12% of the population below the poverty line in the parish within 2 miles in 2020. Cornerstone Chemical, Co had the highest TRI-reported total air emissions, with 2.19 million lbs which is 60% of the parish.

## GREENHOUSE GASES

The parish had 6 GHG facilities with 32.3 million MTCO<sub>2</sub> in GHG emissions from 2016 to 2021. There was a 31% decrease in greenhouse gas emissions from 2016 to 2021. The highest emitting year was in 2019, with 6.61 million MTCO<sub>2</sub> in GHG emissions. These emissions affected approximately 9% of the minority population and 3% of the population below the poverty line in the parish within 2 miles. 78% of the parish's GHG emissions were produced by Ninemile Point within the six years, with 25.23 million MTCO<sub>2</sub>.

## FACILITY LOCATION

The majority of GHG and TRI facilities are located in areas with a minority population above 25% and below the poverty line above 10% areas, with only one facility in 23 to 100% below the poverty line. This is slightly different from 1990, when Jefferson had a mixture of facilities and locations, with lots of clustering throughout the parish. On average, TRI facilities are 0.72 miles from each other and the furthest at 1.62 miles from another facility. TRI facilities were in the same area as GHG facilities—however, the average distance between TRI facilities was 0.62 miles, and the furthest gap was 1.08 miles.

# Orleans

*The parish had the highest minority population and was below the poverty line with 63% and 25% in 2020, respectively.*

## TOXIC RELEASE INVENTORY

The TRI-reported facilities in the parish ranged from 2 to 5 from 2016 to 2021. Two facilities did not report TRI air emissions. During this time, 31,499.99 lbs of total air emissions were reported for TRI-reporting facilities. The highest year for TRI-reported total air emissions was 2018, with 5,721.60 lbs. There have been increases and decreases from 2016 to 2020 in the total air emission; however, there is a 131,650.59 lbs decrease from 2016 to 2021—several facilities reported very low emission levels in the TRI. However, Air Products & Chemicals Inc (New Orleans La Facility) had the highest TRI-reported total air emissions, with 31,479 lbs.

These emissions affected approximately 10% of the minority population and 3% of the population below the poverty line in the parish within 2 miles in 2020.

## GREENHOUSE GASES

The parish had 9 to 10 GHG facilities with 2.7 million MTCO<sub>2</sub> in GHG emissions from 2016 to 2021. There was a 260,657 MTCO<sub>2</sub> in greenhouse gases decrease in emissions from 2016 to 2021. The highest emitting year was in 2017, with 552,599 MTCO<sub>2</sub> in GHG emissions. These emissions affected approximately 30% of the minority population and 11% of the population below the poverty line in the parish within 2 miles. Air Products & Chemicals Inc - Industrial Gas Production Facility had the highest GHG emissions within the six years, with 1.29 million MTCO<sub>2</sub>, 47% of the parish.

## FACILITY LOCATION

In 1990, Orleans had a facility in a tract with 0 to 20% minority, but most facilities were clustered in 60 to 80% minority tracts. From 2016 to 2021, TRI reporting facilities were located primarily in areas with 71.5% minority and 54% to 99% below the poverty line. On average, these facilities are 3.67 miles from each other and the furthest at 3.73 miles from another facility. GHG facilities were in the same area as TRI facilities—however, the average distance between GHG facilities was 11.06 miles, and the furthest gap at 61.06 miles.

# St. Charles

*In 2020, St. Charles had a population of 52,549, with a minority population of 30%, and 12% was below the poverty line.*

## TOXIC RELEASE INVENTORY

The TRI-reported facilities in St. Charles ranged from 25 to 22 from 2016 to 2021. Two facilities did not report TRI air emissions. During this time, 17.46 million lbs of total air emissions were reported for TRI-reporting facilities. The highest year for TRI-reported total air emissions was 2016, with 3.35 million lbs. There was a 1.01 million lbs decrease in total air emissions from 2016 to 2021. These emissions affected approximately 14% of the minority population and 4% of the population below the poverty line in the parish within 2 miles in 2020. Shell Norco Chemical Plant produced 32% of the parish's overall emissions, with a total air emission of 5.66 million lbs.

## GREENHOUSE GASES

The parish ranged from 18 to 19 GHG facilities with 102.7 million MTCO<sub>2</sub> in GHG emissions from 2016 to 2021. There was a 2.11 million MTCO<sub>2</sub> decrease in greenhouse gas emissions from 2016 to 2021. The highest emitting year was 2019, with 18.32 million MTCO<sub>2</sub> in GHG emissions. These emissions affected approximately 17% of the minority population and 5% of the population below the poverty line in the parish within 2 miles. Norco Manufacturing Complex had the highest GHG emissions within the six years, with 23.54 million MTCO<sub>2</sub>. The facility produced 23% of the parish's GHG emissions from 2016 to 2020.

## FACILITY LOCATION

In 1990, St. Charles had facilities mostly 0% to 20%, with three facilities in 40 to 100%. From 2016 to 2021, TRI reporting facilities were located primarily in areas between 52% to 65% minority and between 7.6% to 18.1% and 30.5% below the poverty line. On average, these facilities are 0.21 miles from each other and the furthest at 1.86 miles from another facility. GHG facilities were in the same area as TRI facilities—however, the average distance between GHG facilities was 0.41 miles, and the furthest gap at 3.75 miles.

# St. James

*In 2020, St. James had a population of 20,192, with a minority population of 50%, and 17% was below the poverty line.*

## TOXIC RELEASE INVENTORY

The TRI-reported facilities in St. James had 11 facilities from 2016 to 2021. During this time, 8 million lbs of total air emissions were reported for TRI-reporting facilities. The highest year for TRI-reported total air emissions was 2016, with 1.72 million lbs. There was a 751,694.50 lbs decrease in total air emissions from 2016 to 2021. These emissions affected approximately 16% of the minority population and 5% of the population below the poverty line in the parish within 2 miles in 2020. Mosaic Phosphates Co Faustina Plant produced 34% of the parish's overall emissions, with a total air emission of 2.7 million lbs.

## GREENHOUSE GASES

The parish ranged from 11 to 12 GHG facilities with 36.41 million MTCO<sub>2</sub> in GHG emissions from 2016 to 2021. There was a 2.68 million MTCO<sub>2</sub> decrease in greenhouse gas emissions from 2016 to 2021. The highest emitting year was in 2016, with 6.82 million MTCO<sub>2</sub> in GHG emissions. These emissions affected approximately 21% of the minority population and 5% of the population below the poverty line in the parish within 2 miles. Convent Refinery had the highest GHG emissions within the six years, with 11.31 million MTCO<sub>2</sub>. The facility produced 31% of the parish's GHG emissions from 2016 to 2020.

## FACILITY LOCATION

In 1990, St. James only had facilities in areas of 60 to 100% minority. From 2016 to 2021, TRI reporting facilities were located primarily in areas between 49% to 55% and 93% minority and between 15.5% to 16.9% and 37% below the poverty line. On average, these facilities are 0.62 miles from each other and the furthest at 2.22 miles from another facility. GHG facilities were in the same area as TRI facilities—however, the average distance between GHG facilities was 0.63 miles, and the furthest gap at 2.19 miles.

# St. John the Baptist

*In 2020, St. John the Baptist had a population of 42,477, a minority population of 63%, and 17% below the poverty line. St. John the Baptist has the lowest facilities in the Corridor.*

## TOXIC RELEASE INVENTORY

The TRI-reported facilities in St. John The Baptist ranged from 10 to 11 from 2016 to 2021. During this time, 4.94 million lbs of total air emissions were reported for TRI-reporting facilities. The highest year for TRI-reported total air emissions was 2016, with 1.05 million lbs. There was a 707,432.35 lbs decrease in total air emissions from 2016 to 2021. These emissions affected approximately 21% of the minority population and 8% of the population below the poverty line in the parish within 2 miles in 2020. Marathon Petroleum Co LP produced 55% of the parish's overall emissions, with a total air emission of 2.7 million lbs.

## GREENHOUSE GASES

The parish had 5 GHG facilities with 29.99 million MTCO<sub>2</sub> in GHG emissions from 2016 to 2021. There was a 38,131 MTCO<sub>2</sub> increase in greenhouse gas emissions from 2016 to 2021. The highest emitting year was 2018, with 5.24 million MTCO<sub>2</sub> in GHG emissions. These emissions affected approximately 20% of the minority population and 8% of the population below the poverty line in the parish within 2 miles. Garyville Refinery had the highest GHG emissions within the six years, with 23.75 million MTCO<sub>2</sub>. The facility produced 79% of the parish's GHG emissions from 2016 to 2020.

## FACILITY LOCATION

In 1990, St. John the Baptist facilities mainly were in areas with 40 to 60% minority populations, with only one facility in 80 to 100% with facilities clustering in areas with a minority population of 40 to 60%. From 2016 to 2021, TRI reporting facilities were located primarily in areas between 37% to 48% and 92% minority and between 18.5% to 30.9% and 37% below the poverty line. On average, these facilities are 0.20 miles from each other and the furthest at 0.57 miles from another facility. GHG facilities were in the same area as TRI facilities—however, the average distance between GHG facilities was 0.91 miles, and the furthest gap was 1.92 miles.

# West Baton Rouge

*In 2020, West Baton Rouge had a population of 27,199, with a minority population of 43%, and 15% of the population was below the poverty line.*

## TOXIC RELEASE INVENTORY

The TRI-reported facilities in West Baton Rouge ranged from 11 to 14 from 2016 to 2021. One facility did not report TRI air emissions. During this time, 2.2 million lbs of total air emissions were reported for TRI-reporting facilities. The highest year for TRI-reported total air emissions was 2021, with 429,795.14 lbs. There was a 27,907.25 lbs increase in total air emissions from 2016 to 2021. These emissions affected approximately 59% of the minority population and 18% of the population below the poverty line in the parish within 2 miles in 2020. Addis Carbon Black Plant produced 46% of the parish's overall emissions, with a total air emission of 1.04 million lbs.

## GREENHOUSE GASES

The parish had 7 GHG facilities with 7.14 million MTCO<sub>2</sub> in GHG emissions from 2016 to 2021. There was a 129,027 MTCO<sub>2</sub> decrease in greenhouse gas emissions from 2016 to 2021. The highest emitting year was 2018, with 1.2 million MTCO<sub>2</sub> in GHG emissions. These emissions affected approximately 29% of the minority population and 8% of the population below the poverty line in the parish within 2 miles. Placid Refining Co LLC - Port Allen Refinery had the highest GHG emissions within the six years, with 3.7 million MTCO<sub>2</sub>. The facility produced 52% of the parish's GHG emissions from 2016 to 2020.

## FACILITY LOCATION

In 1990, West Baton Rouge facilities were primarily in tracts with 20% to 40% minority populations. From 2016 to 2021, TRI reporting facilities were located primarily in areas with 66% minority and 19.9% below the poverty line. On average, these facilities are 0.36 miles from each other and the furthest at 0.56 miles from another facility. GHG facilities were in the same area as TRI facilities—however, the average distance between GHG facilities was 0.62 miles, and the furthest gap at 1.10 miles.

# Proposed and Under-Construction Facilities

There are 29 facilities proposed or under construction in Louisiana, and 24 are in the ten parishes. Ten of these facilities are pre-construction, four are under construction, eight are announced, and two are on hold. The majority of these facilities are plastic resin manufacturing and methanol plants. There are no proposed or under-construction facilities in Orleans, and there is an announced facility without a location that could be in St. Charles, St. John the Baptist, or St. James. The types of facilities are refineries, plastic resin manufacturing, propylene dehydrogenation (PDH) plant, ammonia, ethylene cracker, other inorganic gases, methanol plants, and more.

The following summarizes the number of facilities per parish, the census tract demographical information, and the Environmental Justice Index Social Vulnerability module (EJI SVM) percentile for each parish. The EJI SVM comes from the EJI, which uses data to rank the cumulative impacts of environmental injustice on health for the census tract. EJI reviews three modules (environmental burden, social vulnerability, and health vulnerability), ranking each between 0-1, with zero representing the lowest relative burden/vulnerability and 1 representing the highest relative burden/vulnerability.

**Ascension has nine facilities.** Of these facilities, four are announced, three are in pre-construction, and two are under construction. These facilities are 0.043 to 0.41 miles from a TRI or GHG reporting facility in 2021. Two facilities are proposed or under construction for Shell Chemical LP and CF Industries Nitrogen, LLC. The facilities are proposed to be in areas with a minority population from 48% to 62% and a below-poverty-line population of 60% to 37%. The EJI Social Vulnerability Module for these facilities ranges from 0.16 to 0.96.

**Calcasieu has four facilities.** Of these facilities, one is announced, one is on hold, and three are in pre-construction. These facilities are 0.17 to 1.19 miles from a TRI or GHG reporting facility in 2021. The facilities are proposed to be in areas with a minority population from 14% to 74% and a below-poverty-line population of 60% to 39%. The EJI Social Vulnerability Module for these facilities ranges from 0.16 to 0.96.

**East Baton Rouge has two facilities.** These facilities are announced or under construction. These facilities are 0 to 0.08 miles from a TRI or GHG reporting facility in 2021. The facilities are proposed to be in areas with a minority population of 99% and a below-poverty-line population from 12% to 25%. The EJI Social Vulnerability Module for these facilities is 0.7.

**Iberville has one facility** in pre-construction and 0.68 miles from a TRI or GHG reporting facility in 2021. The facility is proposed to be in an area with a minority population of 65% and a below-poverty-line population of 22%. The EJI Social Vulnerability Module for this facility is 0.87. Another facility has been announced that may be in Iberville or West Baton Rouge.

**Jefferson has one facility** in pre-construction and 0.095 miles from a TRI or GHG reporting facility in 2021. The facilities are proposed to be in areas with a minority population of 62% and a below-poverty-line population of 10%. The EJI Social Vulnerability Module for this facility is 0.67.

**St. James has two facilities**, one in pre-construction and the other on hold. These facilities are 2.35 to 2.38 miles from a TRI or GHG reporting facility in 2021. The facilities are proposed to be in areas with a minority population of 66% and a below-poverty-line population from 12% to 13%. The EJI Social Vulnerability Module for these facilities is 0.98. There also is an announced facility without a location that could be in St. Charles, St. John the Baptist, or St. James.

**West Baton Rouge has three facilities** under construction, in pre-construction, or announced. These facilities are 0.20 to 0.66 miles from a TRI or GHG reporting facility in 2021.

The facilities are proposed to be in areas with a minority population from 37% to 66% and a below-poverty-line population from 6% to 34%. The EJI Social Vulnerability Module for these facilities ranges from 0.16 to 0.78. Another facility has been announced that may be in Iberville or West Baton Rouge.

## Community Impacts

Advocacy of these issues has continued for 30 years in an attempt to shine a light on the injustices these communities face, but with small success. There are drawbacks to the data collection process, frequency, and industry regulation. Yet, Louisiana's industrial contributions to greenhouse gases have increased by 2.6 MMT CO<sub>2</sub> from 1990 to 2020, and this area still has combined emissions of carbon dioxide equivalent (CO<sub>2</sub>Ee) per year in a single parish that could exceed those of 113 countries. The exposure to these emissions has led to the area becoming 95-100 or 80-90 percentile of air toxics cancer risk in the nation. The average annual cancer rate in Louisiana's poor neighborhoods with high levels of air pollution is 502 cases per 100,000 people, compared to the state average of 480.3 cases per 100,000 people.

These health risks decrease life expectancy and support other social inequalities in the area, such as the lack of understanding of the issues and personal contribution to climate change. To improve the livelihood of these parishes through the development of the social and financial economy of the corridor, there needs

to be a reduction in the exposure of toxic substances in the air, soil, and water. This needs to be achieved both by reducing the concentration of facilities in underserved and marginalized groups and by reducing the impact of the existing facilities. The 23 proposed new facilities within the corridor are also within areas of poverty and minority groups, continuing the impact on areas of need. The benefits of a marginal increase in jobs will not outweigh the impact on the health and longevity of residents in the corridor.

Environmental Justice is expanding throughout the nation due to overwhelming cancer and asthmatic-related deaths disproportionately affecting minorities and low-income populations. The Justice40 Initiative is the Biden-Harris Administration initiative of delivering 40% of the overall benefits of Federal climate, clean energy, affordable and sustainable housing, clean water, and other investments to disadvantaged communities that are marginalized, underserved, and overburdened by pollution.

These ten parishes should be highlighted in the ongoing conversation about environmental justice.

# Conclusion

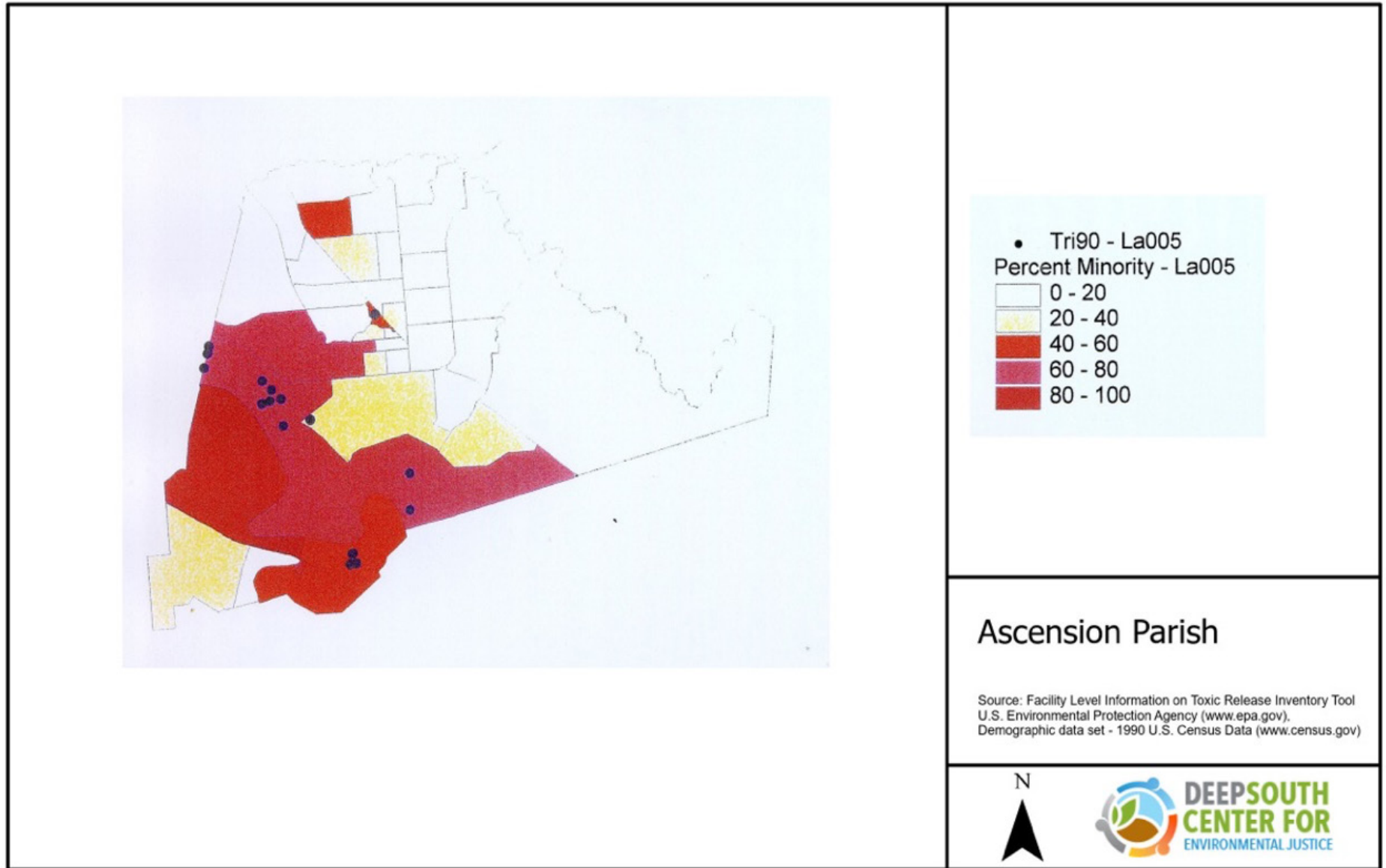
*The maps and analysis showcase the petrochemical industry's continued impact on the minority and low-income populations within these parishes. Based on the impact of the GHG and TRI total air emissions potential effects, there should be additional analysis to determine the severity of the facilities' impact on the residents. The study can include the review of cancer, heart disease, asthma, and other related health effects these chemicals can cause by utilizing the information documented by EPA and other agencies.*

