

EPA: Are the expected BMPs mapped in the watershed? Have critical and priority areas been identified? N

LDEQ Response:

Participation in implementation programs is confidential, and as such, LDEQ is not informed as to locations of BMPs within the watershed, or within subareas. However, to assist partners in targeting areas for pollution reduction, LDEQ subdivided the HUCs in the subsegment into drainage sub-areas. These divisions were based on LiDAR elevation data, levee and pump station spatial data, and monitoring locations. These areas can be seen in the maps below.

Bacteria: In the WIP, baseline monitoring data was analyzed for each sampling location to determine potential sources of bacteria in the watershed. This analysis, combined with ambient monitoring data, land use data (USDA 2016), OSDS locational data (LDH), and ground truthing was used to prioritize sub-areas for pastureland BMPs and for OSDS inspections and repair. High bacteria concentrations are seen throughout the subsegment, and bacteria reduction is warranted in the majority of the geographic area. Subarea A is not prioritized for any bacteria reduction BMPs. There is no pastureland in the area, and OSDS systems have been tied into community treatment in this area. However, this is an area of loading due to permitted dischargers and urban runoff. LDEQ Enforcement is working with the dischargers and with EPA to address discharger issues.

The map in Figure 1 shows sub-areas prioritized for pastureland BMPs. Priority areas were distinguished based on type of pastureland. Some areas are characterized by small family pastures with horses and cows, some areas are dominated by large cattle operations, and some areas contain both types. This map and associated GIS data will be shared with USDA-NRCS partners in the area, who will work with area producers under the National Water Quality Initiative (NWQI) to implement conservation practices.

The map in Figure 2 shows areas prioritized for OSDS inspections and repairs. These areas were distinguished into two priority categories based on monitoring results and locations of OSDS sites. This map and associated GIS data will be shared with the Barataria-Terrebonne National Estuary Program, which will begin inspections targeting areas in order of priority. BTNEP will follow up those inspections by reaching out to residents with a cost-share program for OSDS repair under a separate grant.