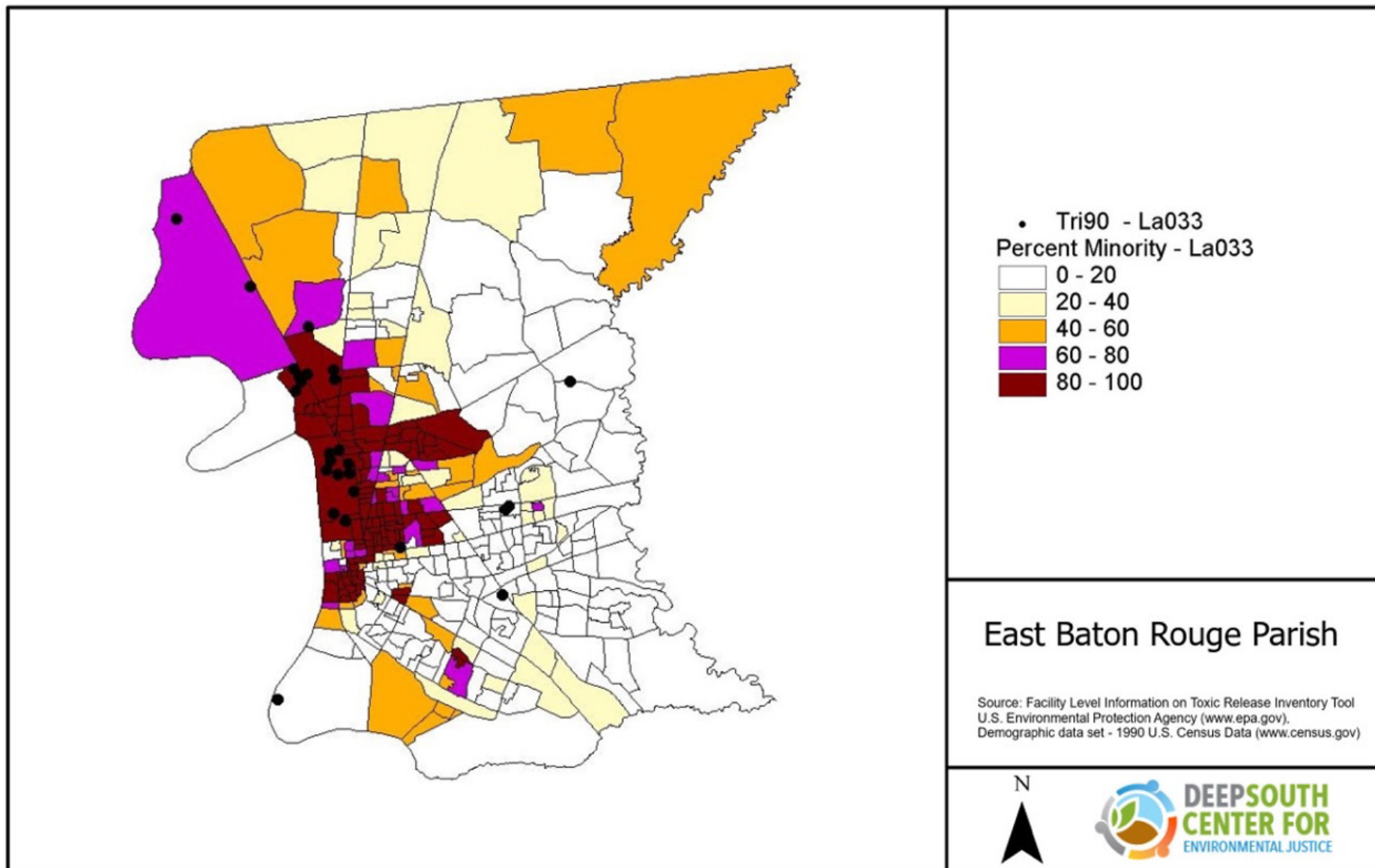


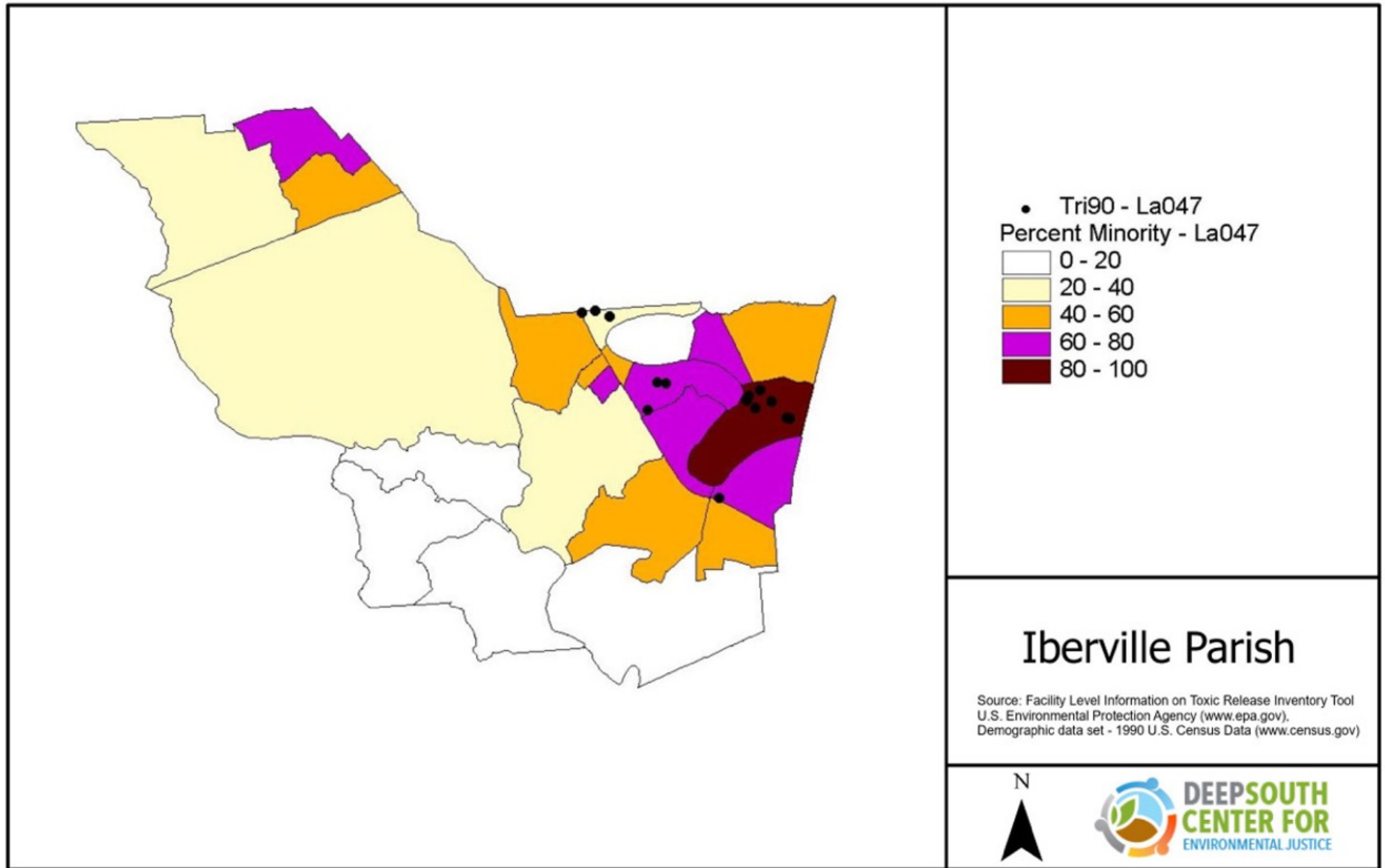
# Appendices

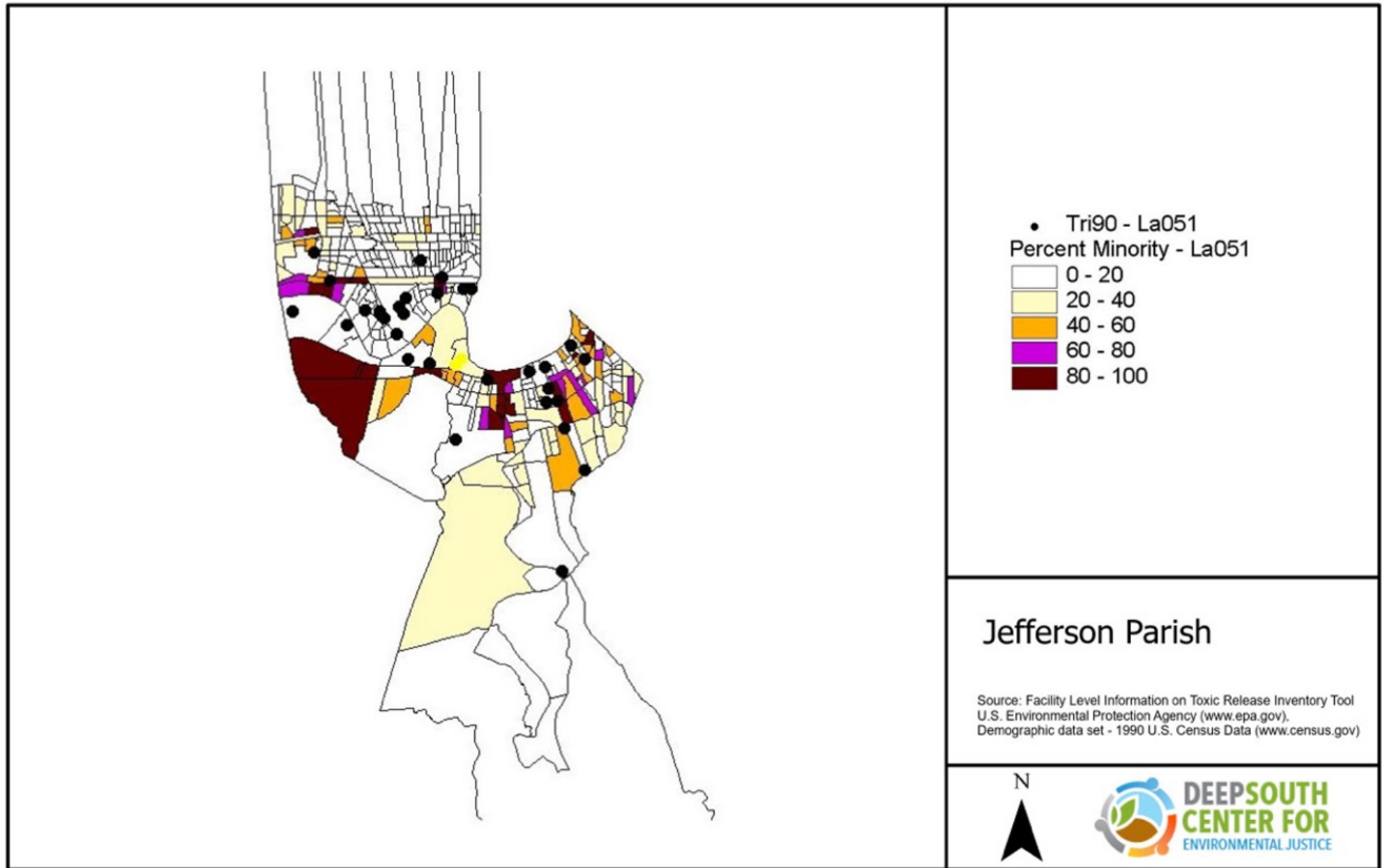


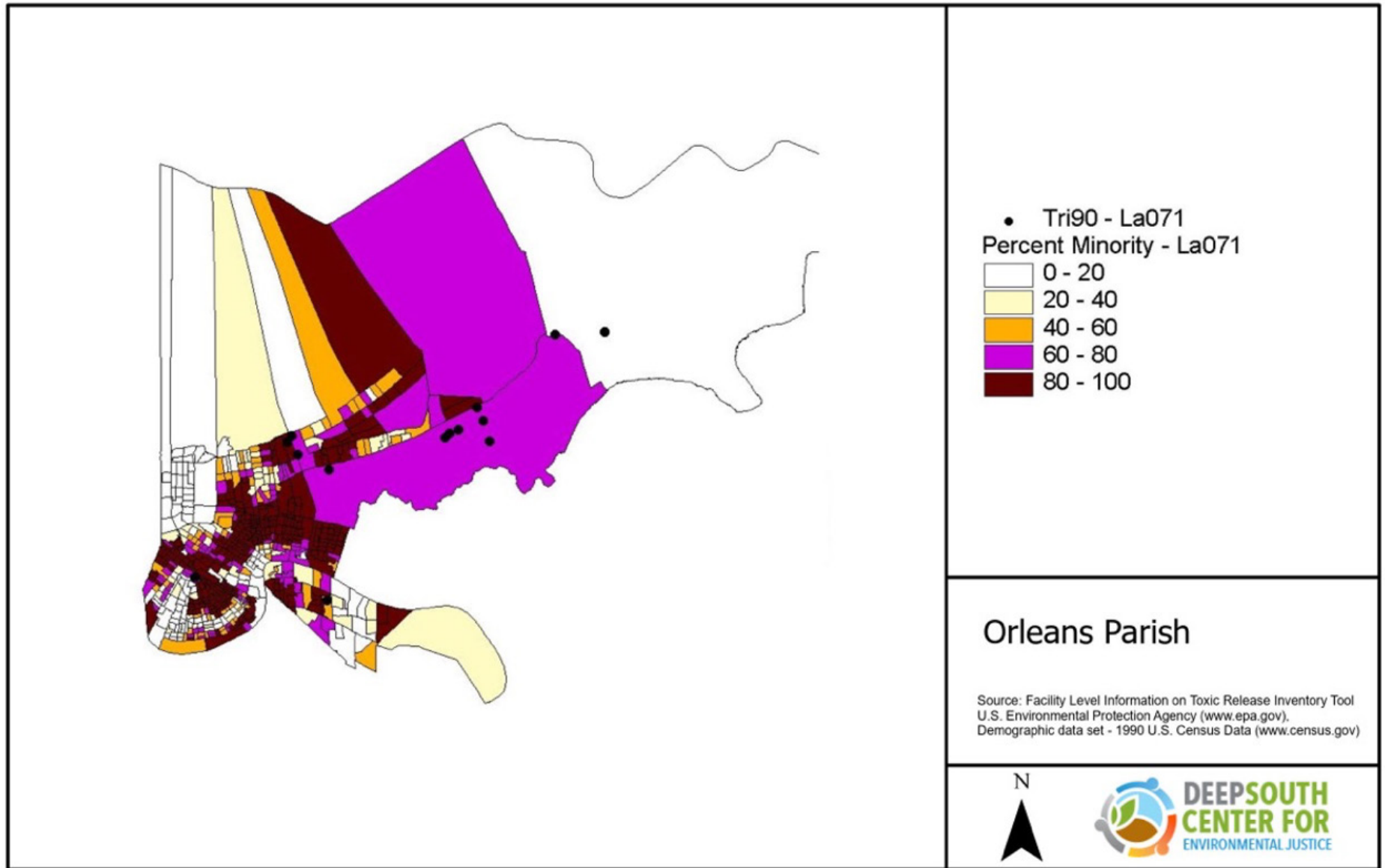
# Appendix I: 1990 Maps

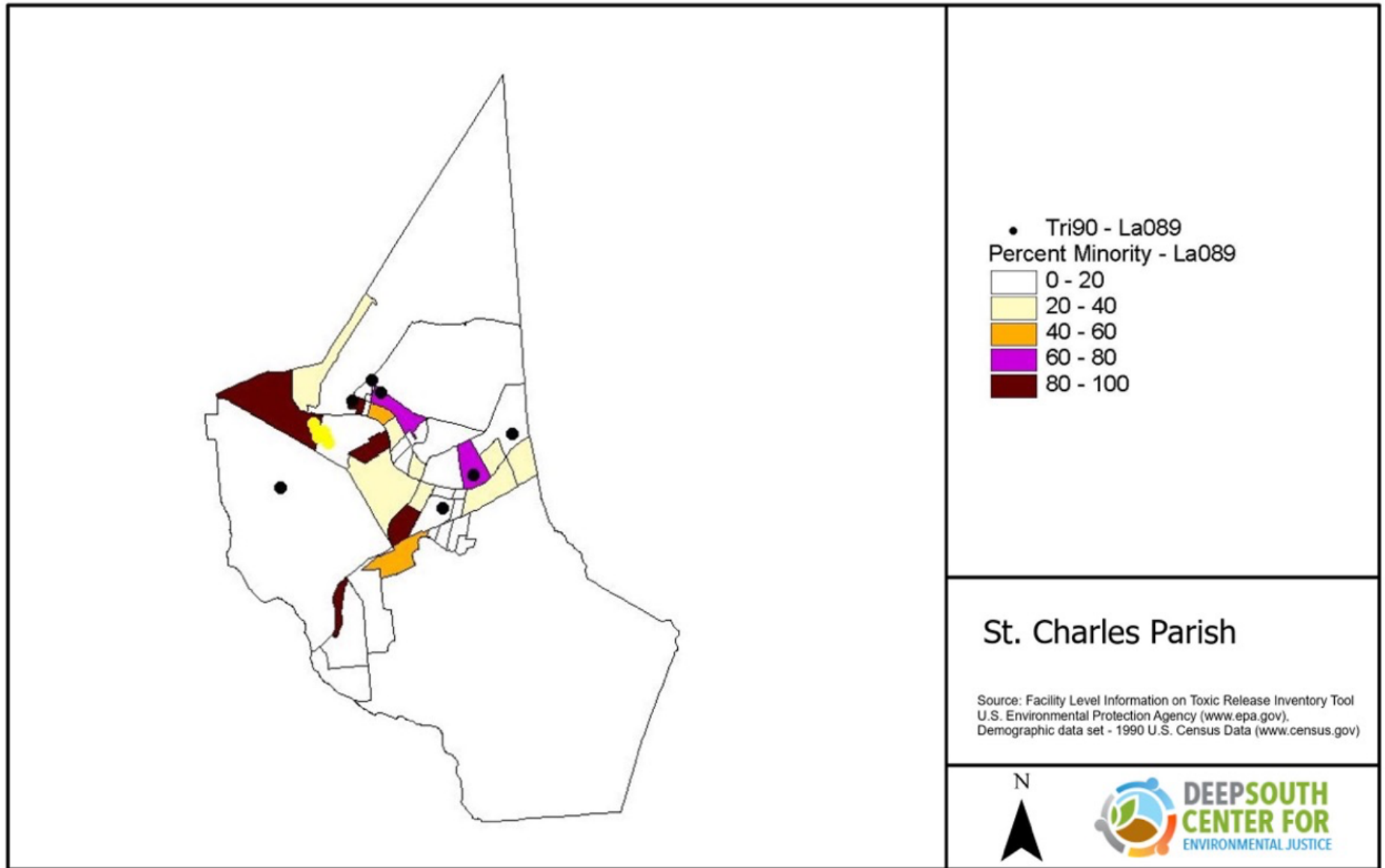


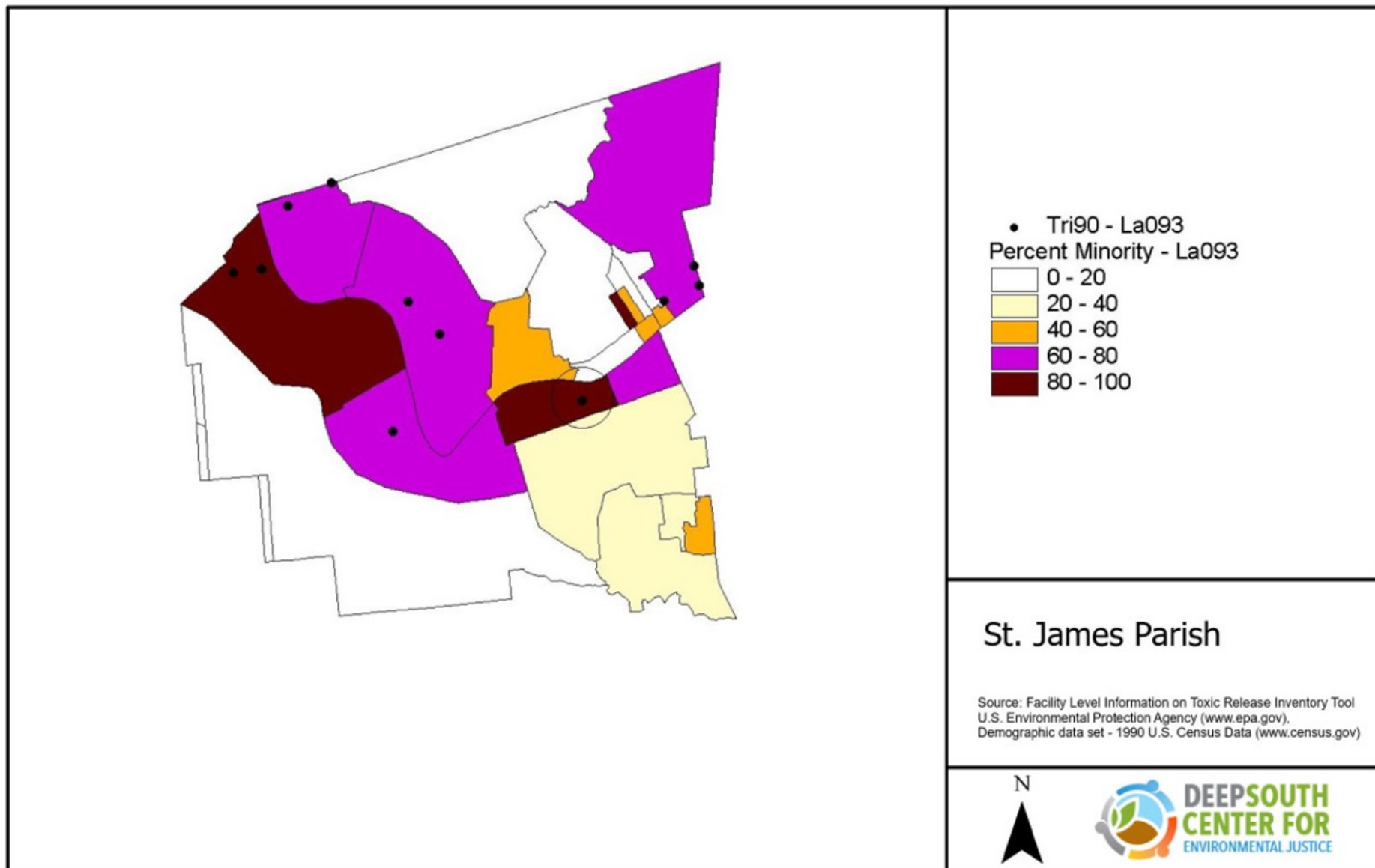


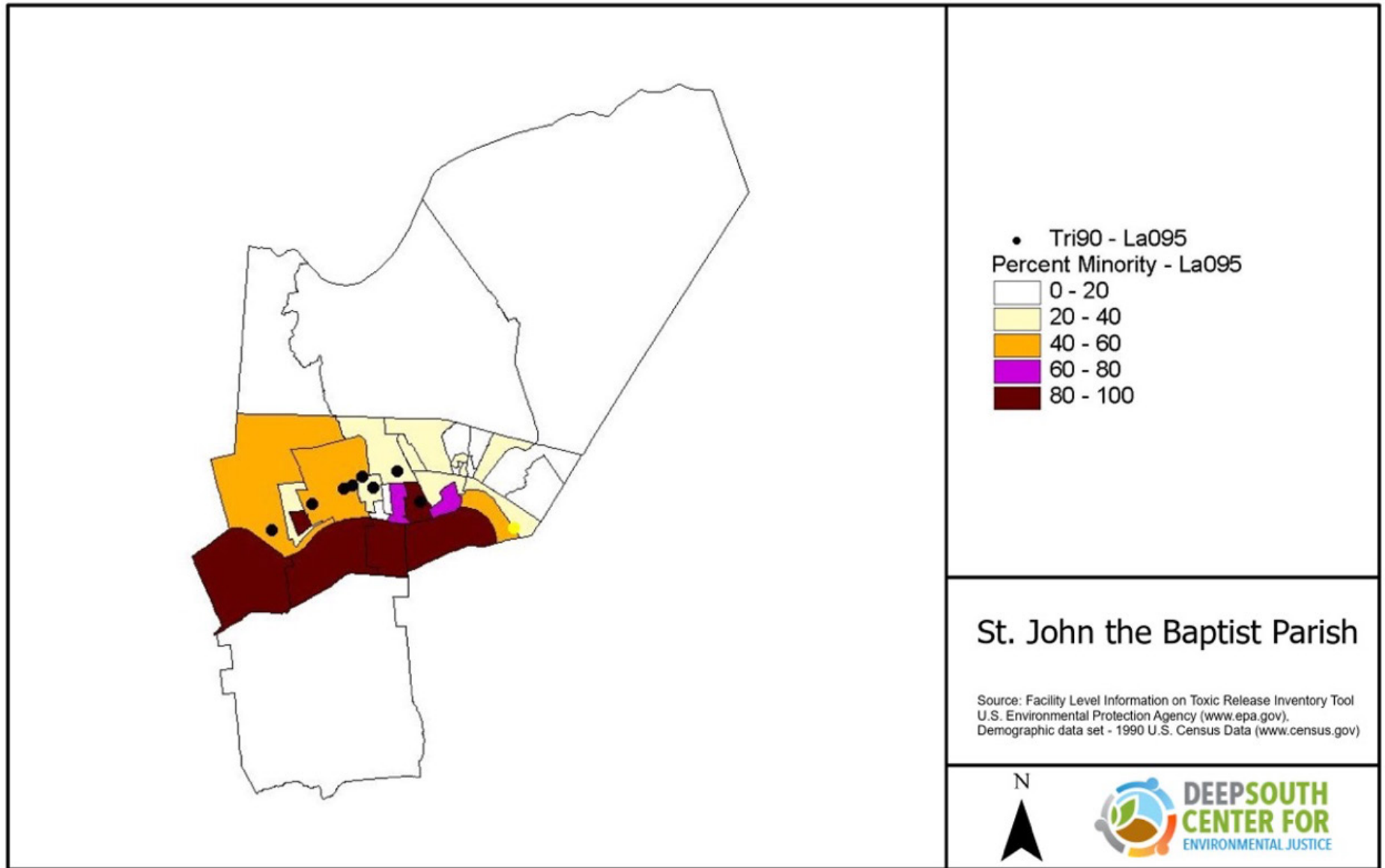


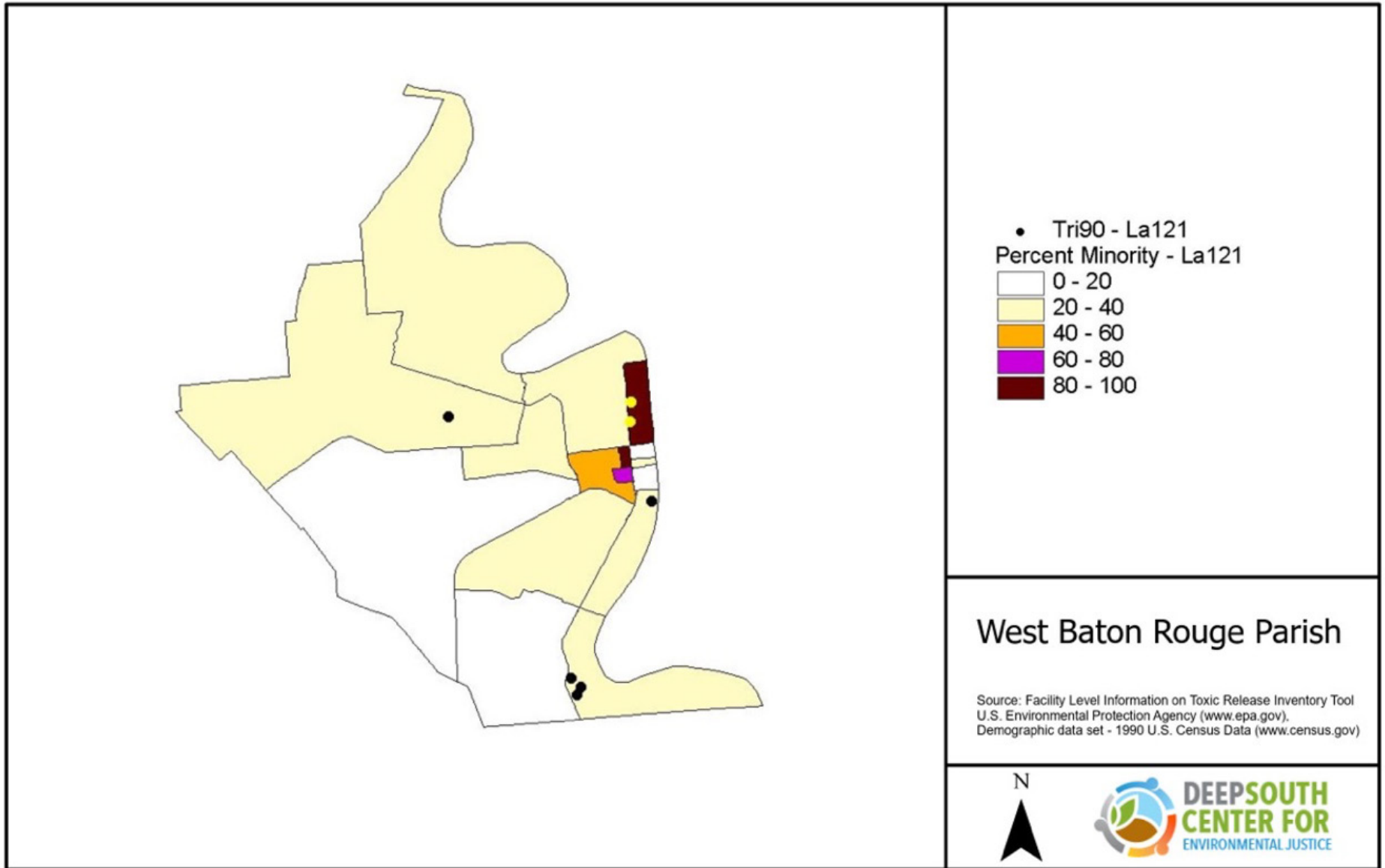




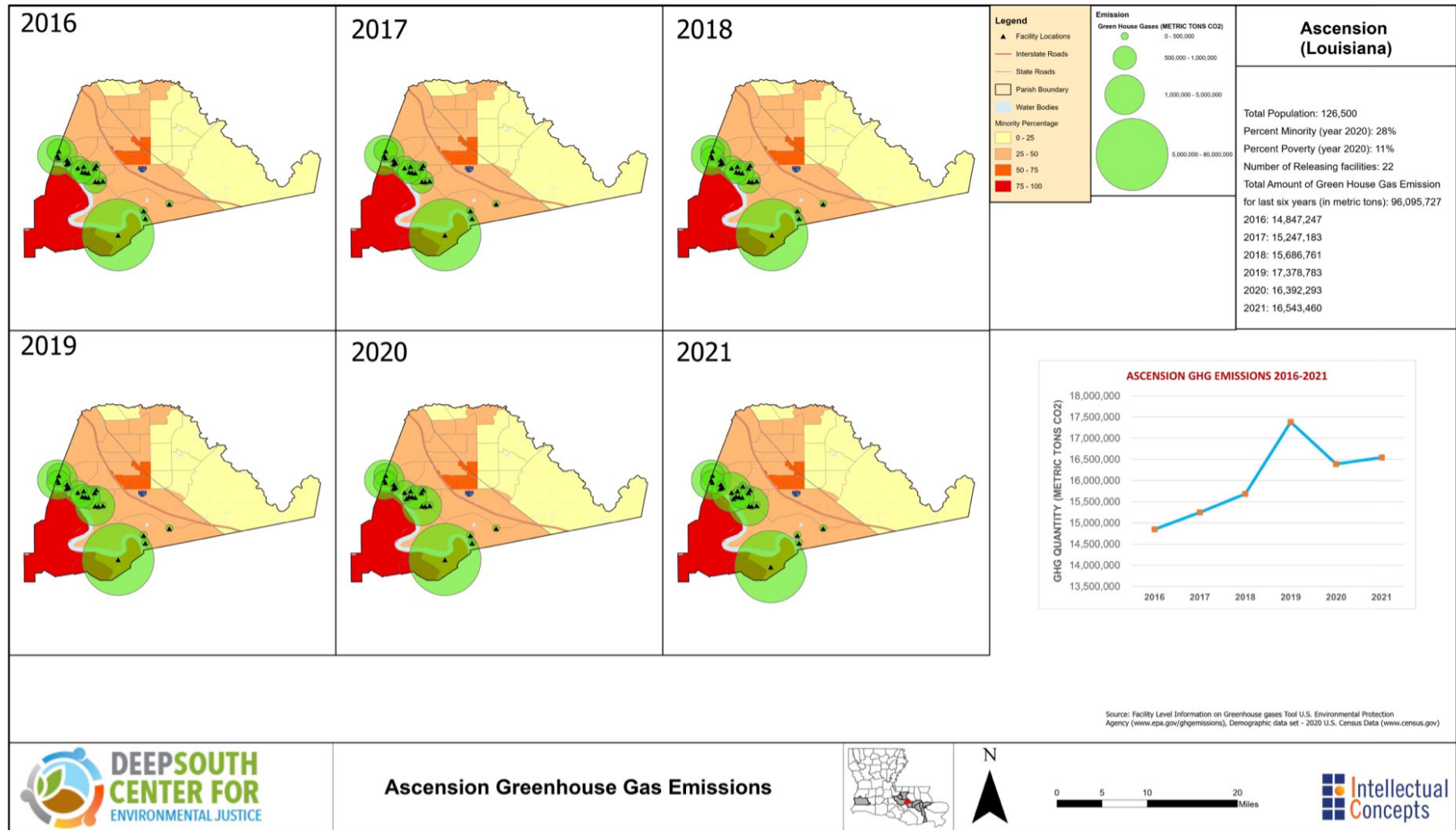






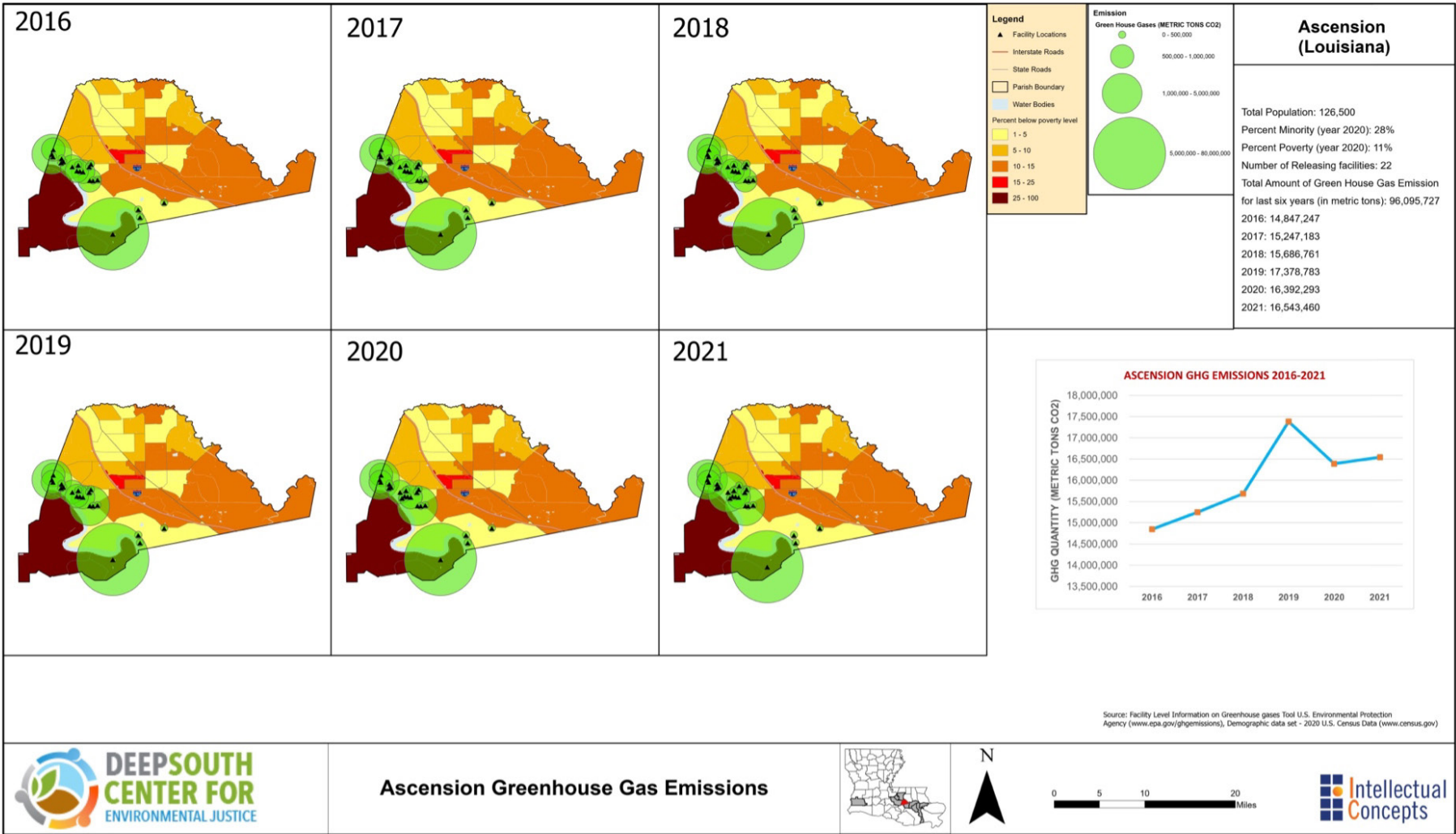


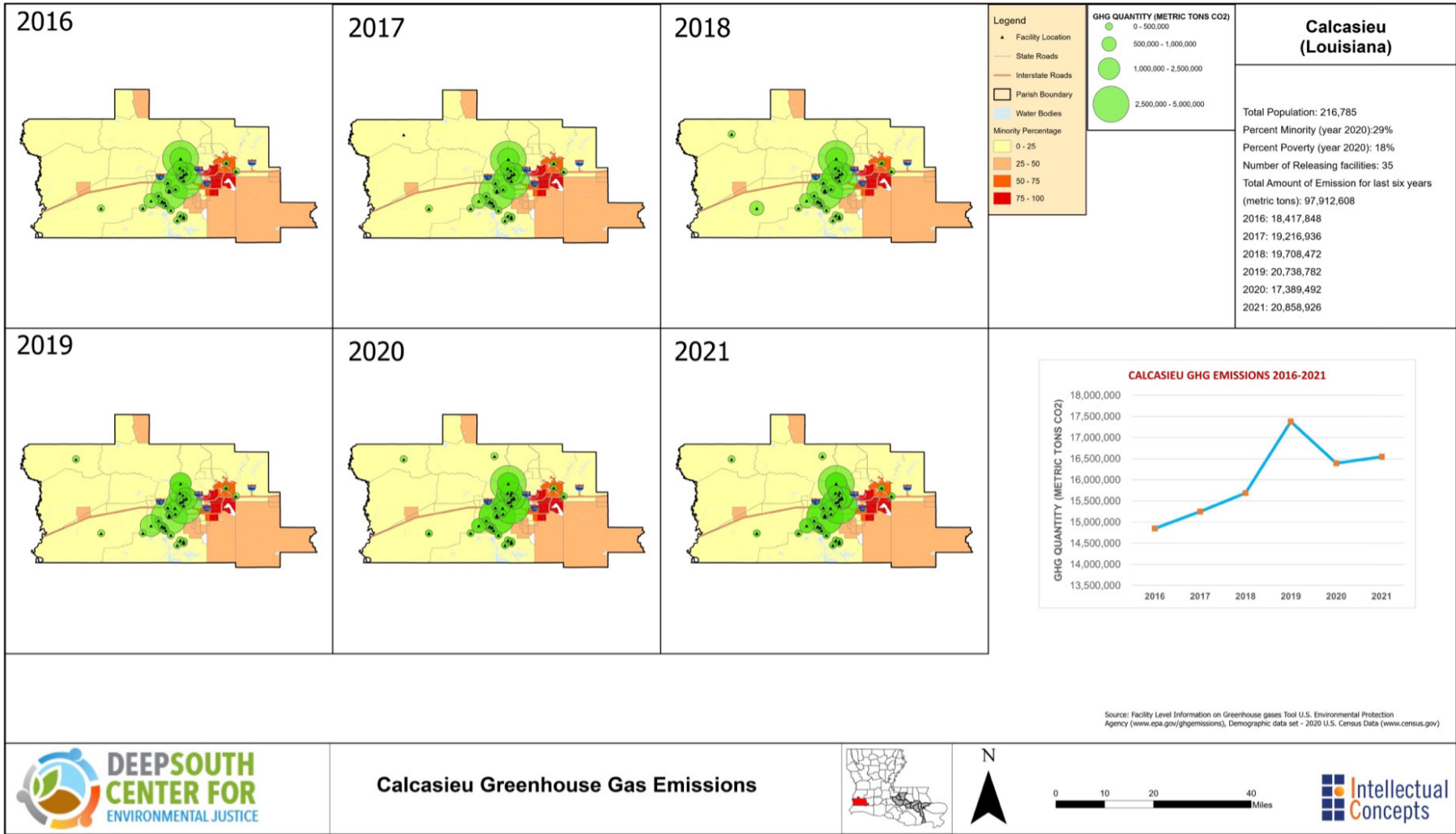
# Appendix II: 2023 GHG Maps



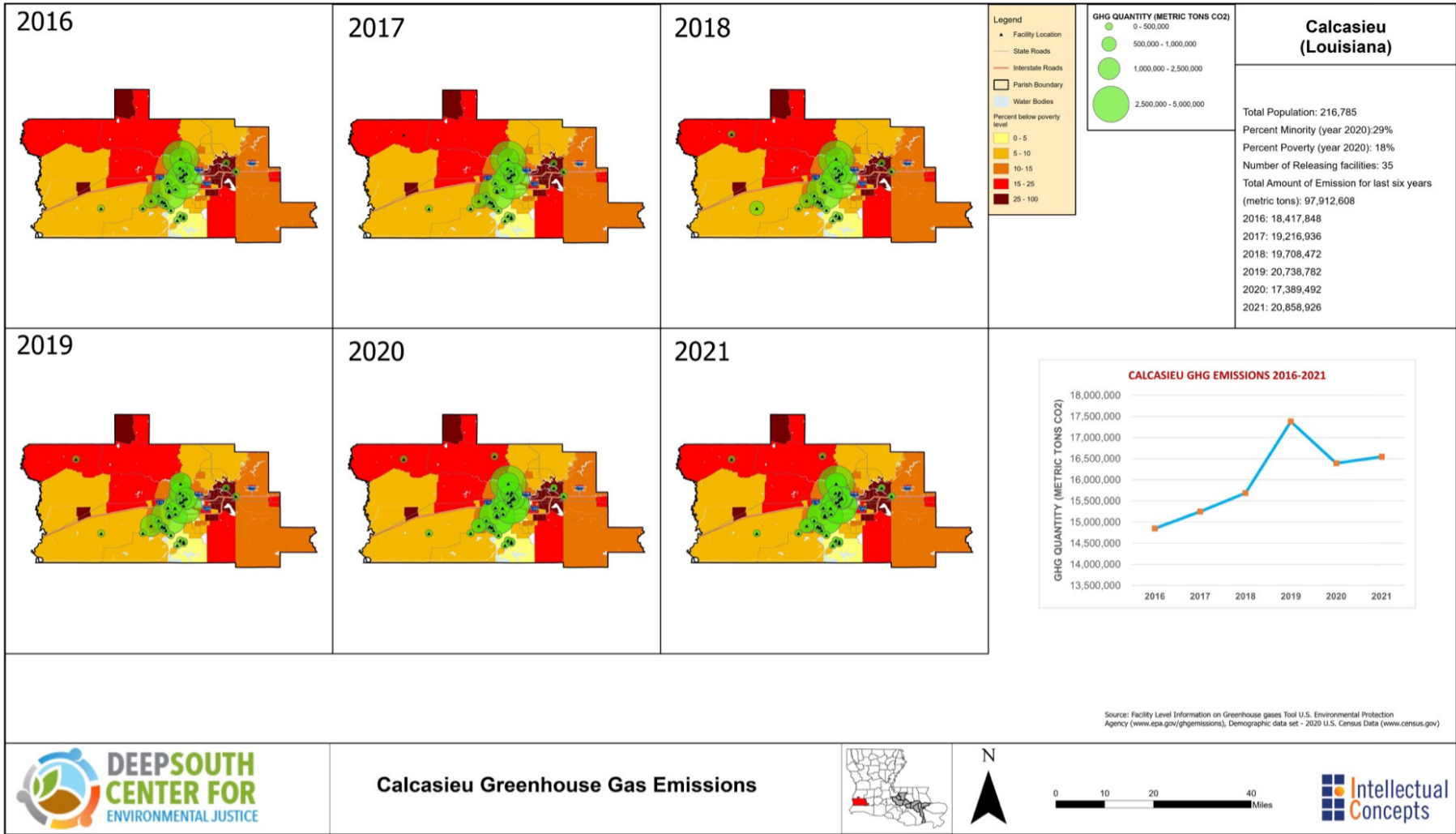
Ascension Greenhouse Gas Emissions



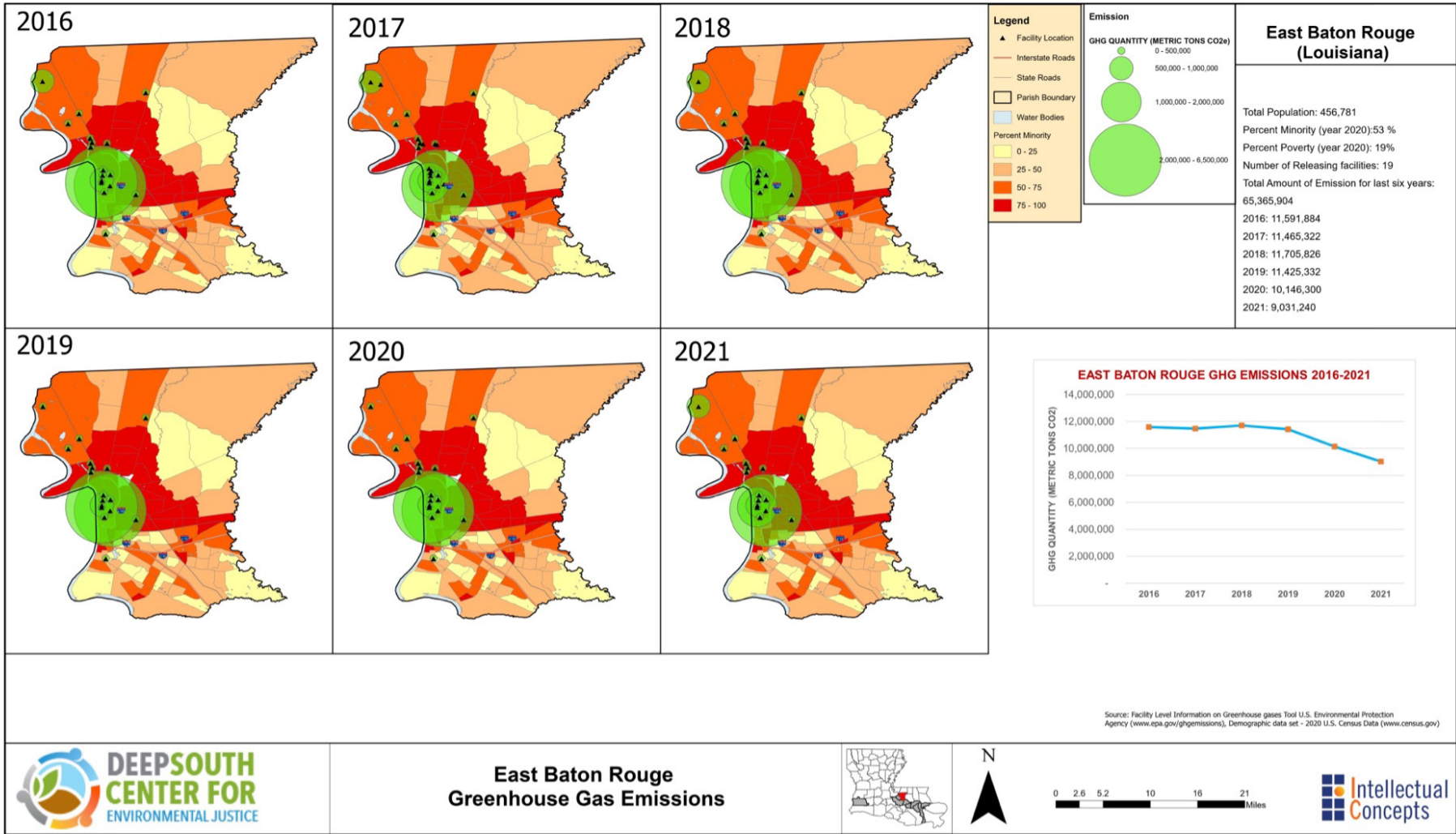


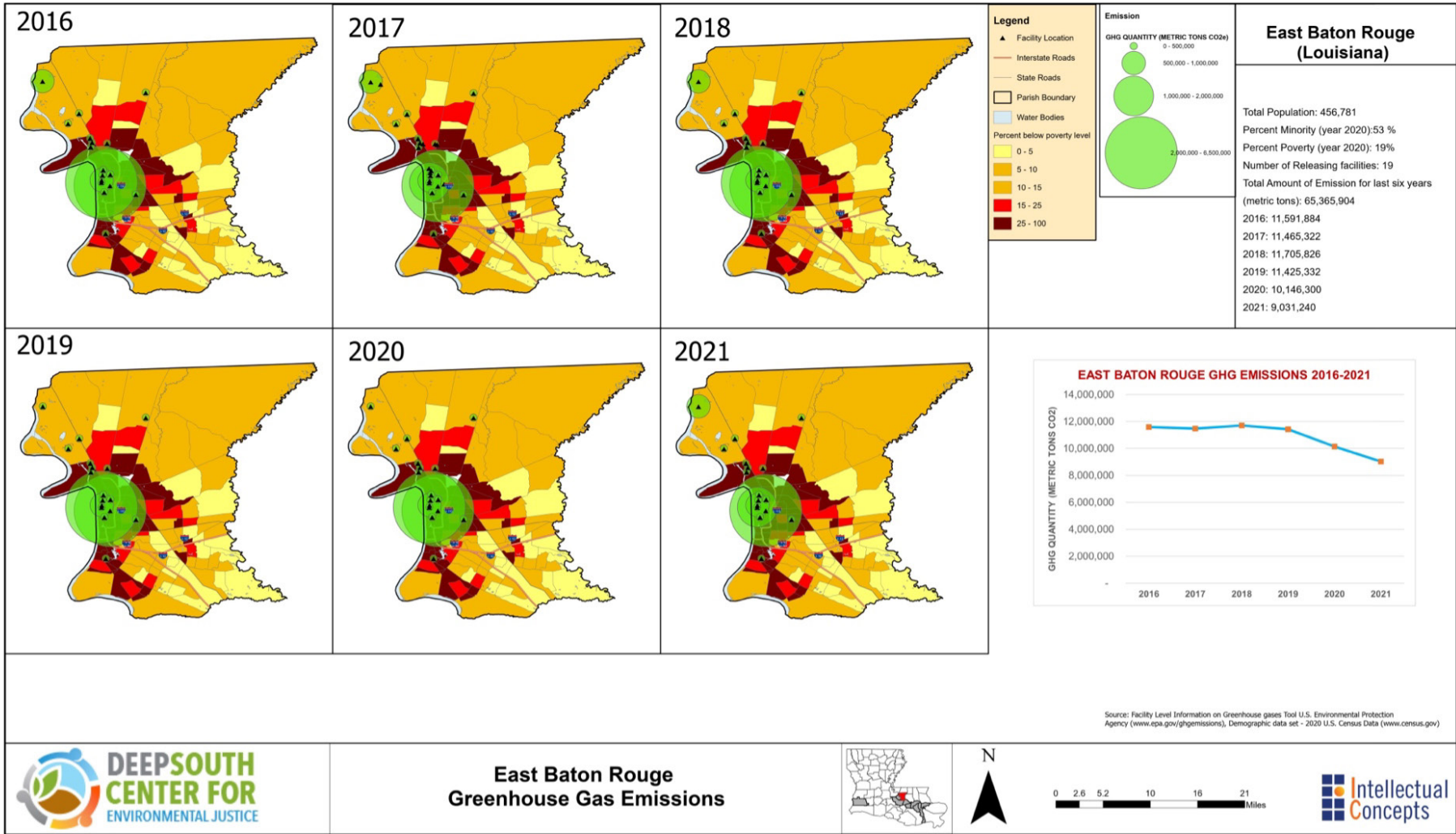


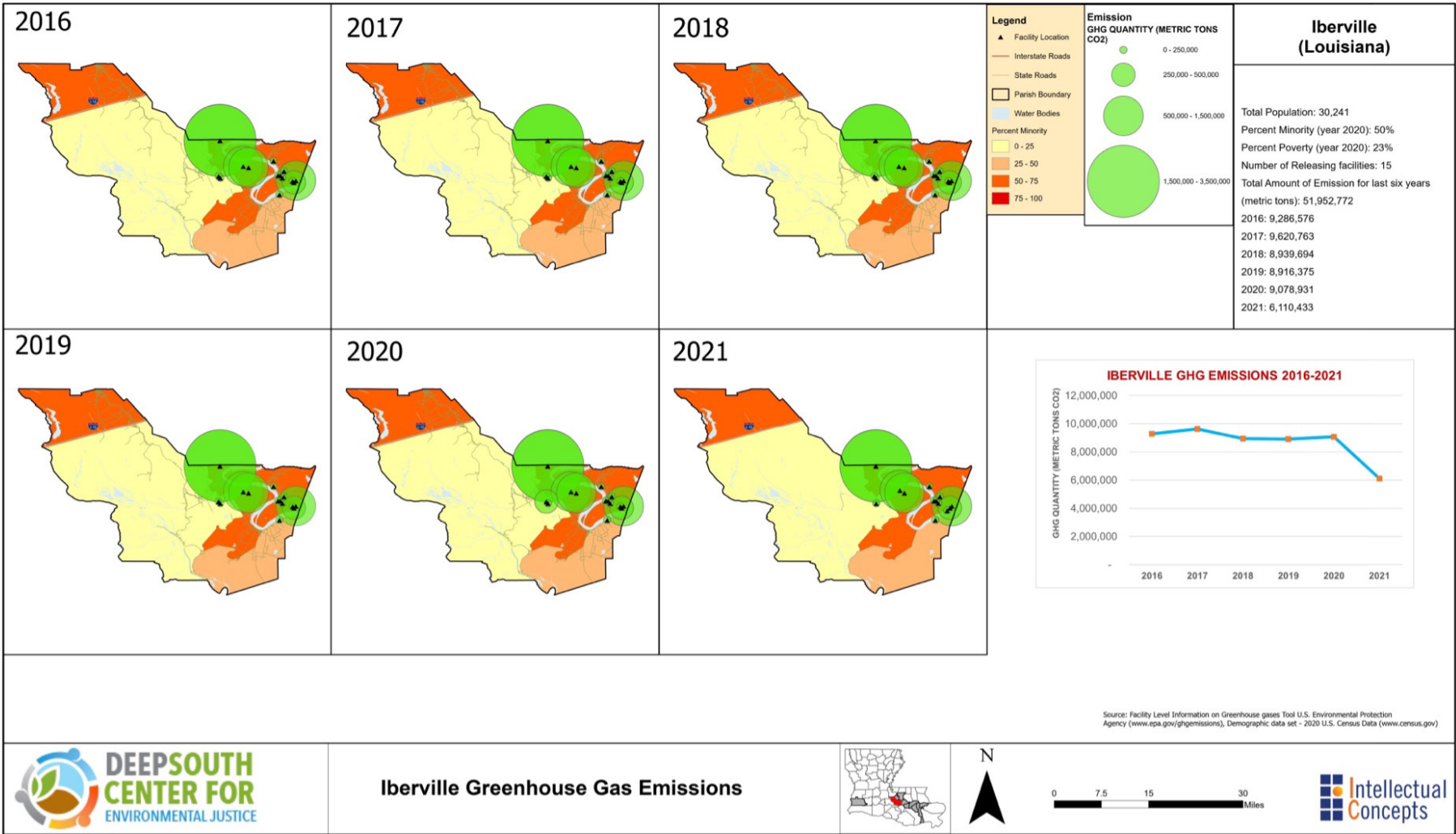
Source: Facility Level Information on Greenhouse gases Tool U.S. Environmental Protection Agency ([www.epa.gov/ghgemissions](http://www.epa.gov/ghgemissions)), Demographic data set - 2020 U.S. Census Data ([www.census.gov](http://www.census.gov))



Source: Facility Level Information on Greenhouse gases Tool U.S. Environmental Protection Agency ([www.epa.gov/ghgemissions](http://www.epa.gov/ghgemissions)), Demographic data set - 2020 U.S. Census Data ([www.census.gov](http://www.census.gov))

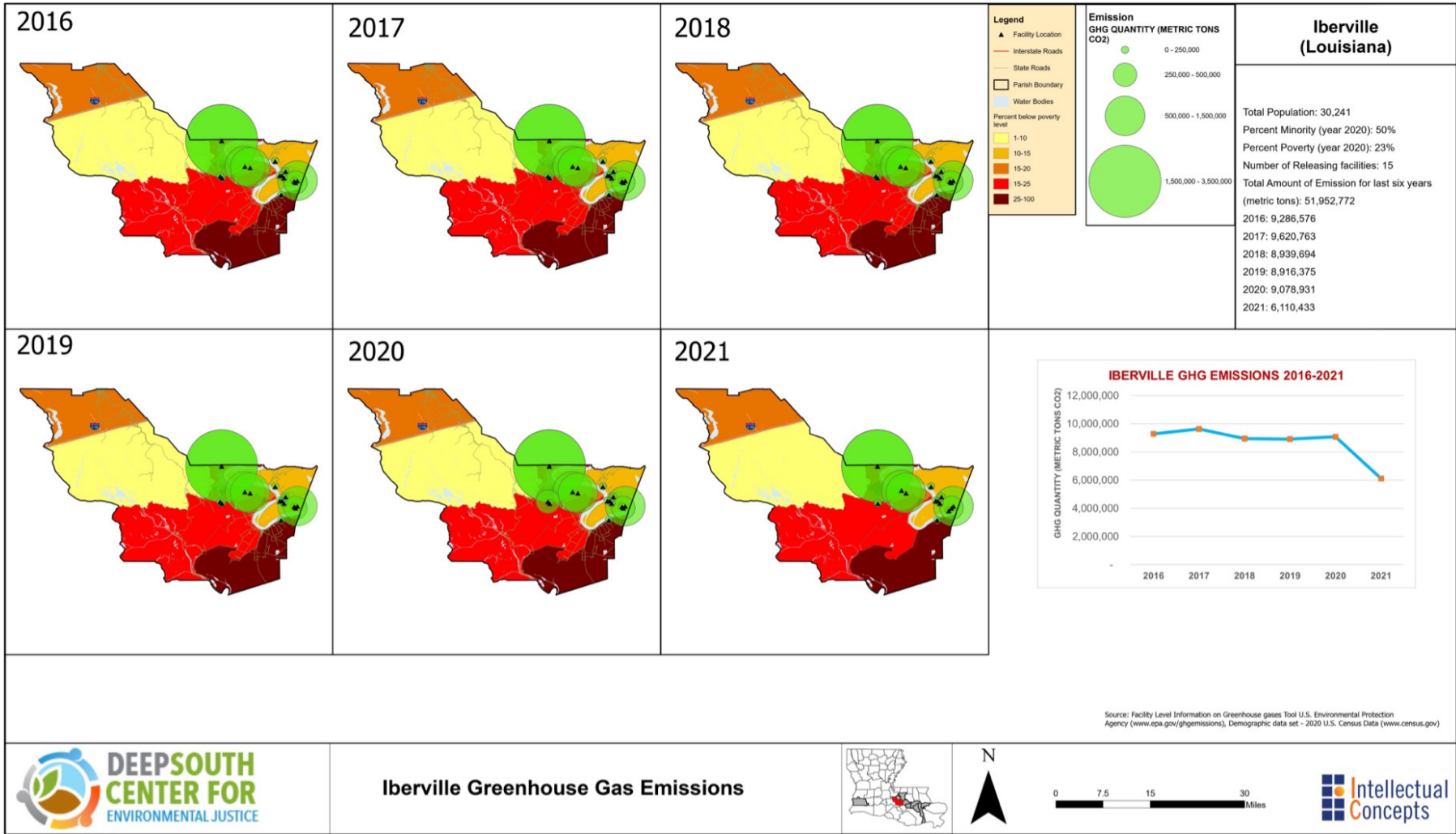


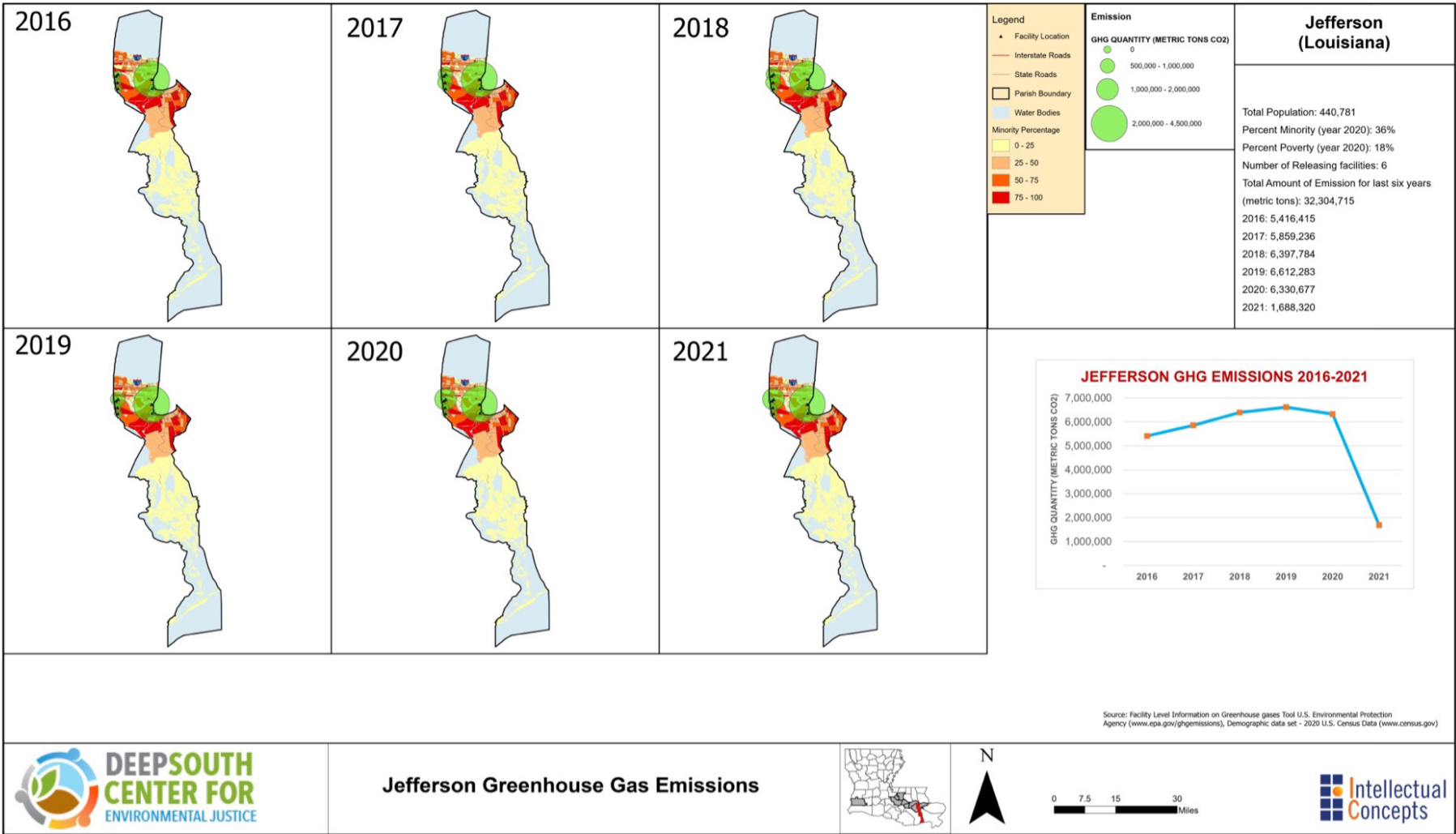




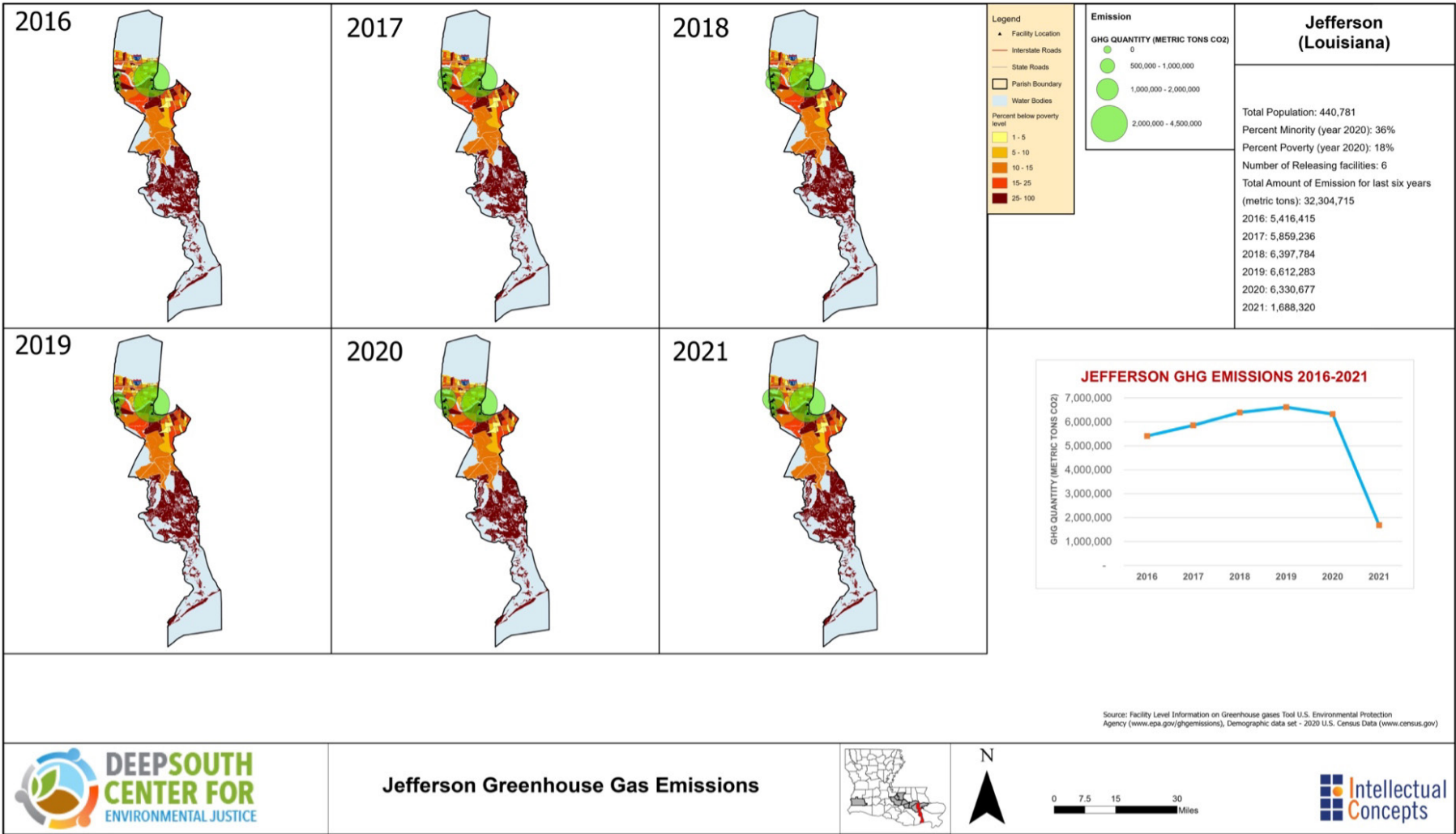
Iberville Greenhouse Gas Emissions



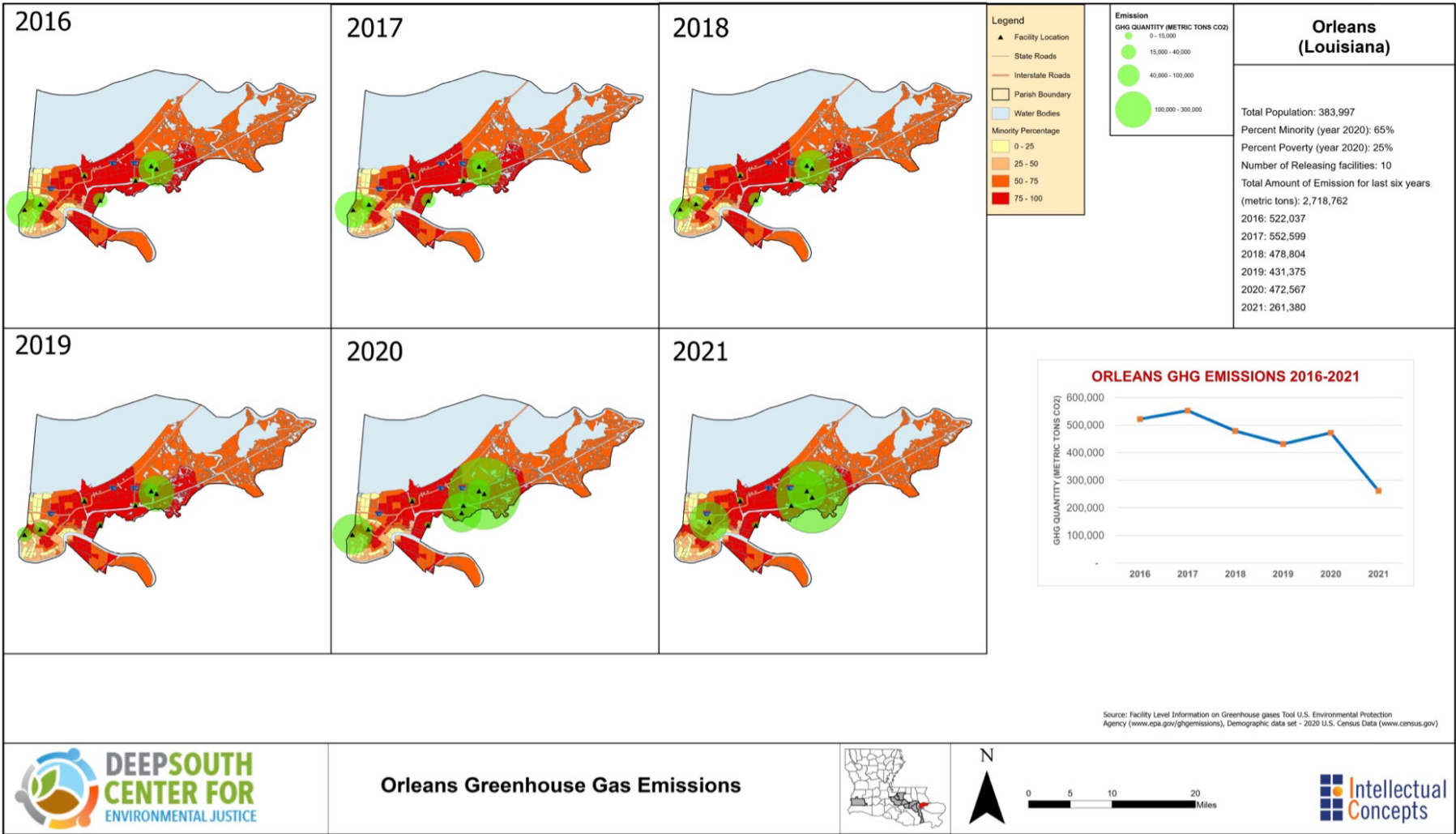




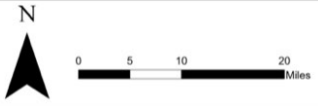
Source: Facility Level Information on Greenhouse gases Tool U.S. Environmental Protection Agency ([www.epa.gov/ghgemissions](http://www.epa.gov/ghgemissions)), Demographic data set - 2020 U.S. Census Data ([www.census.gov](http://www.census.gov))

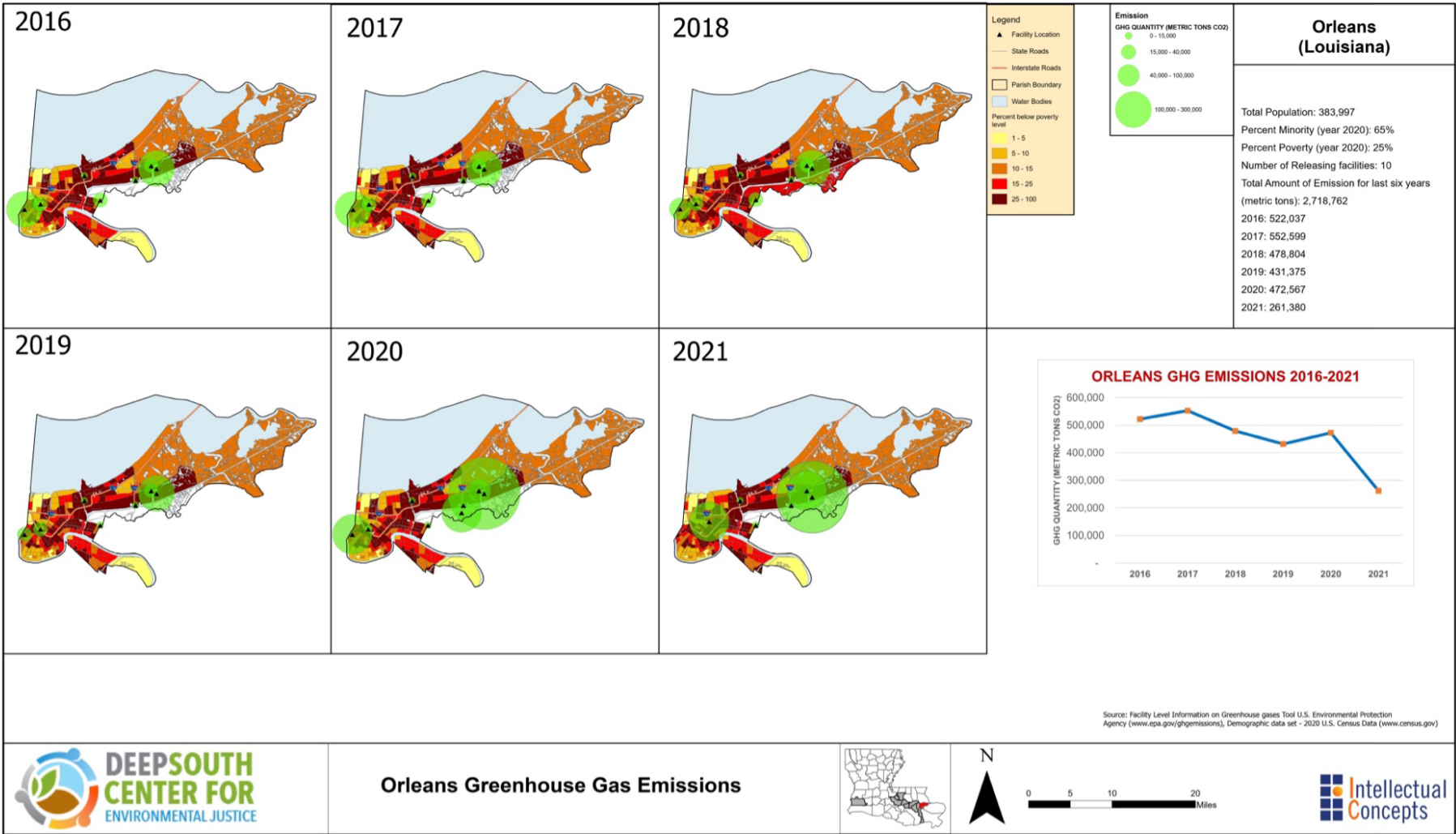


Source: Facility Level Information on Greenhouse gases Tool U.S. Environmental Protection Agency ([www.epa.gov/ghgemissions](http://www.epa.gov/ghgemissions)), Demographic data set - 2020 U.S. Census Data ([www.census.gov](http://www.census.gov))



**Orleans Greenhouse Gas Emissions**

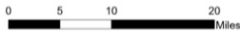


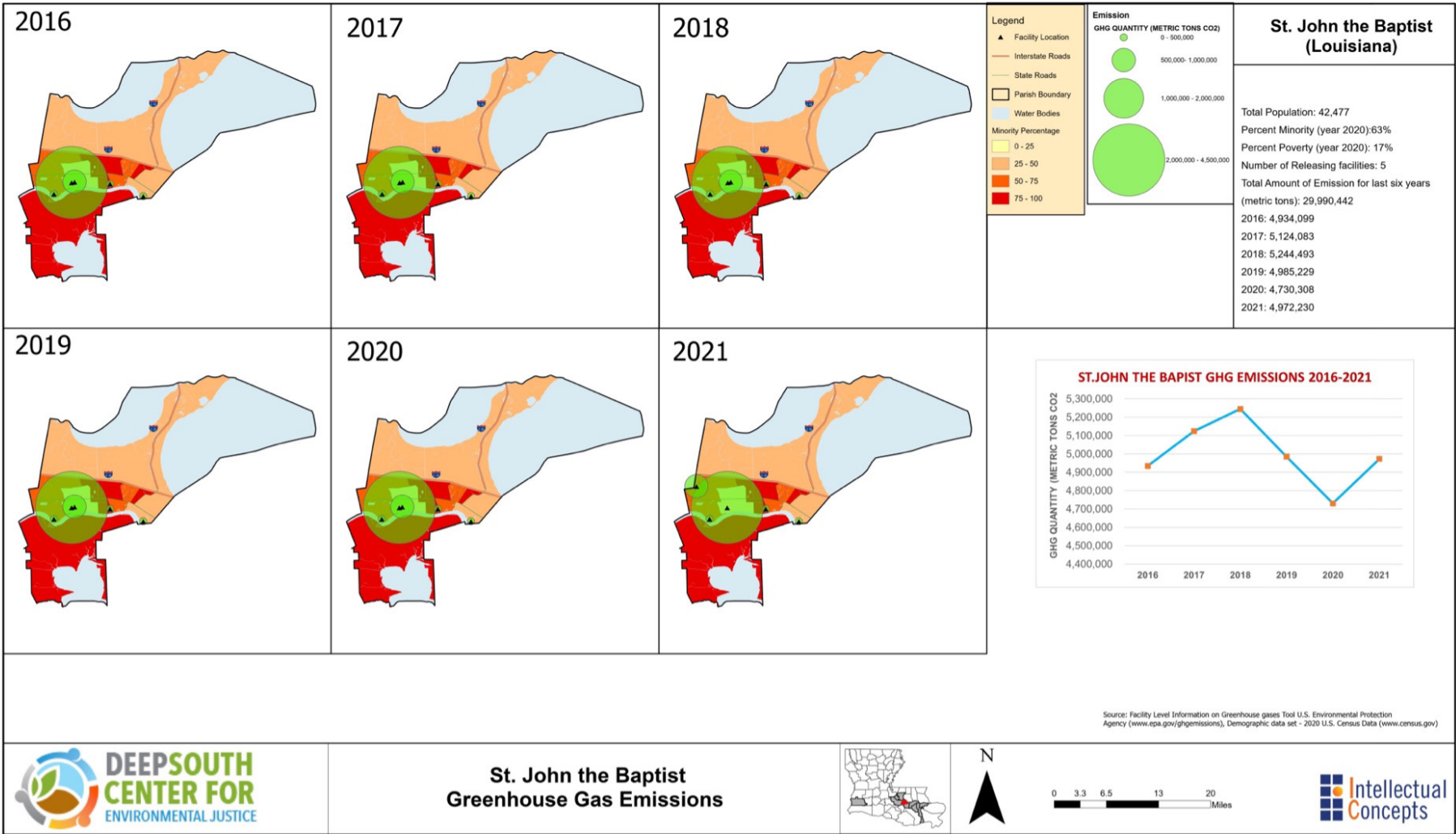


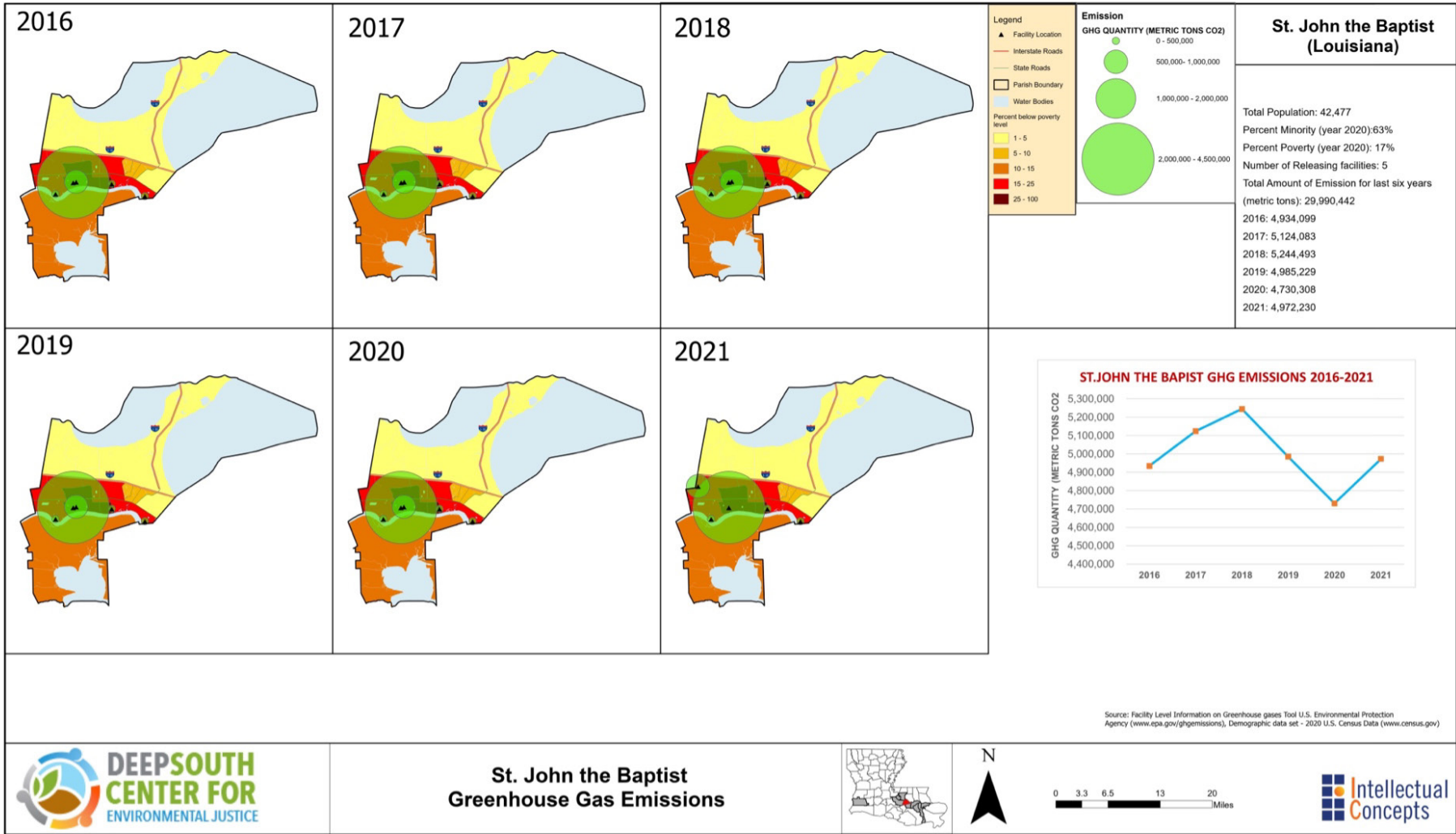
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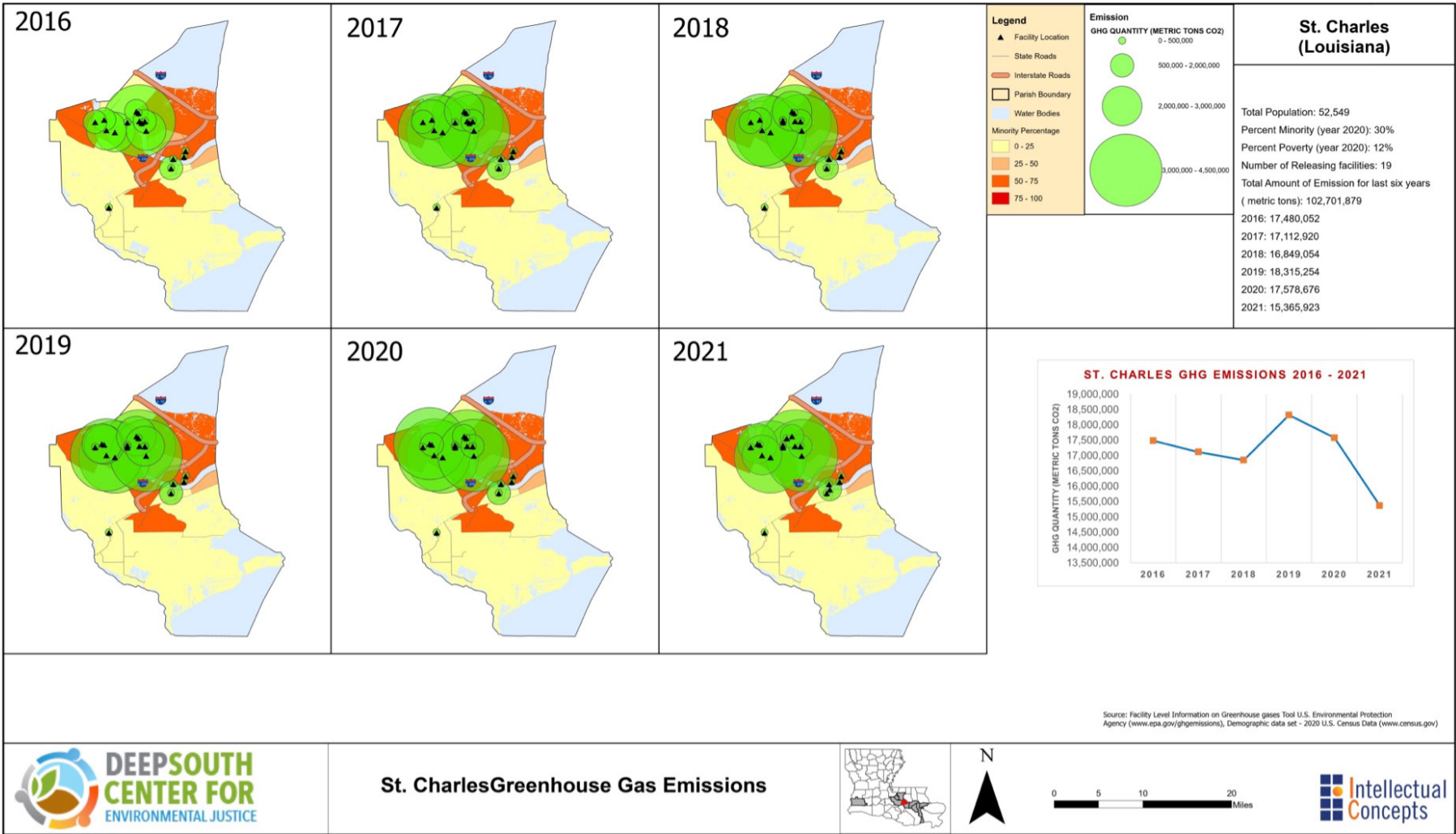


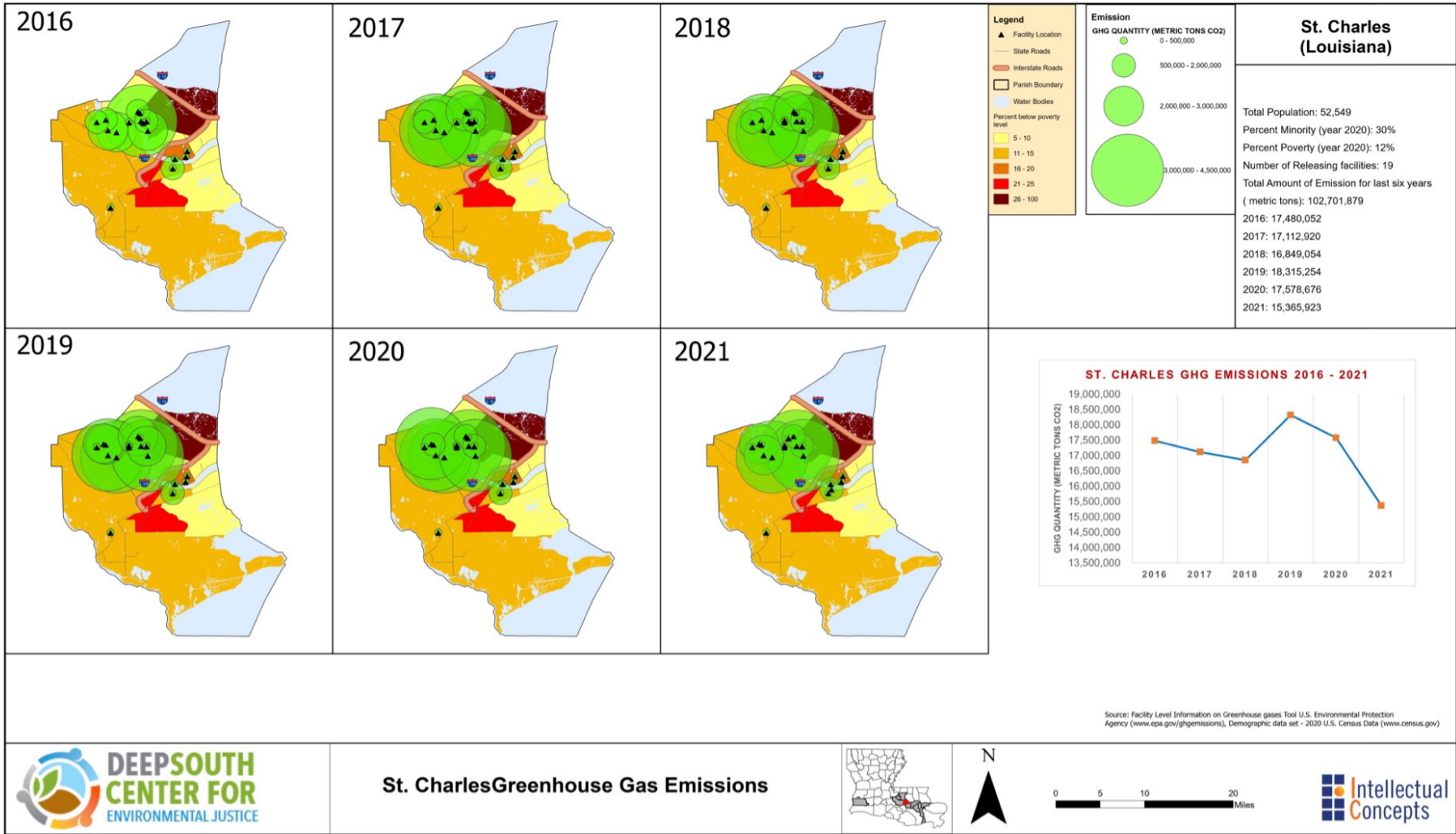
**Orleans Greenhouse Gas Emissions**

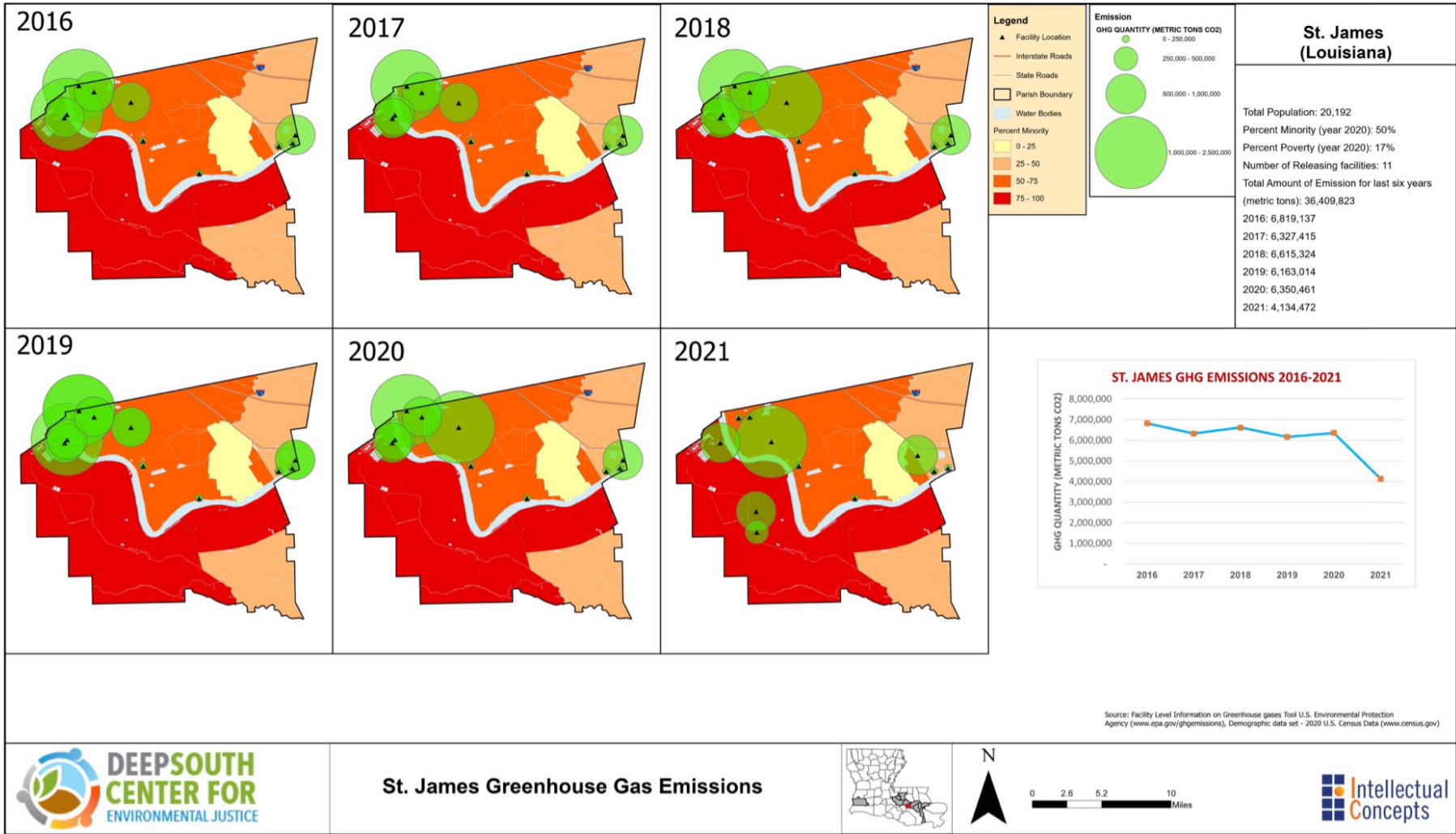


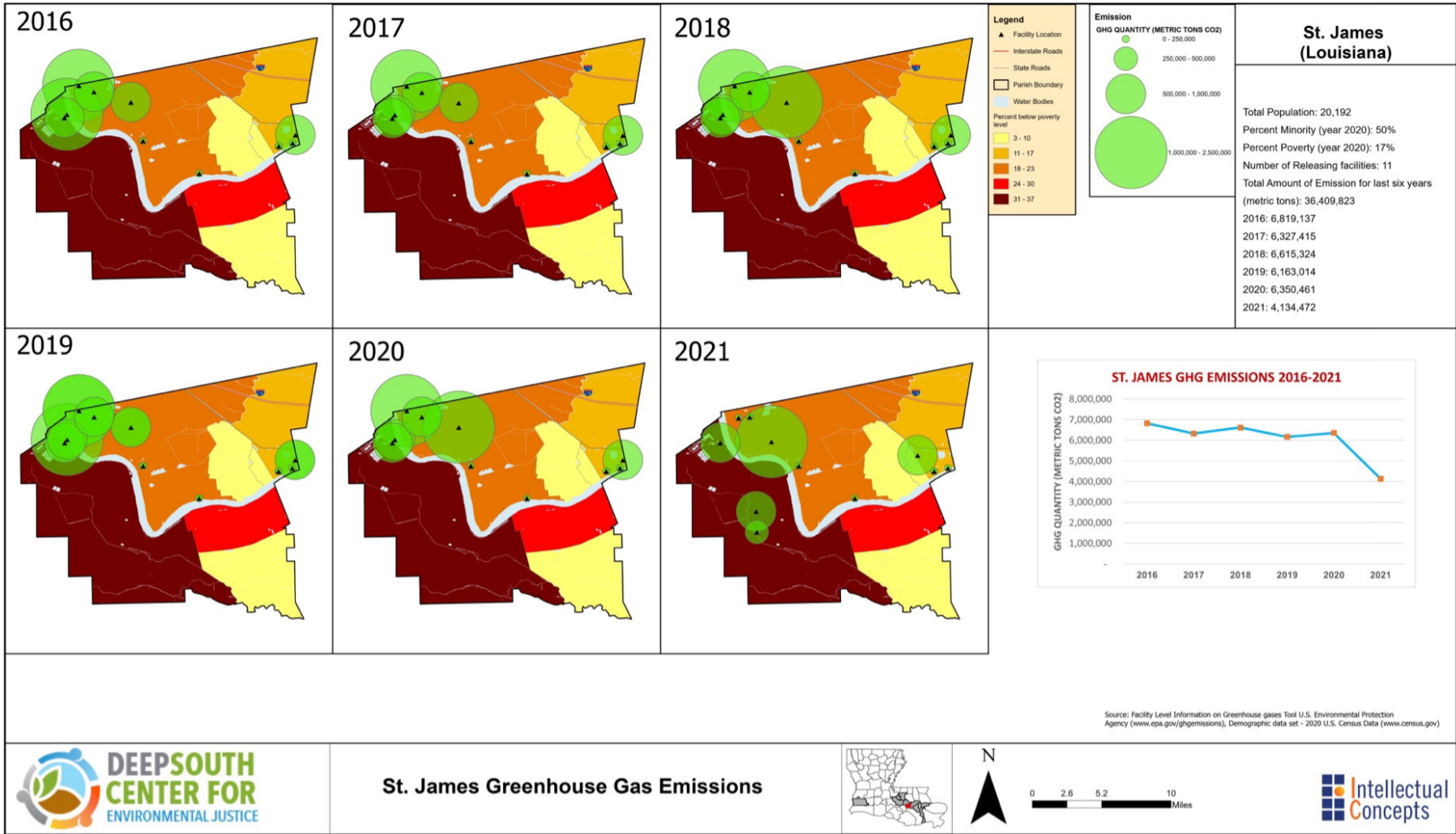


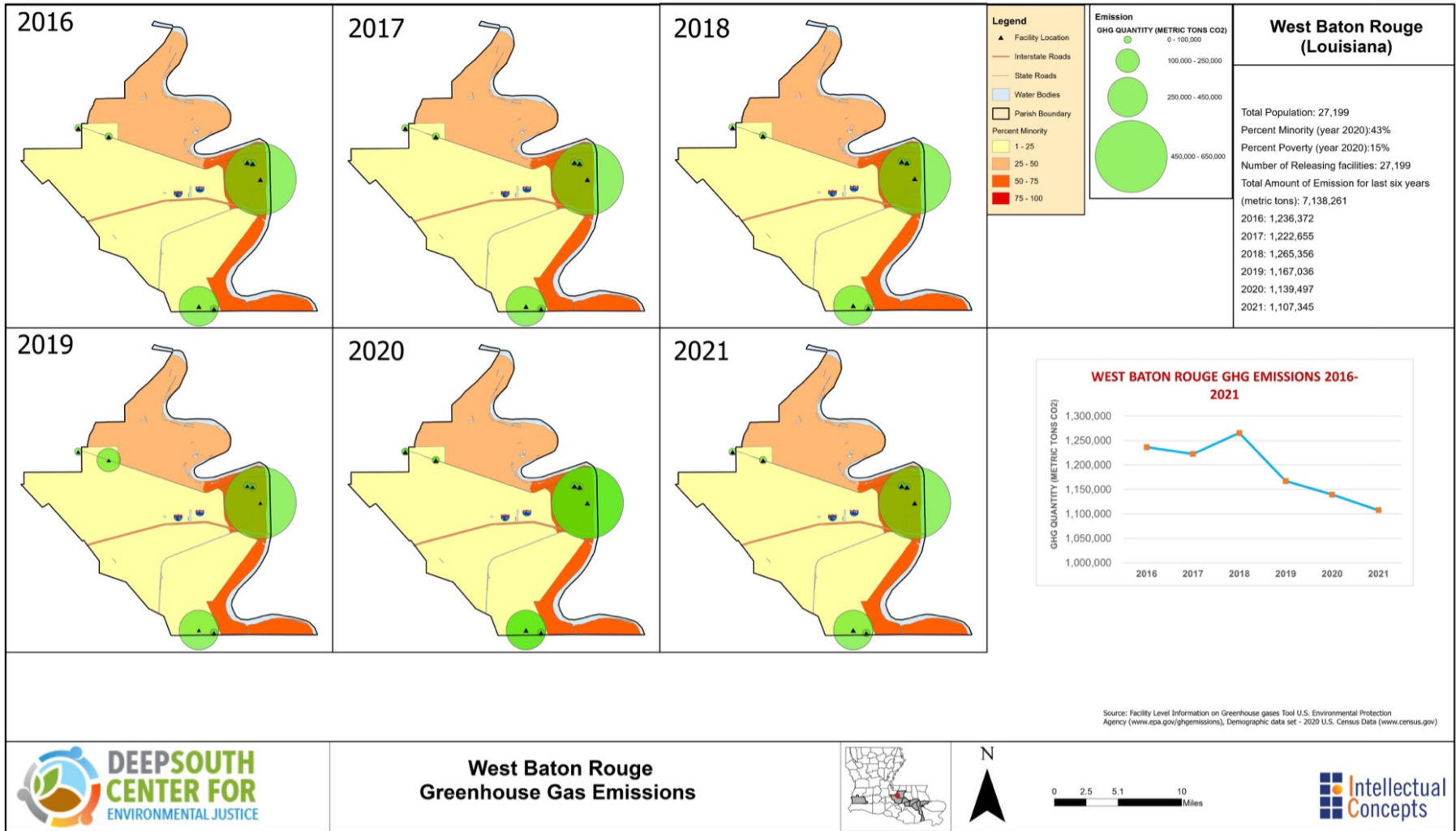


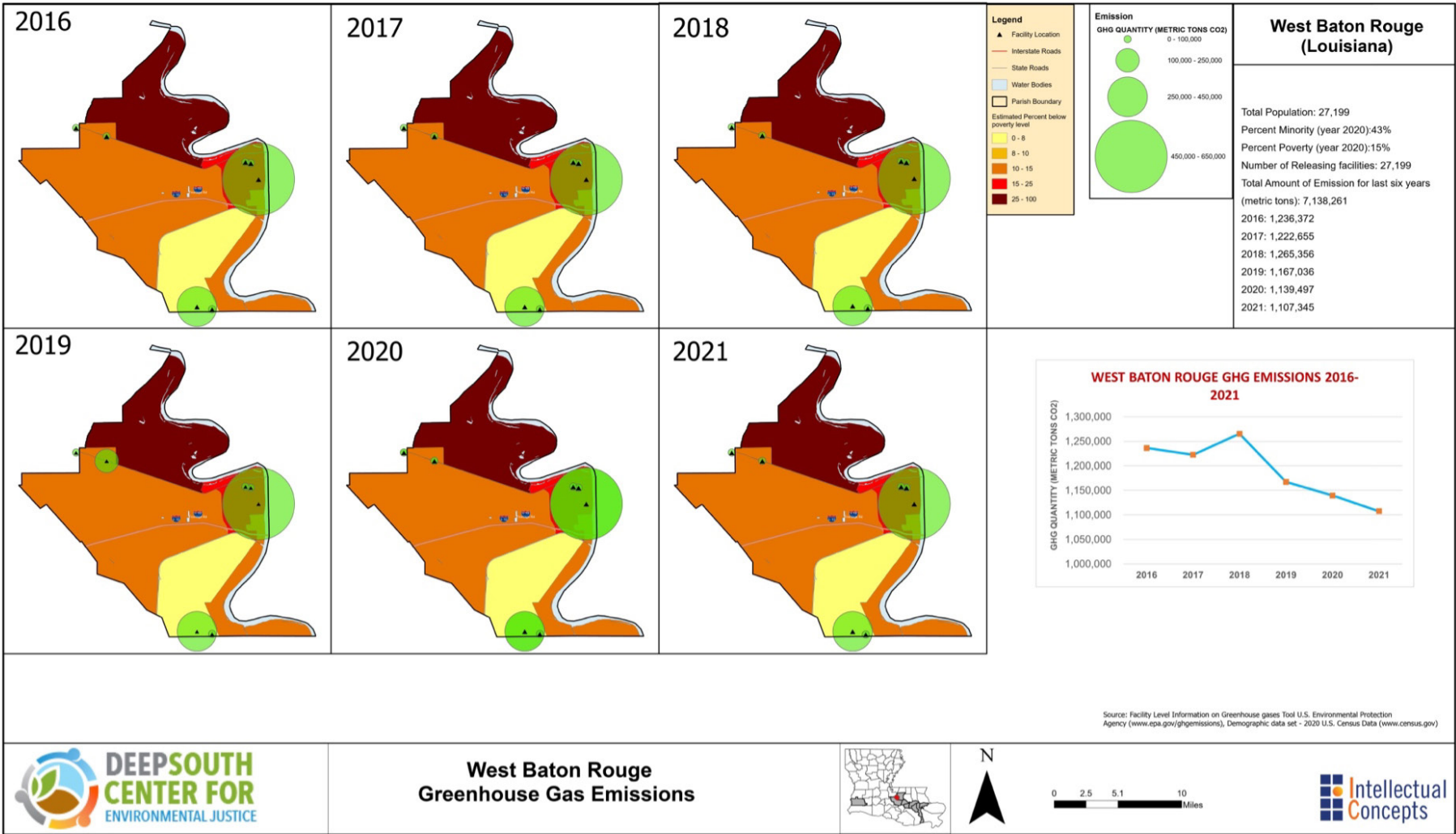




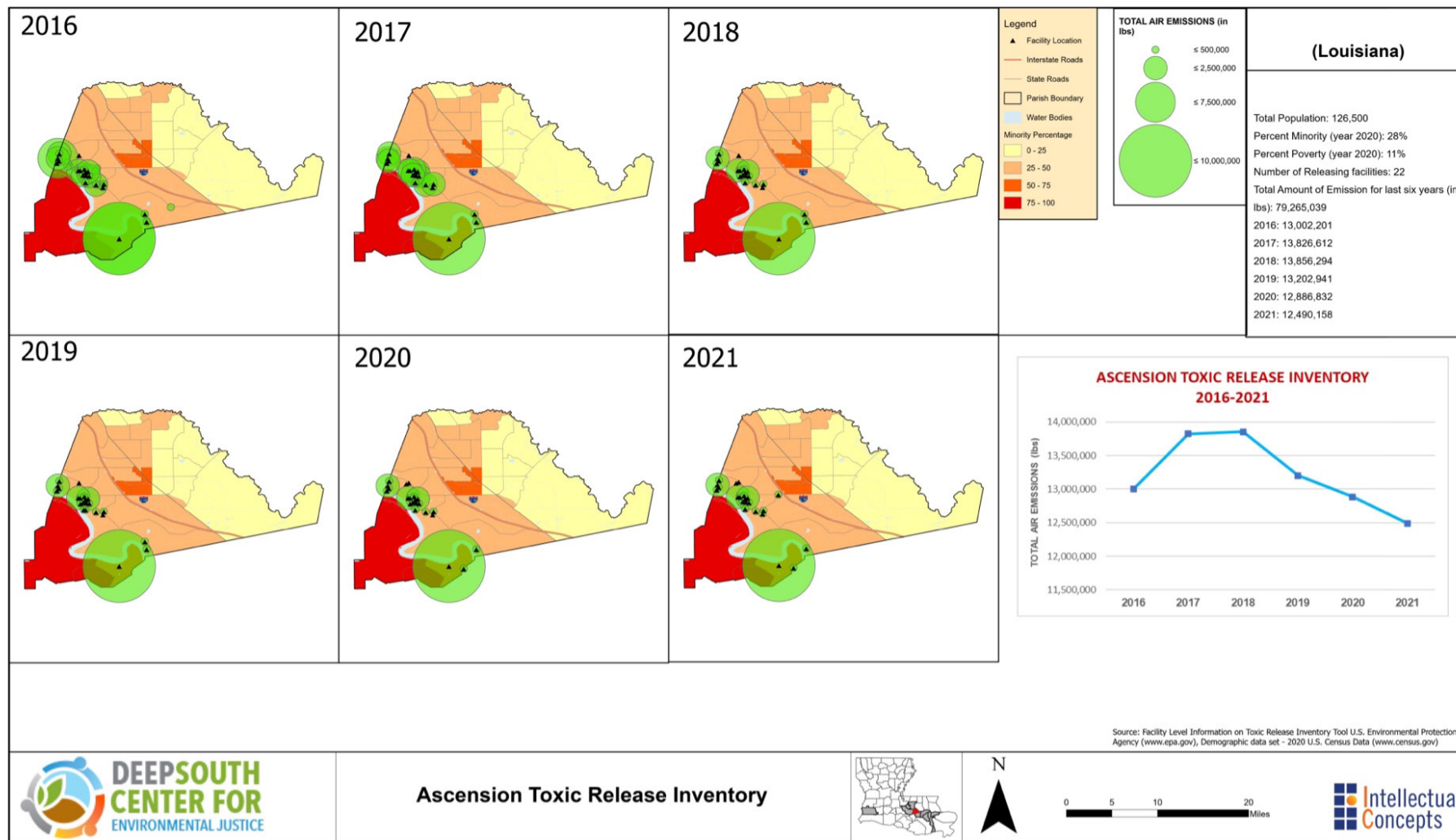


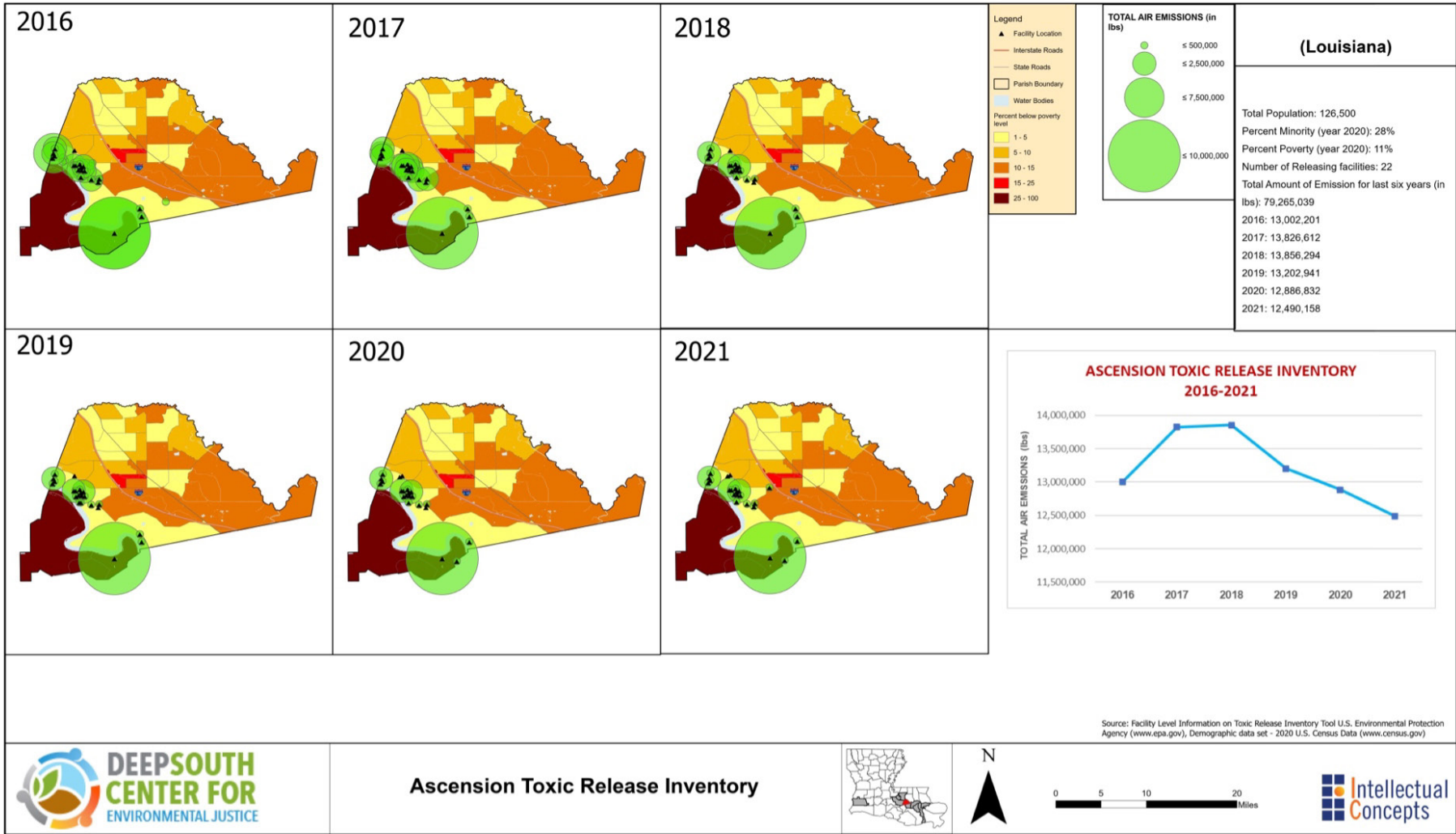


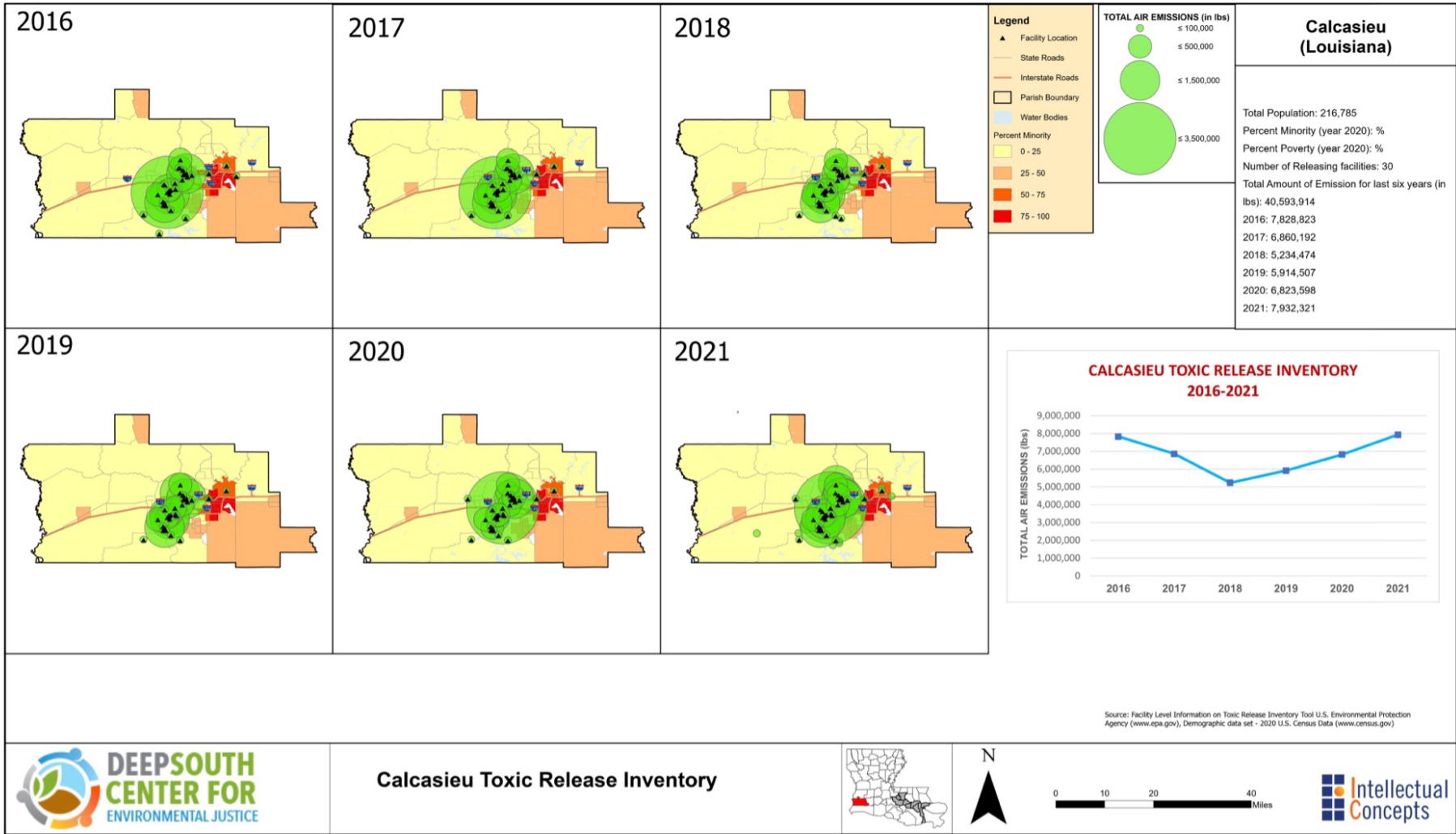


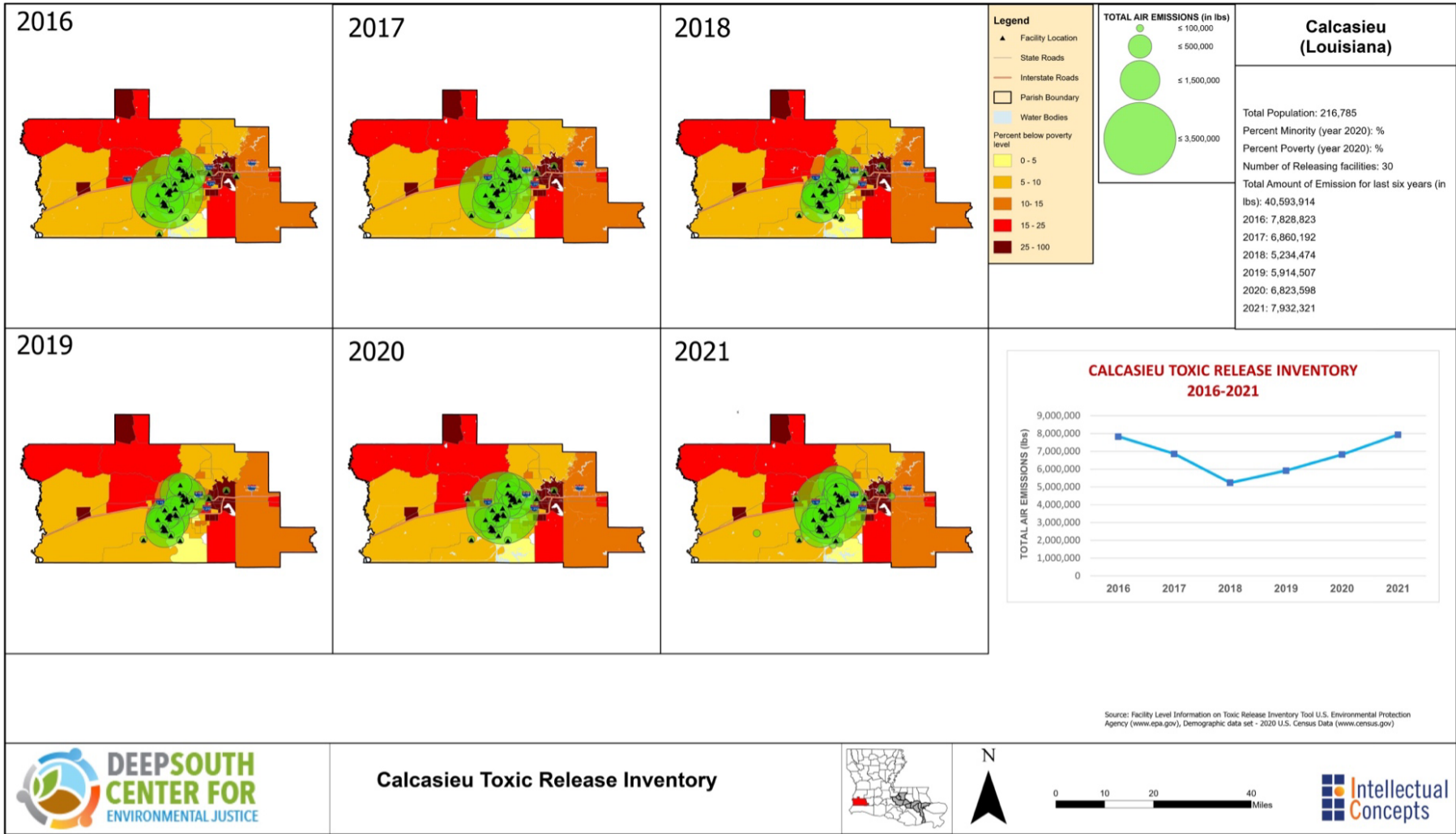


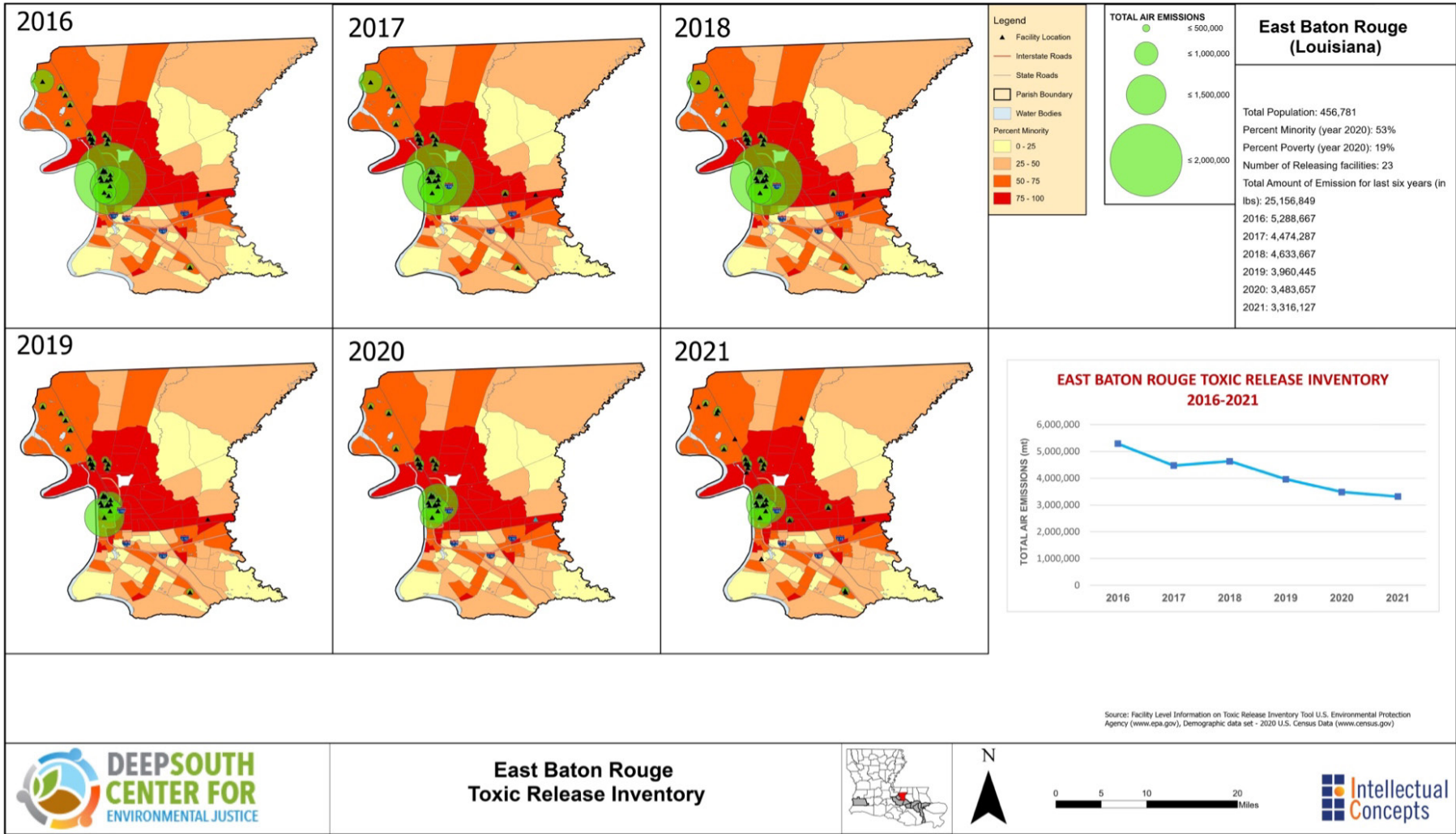
# Appendix III: 2020 TRI Maps

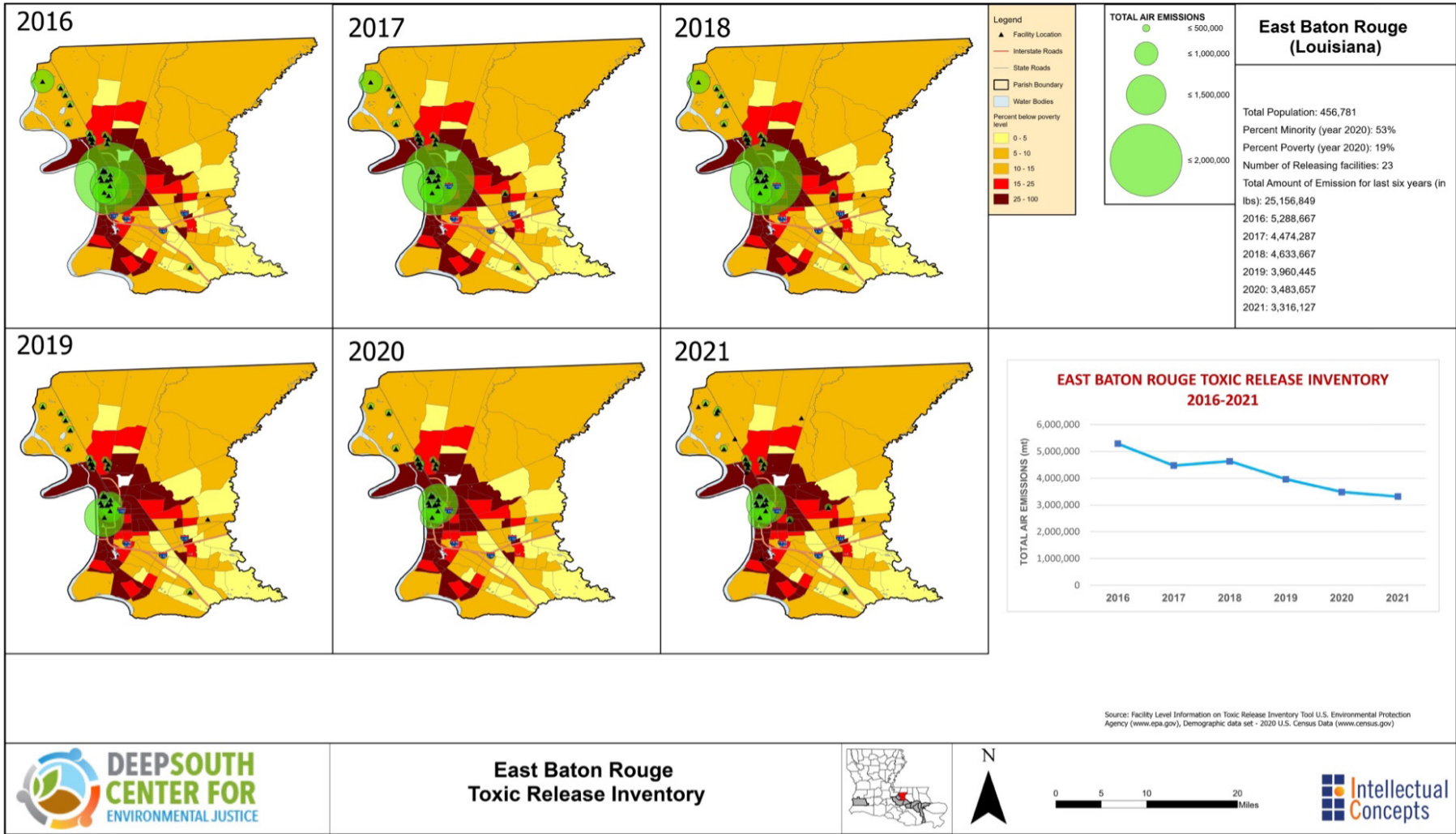


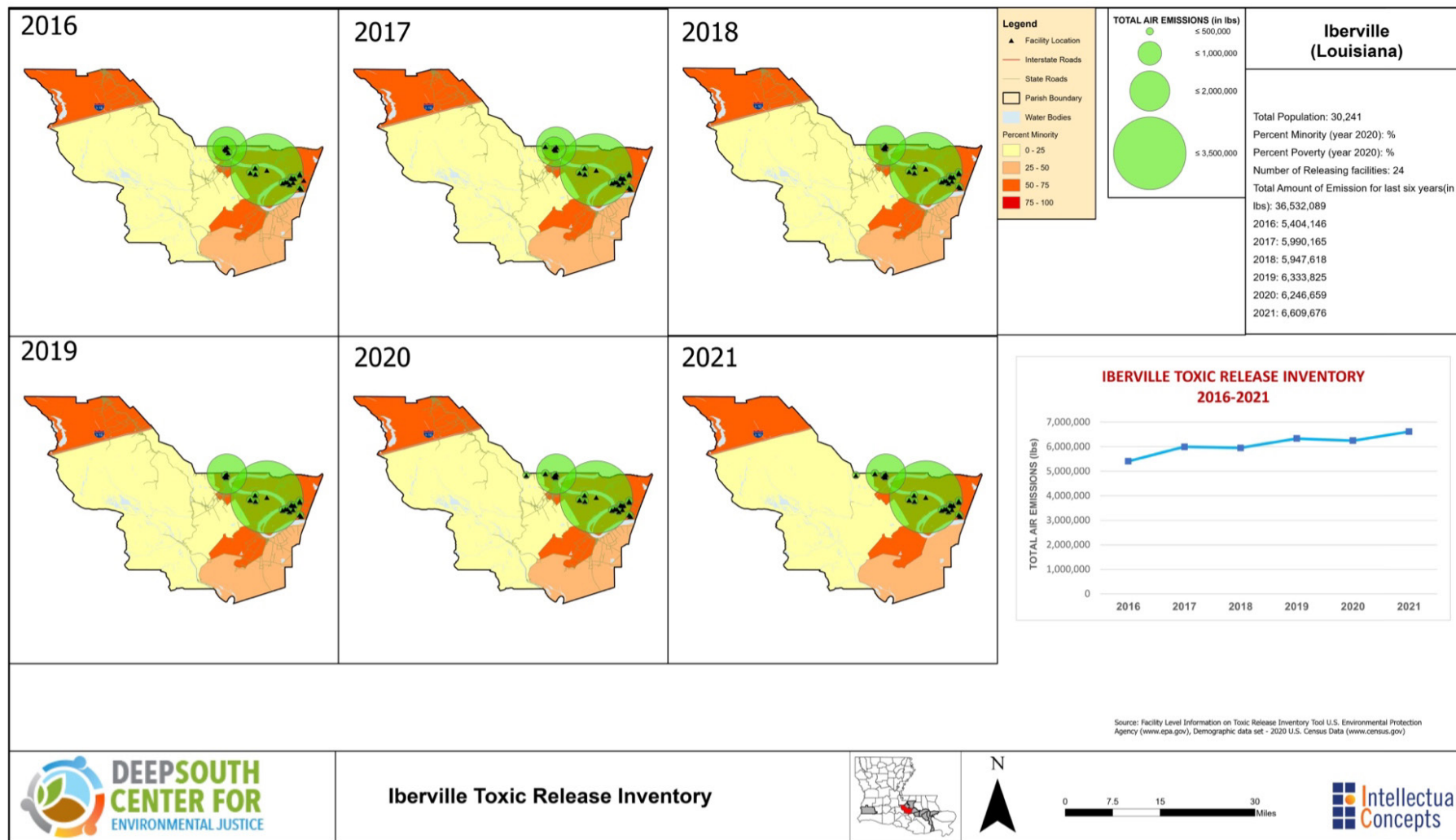


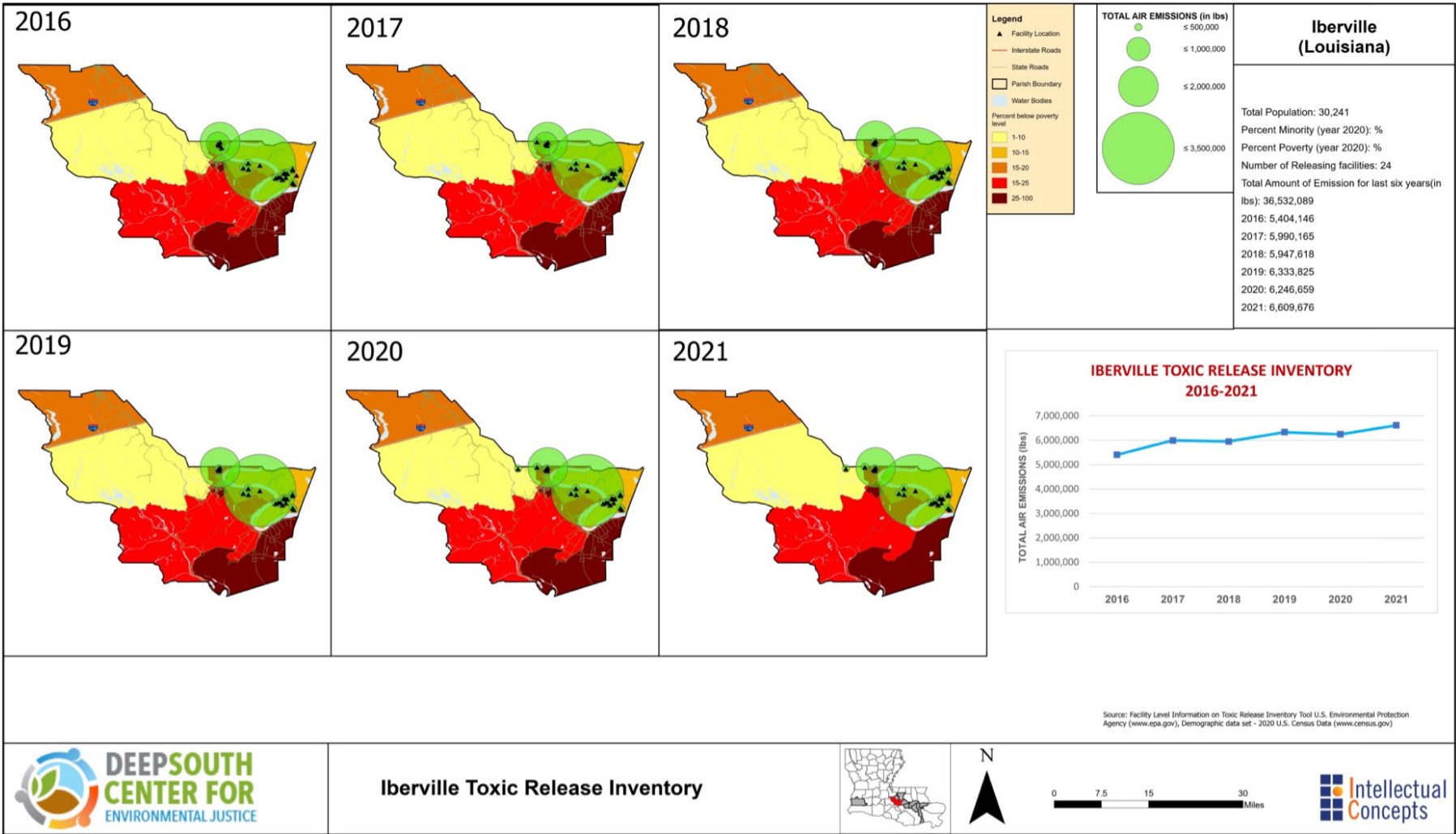


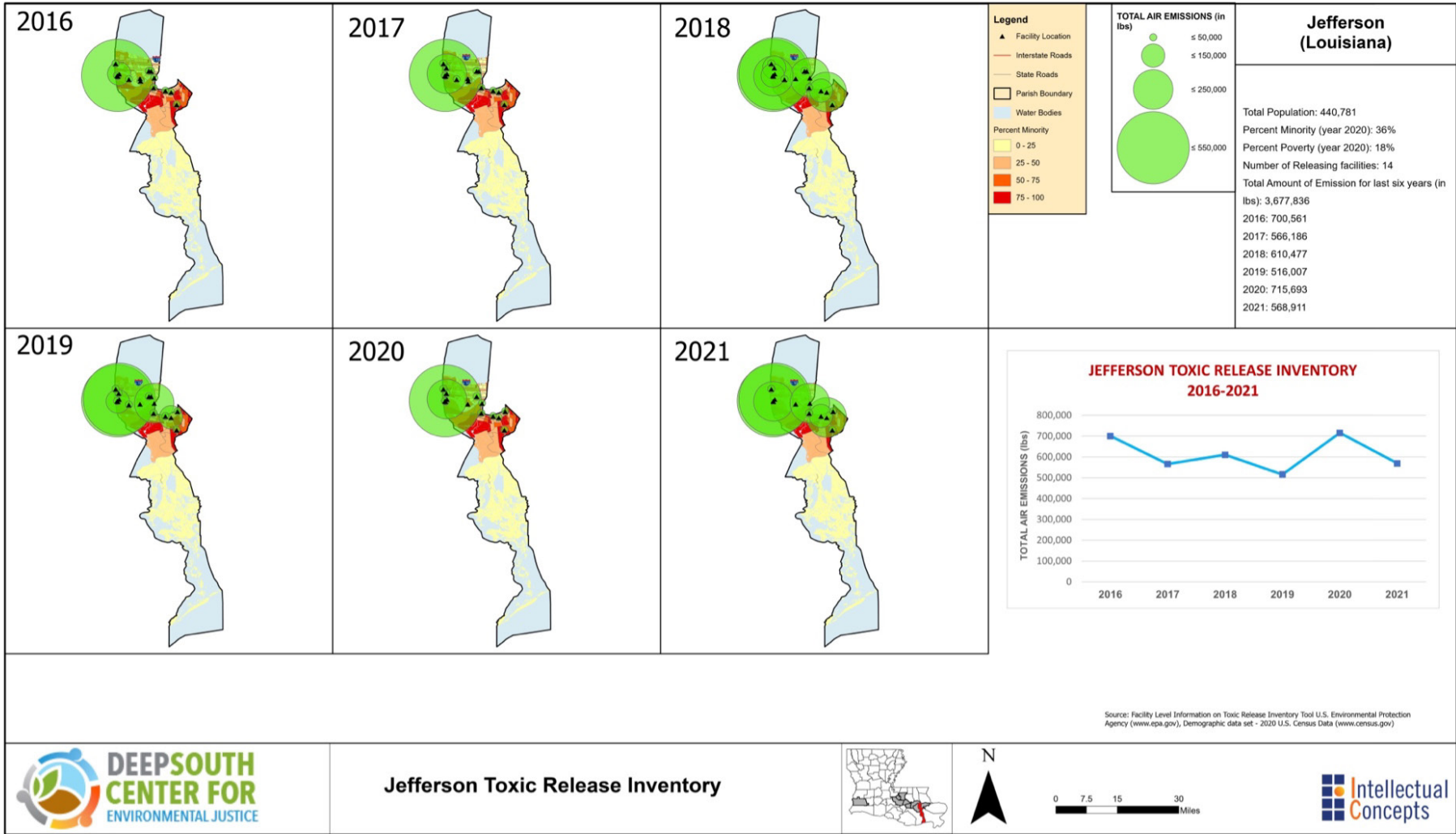


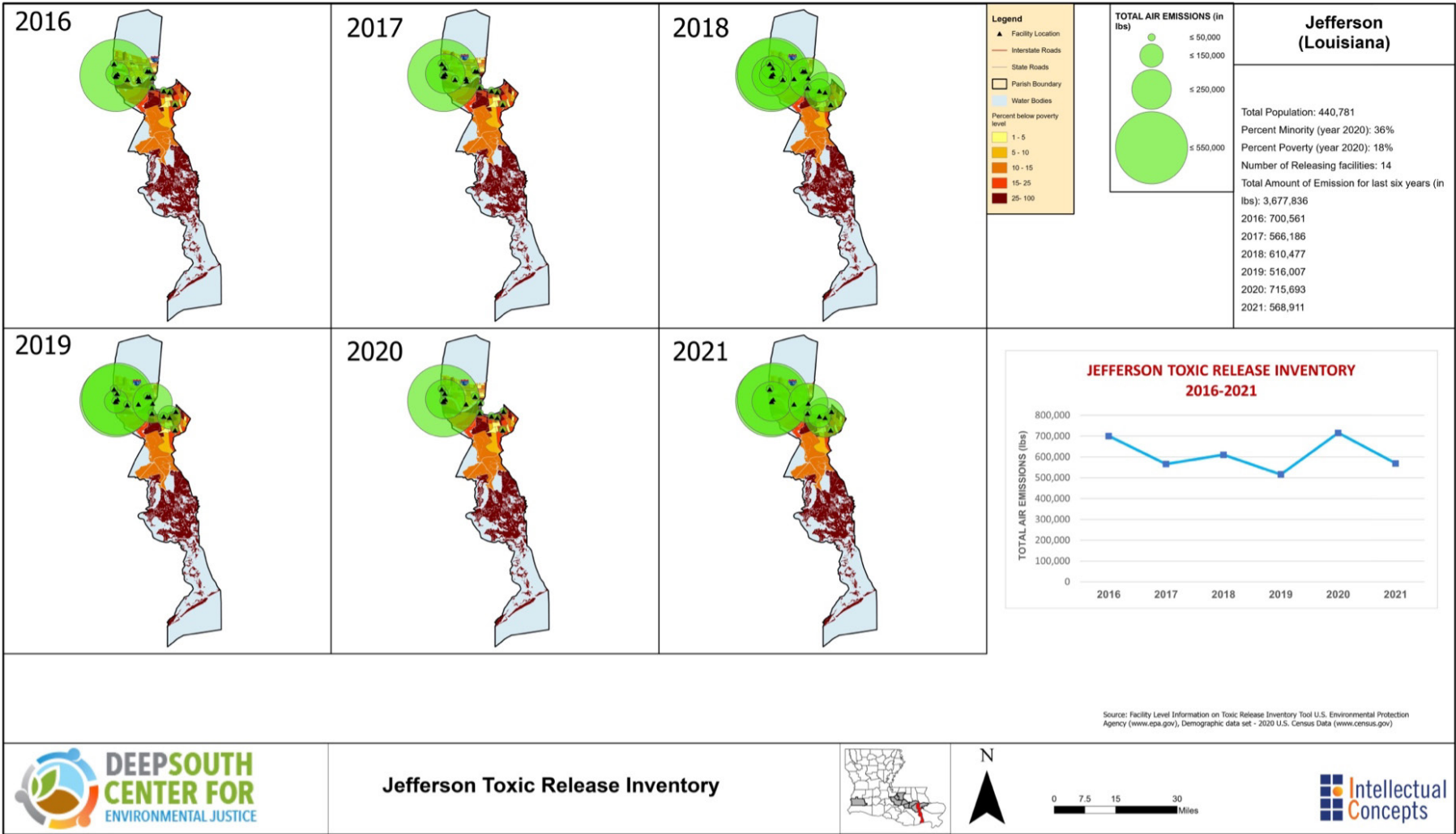


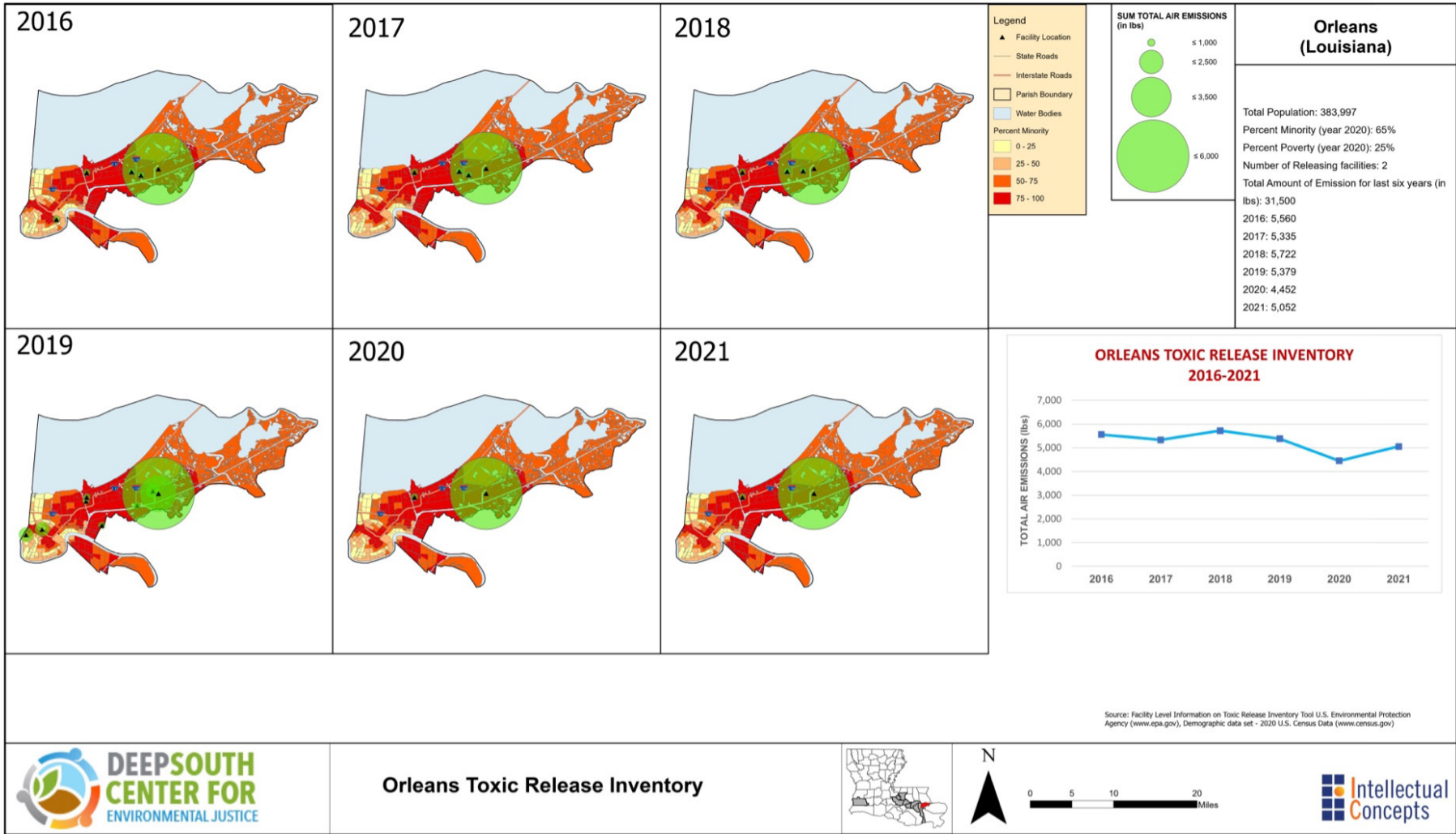


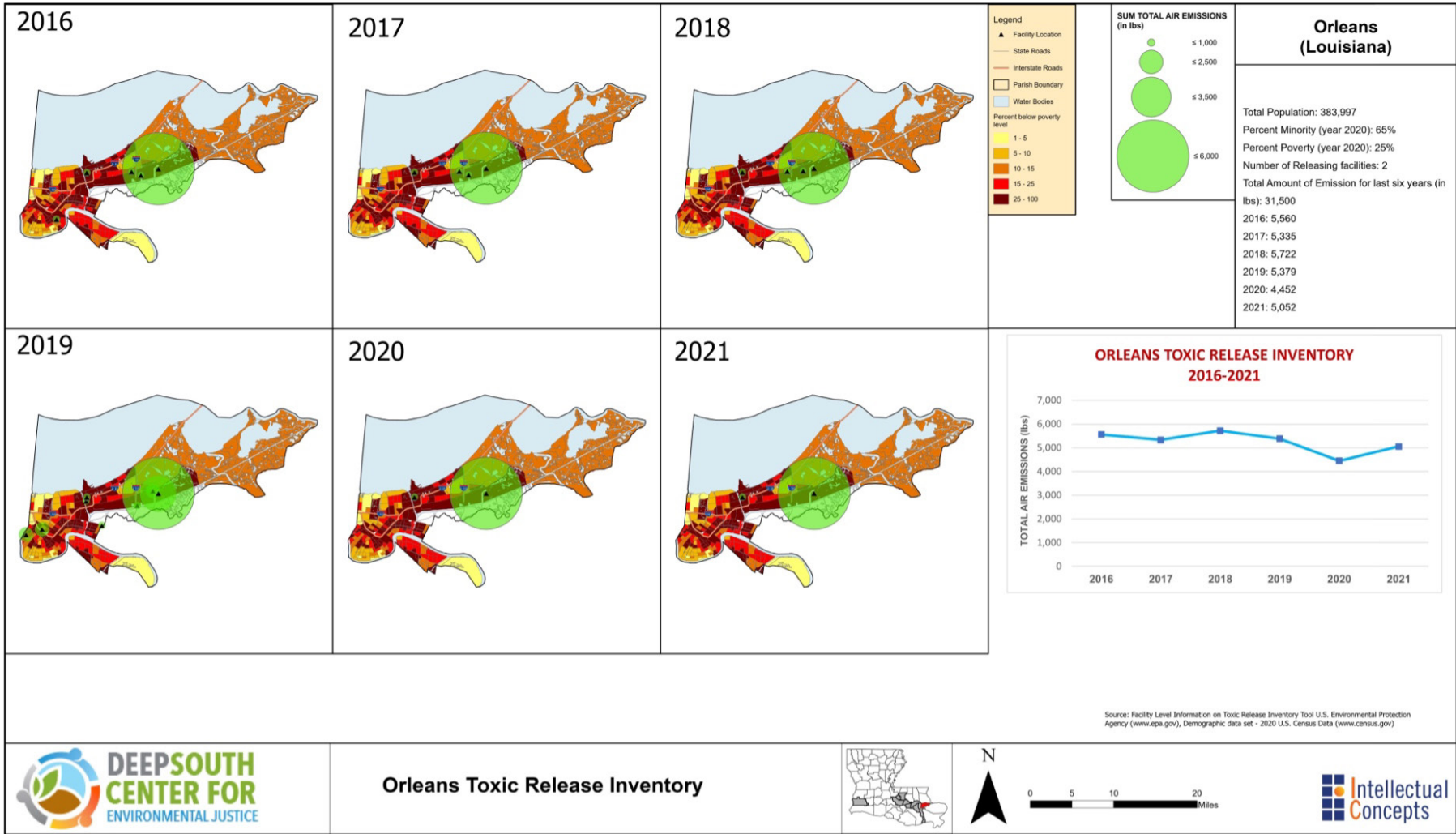


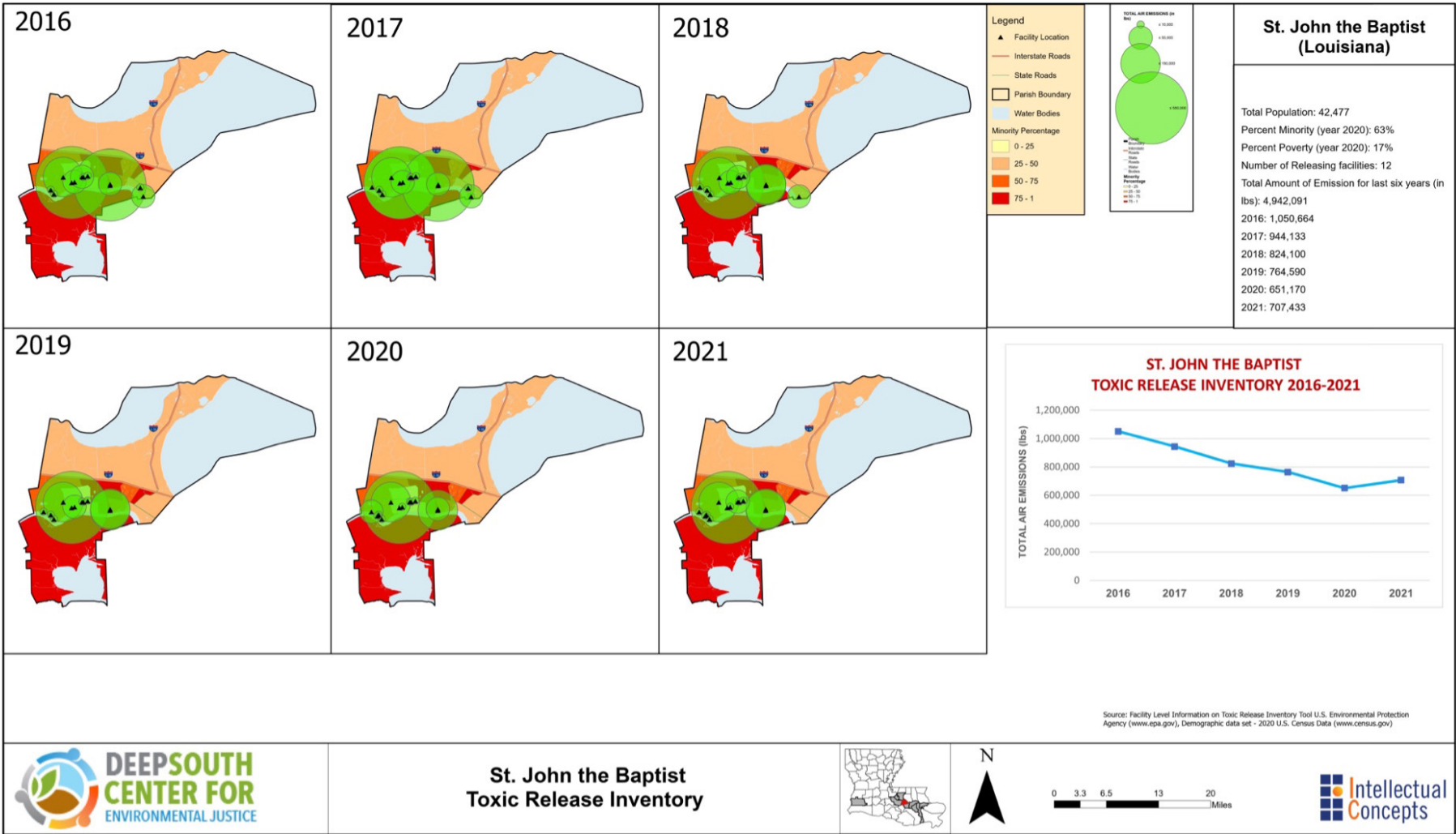


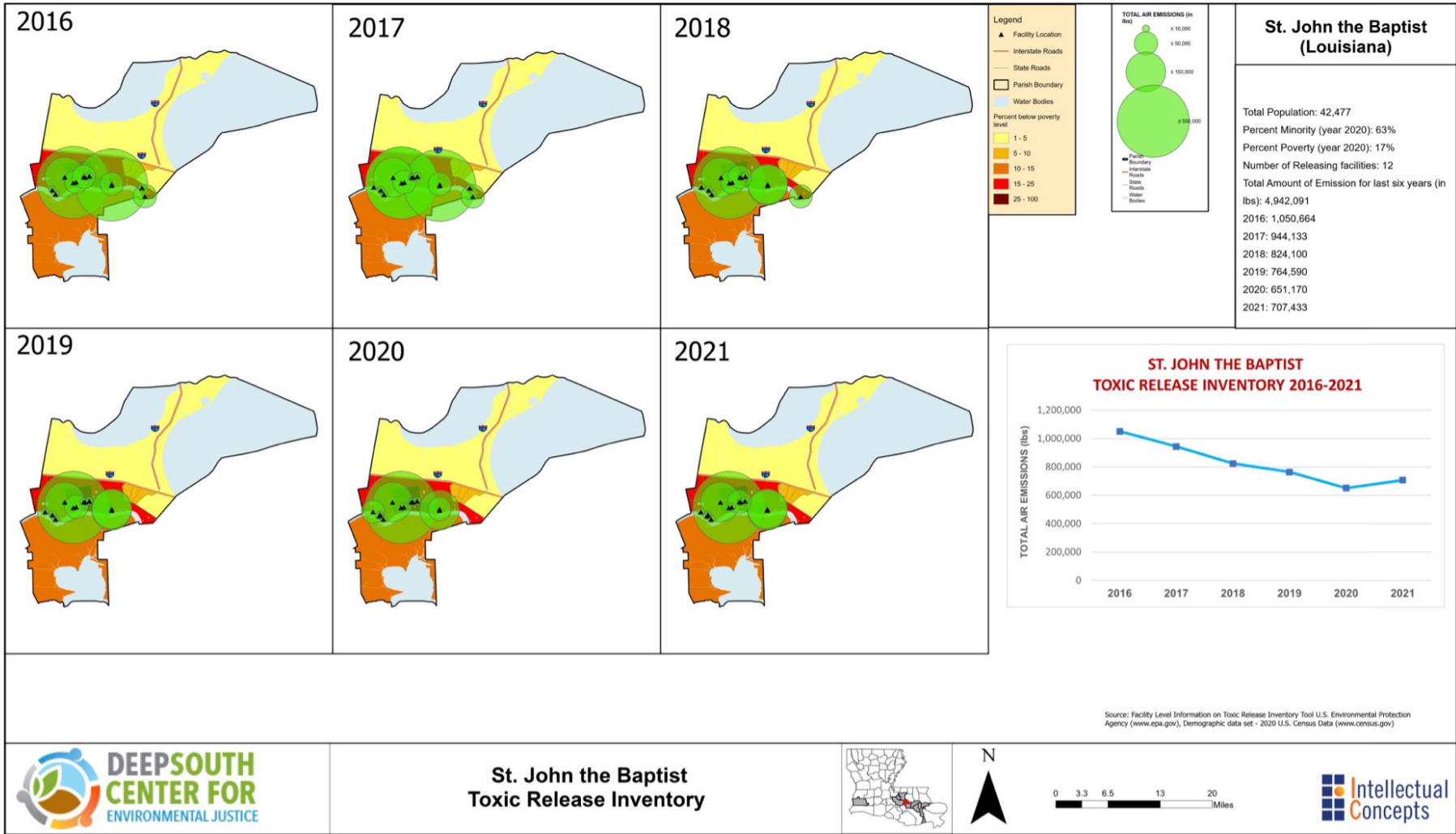


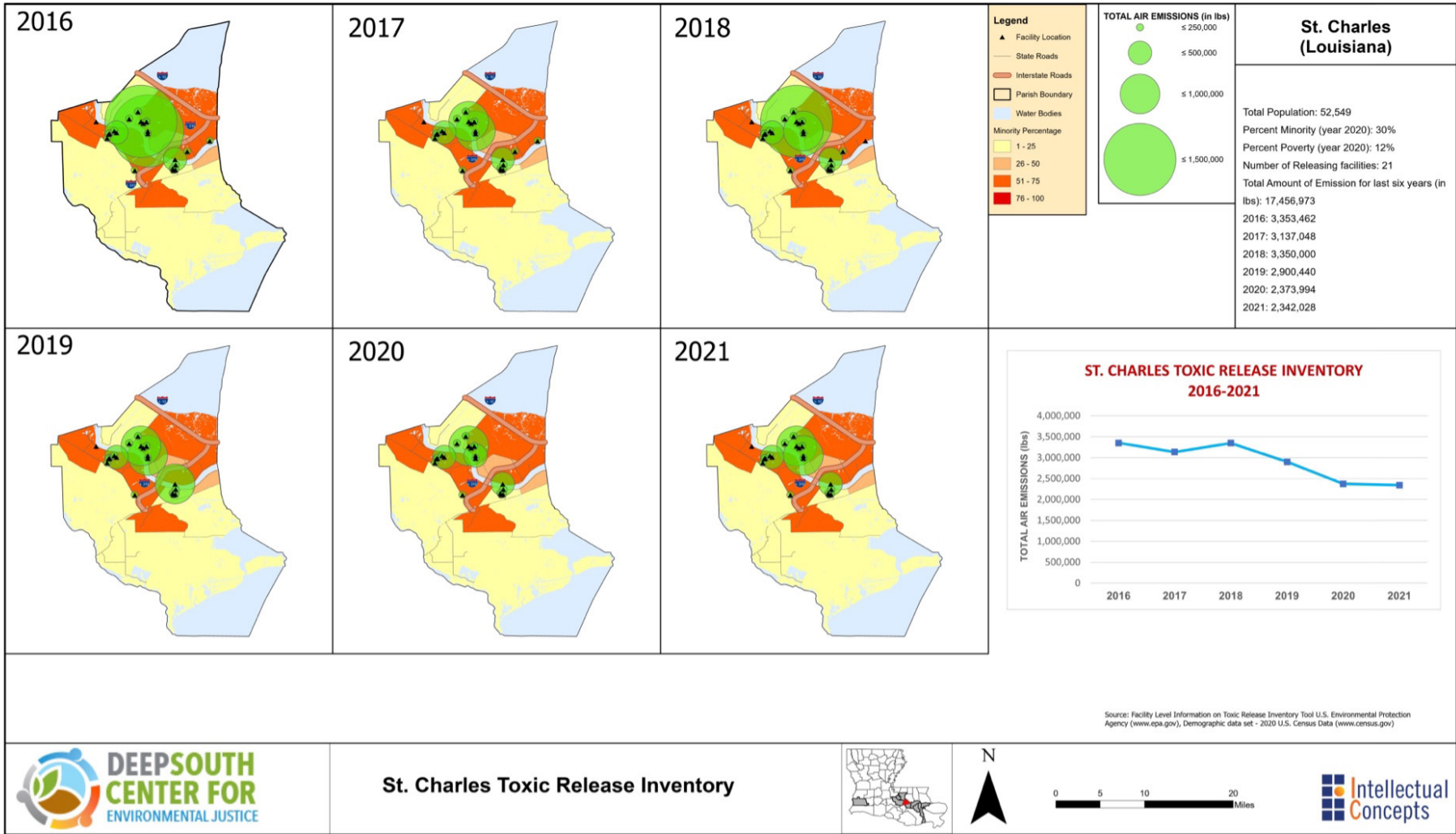


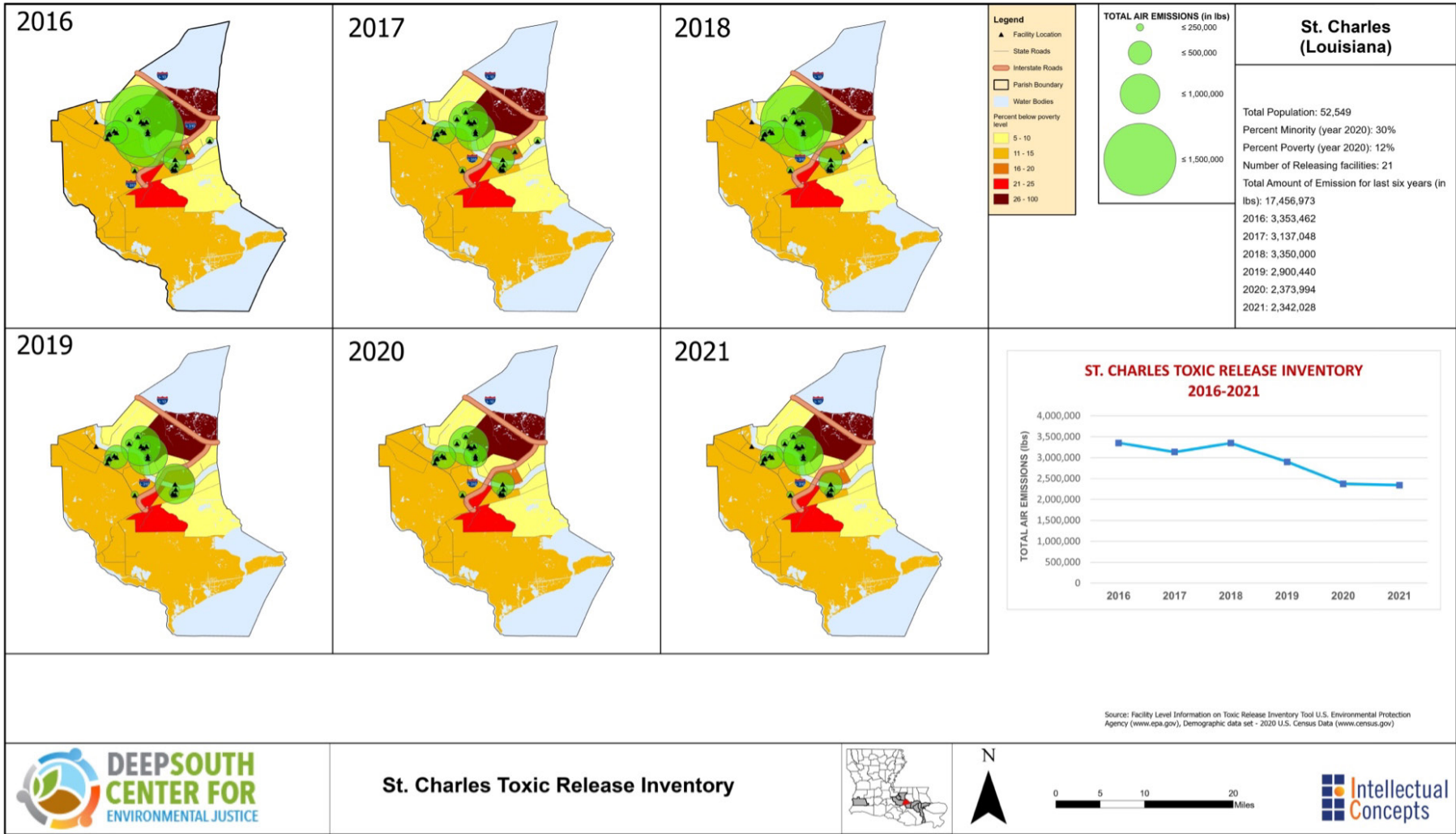


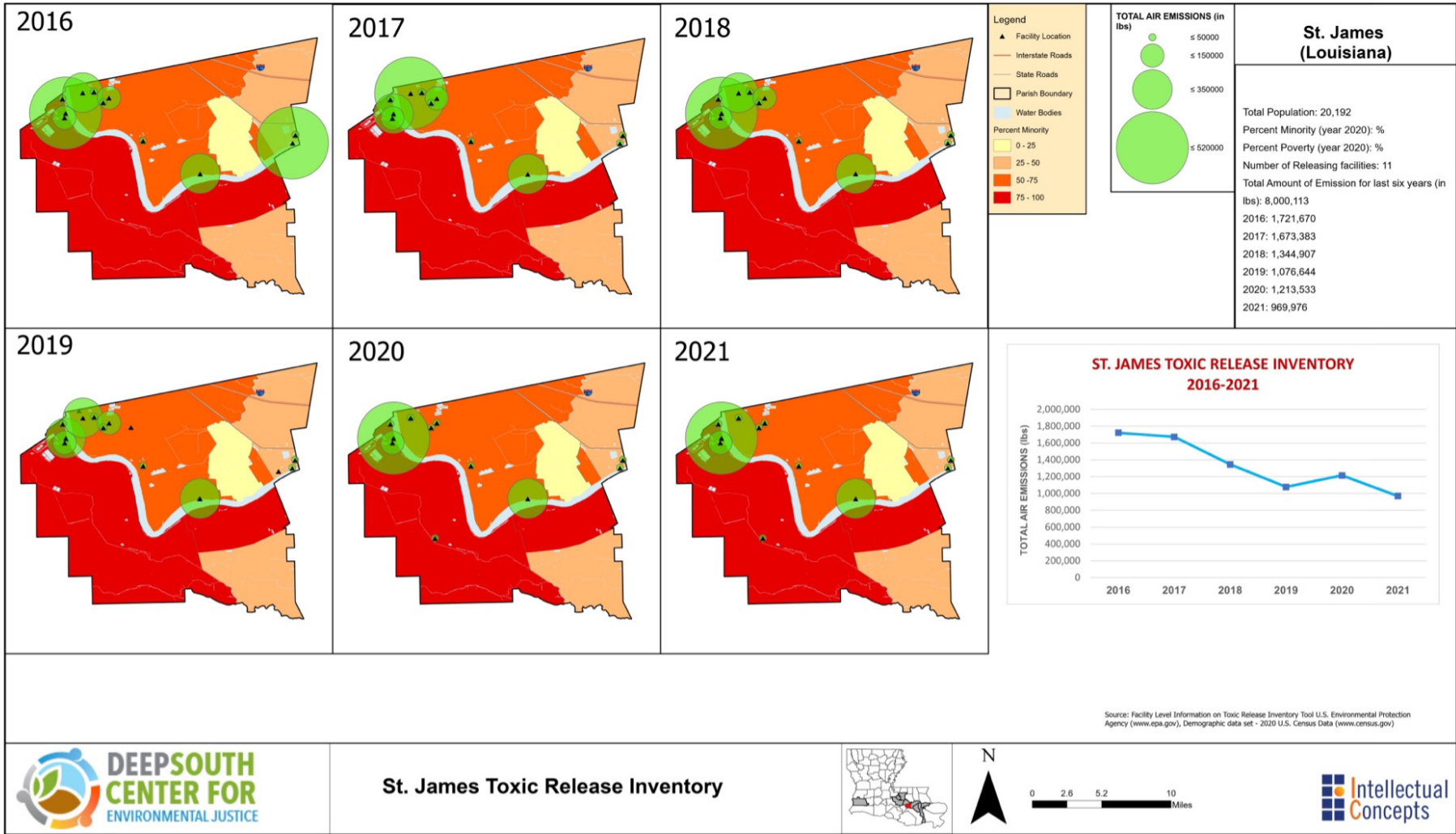






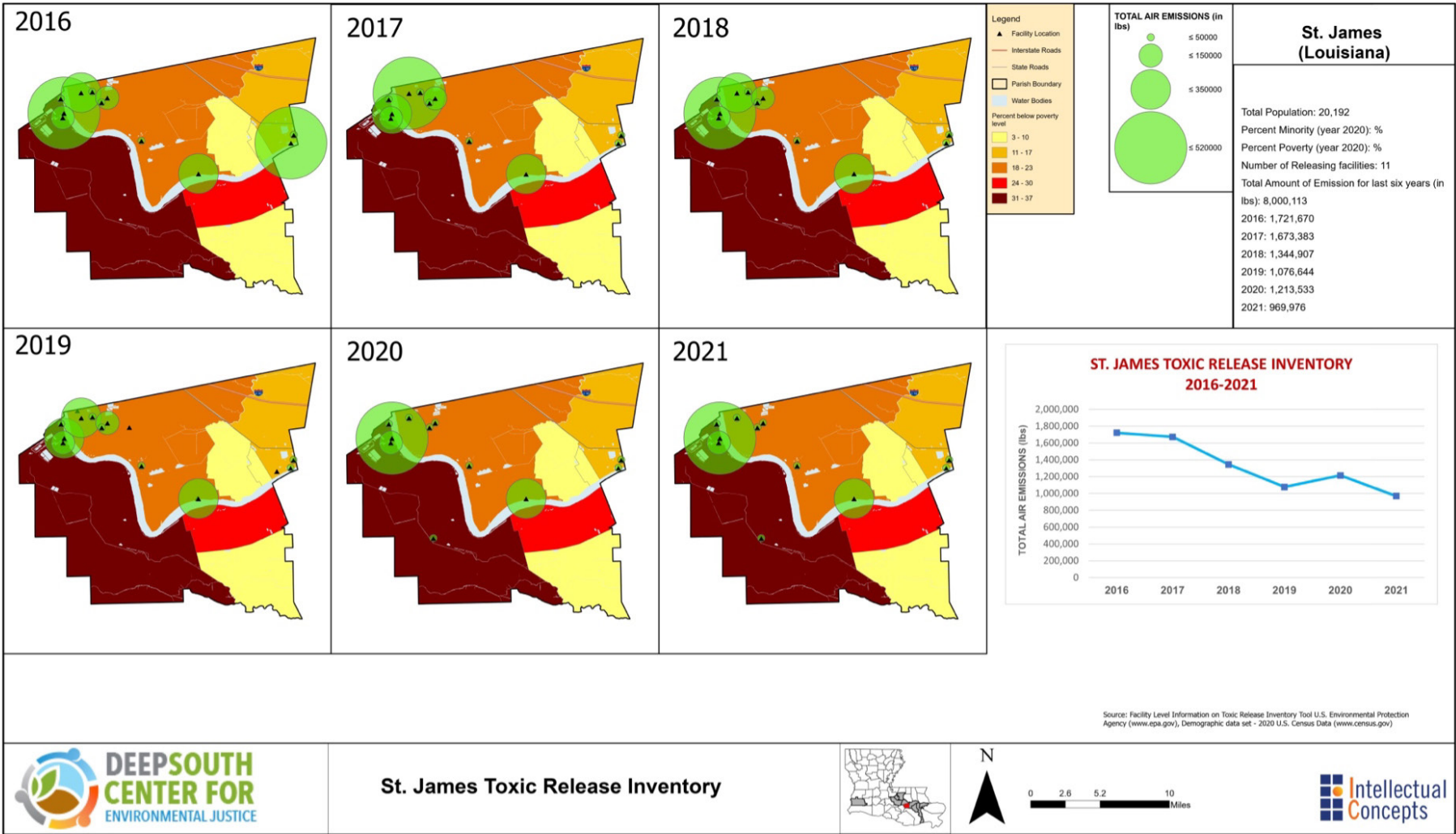


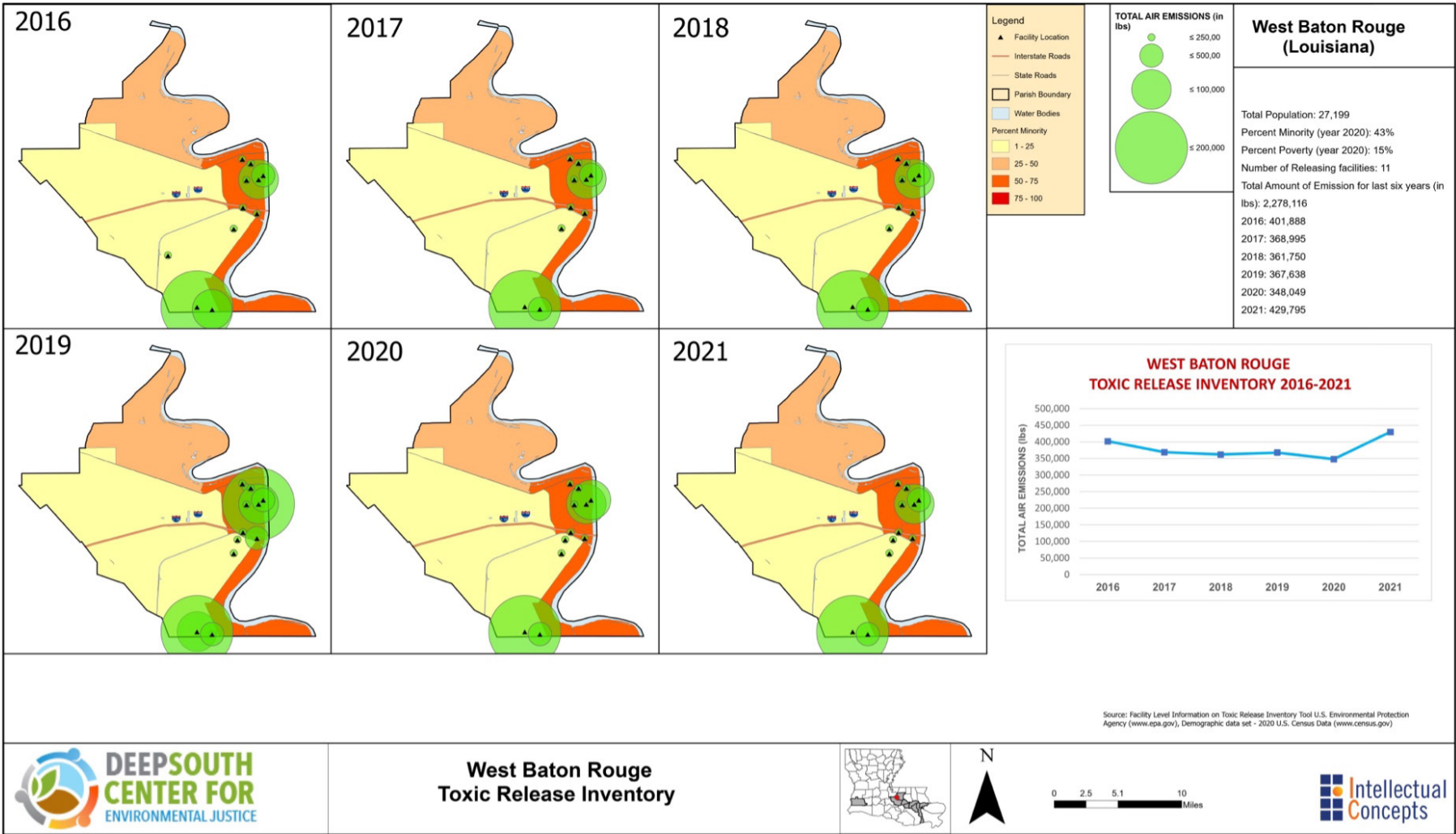




**St. James Toxic Release Inventory**







**West Baton Rouge  
Toxic Release Inventory**