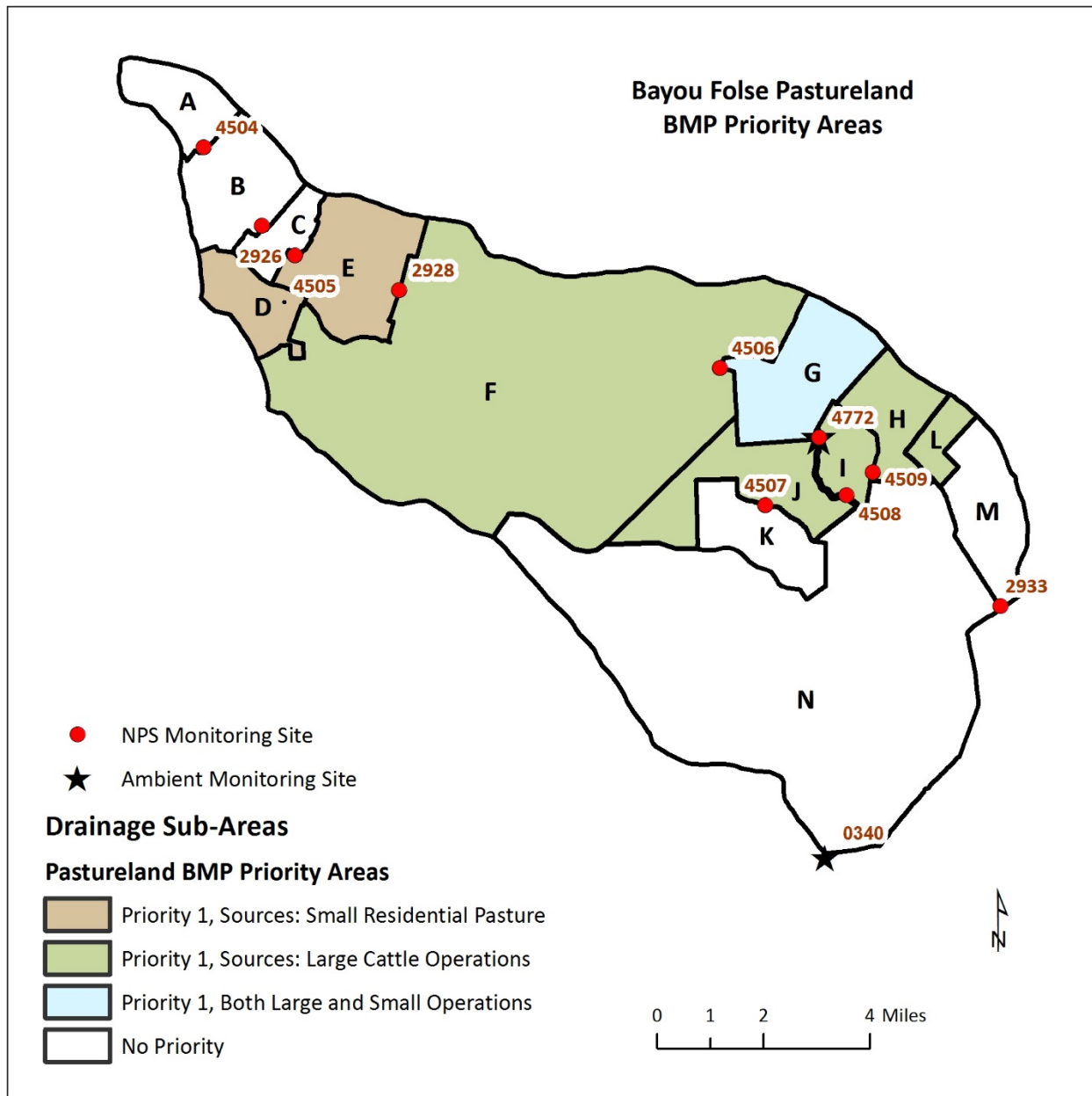


Figure 1. Pastureland BMP Priority Areas

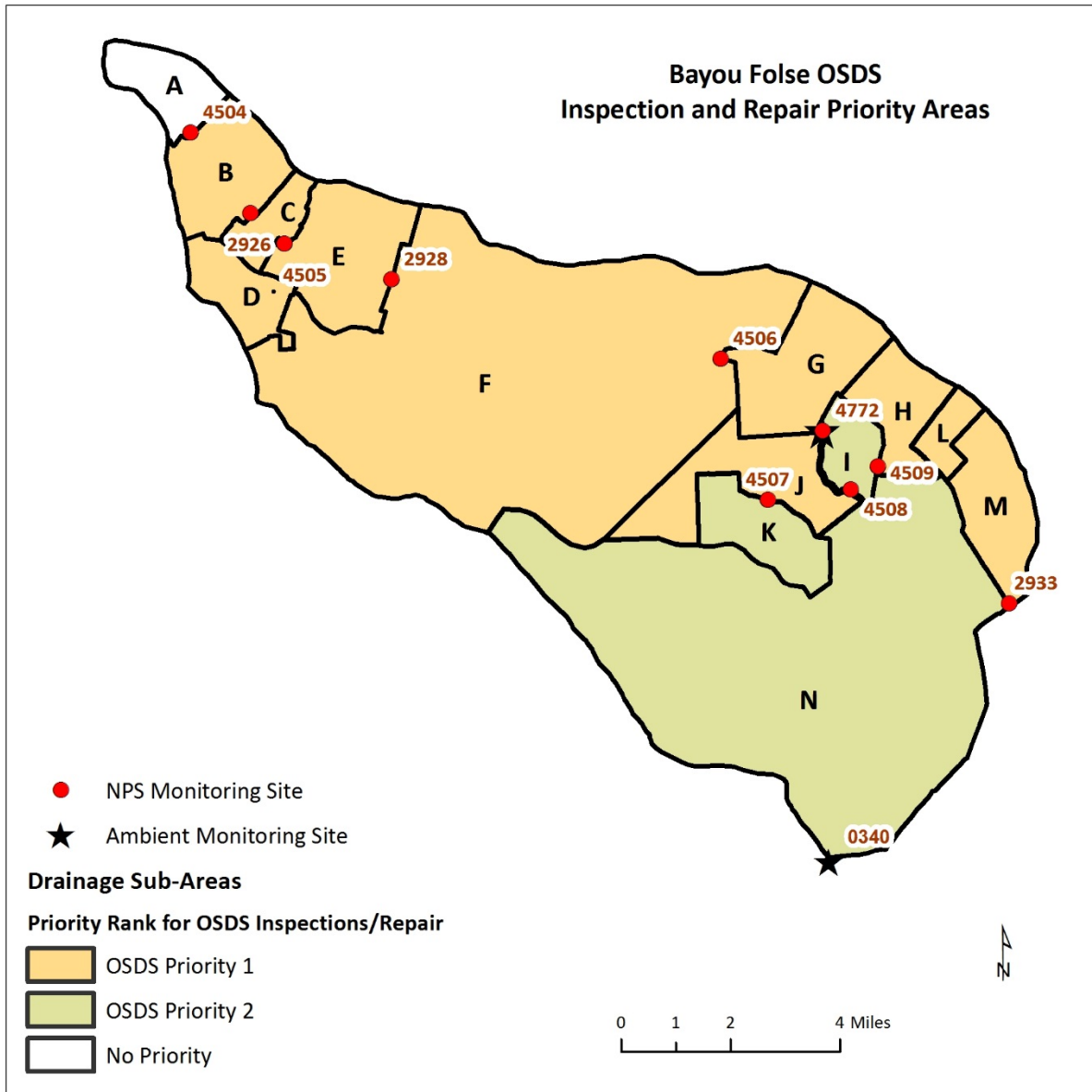


Figure 2. OSDS Inspection and Repair Priority Sub-Areas

Nutrients: Drainage sub-areas were prioritized according to baseline monitoring results from Oct 2016 – Jul 2018. The WIP identified nutrient loading from agricultural areas as a significant contributor to nutrients in Bayou Folsé, and to the low DO concentrations seen throughout the subsegment. Sub-areas were ranked for scoring and locating agricultural BMPs according to concentrations of total phosphorous, TKN, and nitrate-nitrite. An average of those constituent ranks comprised the final priority designation seen in Figure 3. This map and the associated GIS data will be shared with USDA-NRCS to assist them in targeting areas for BMP implementation.

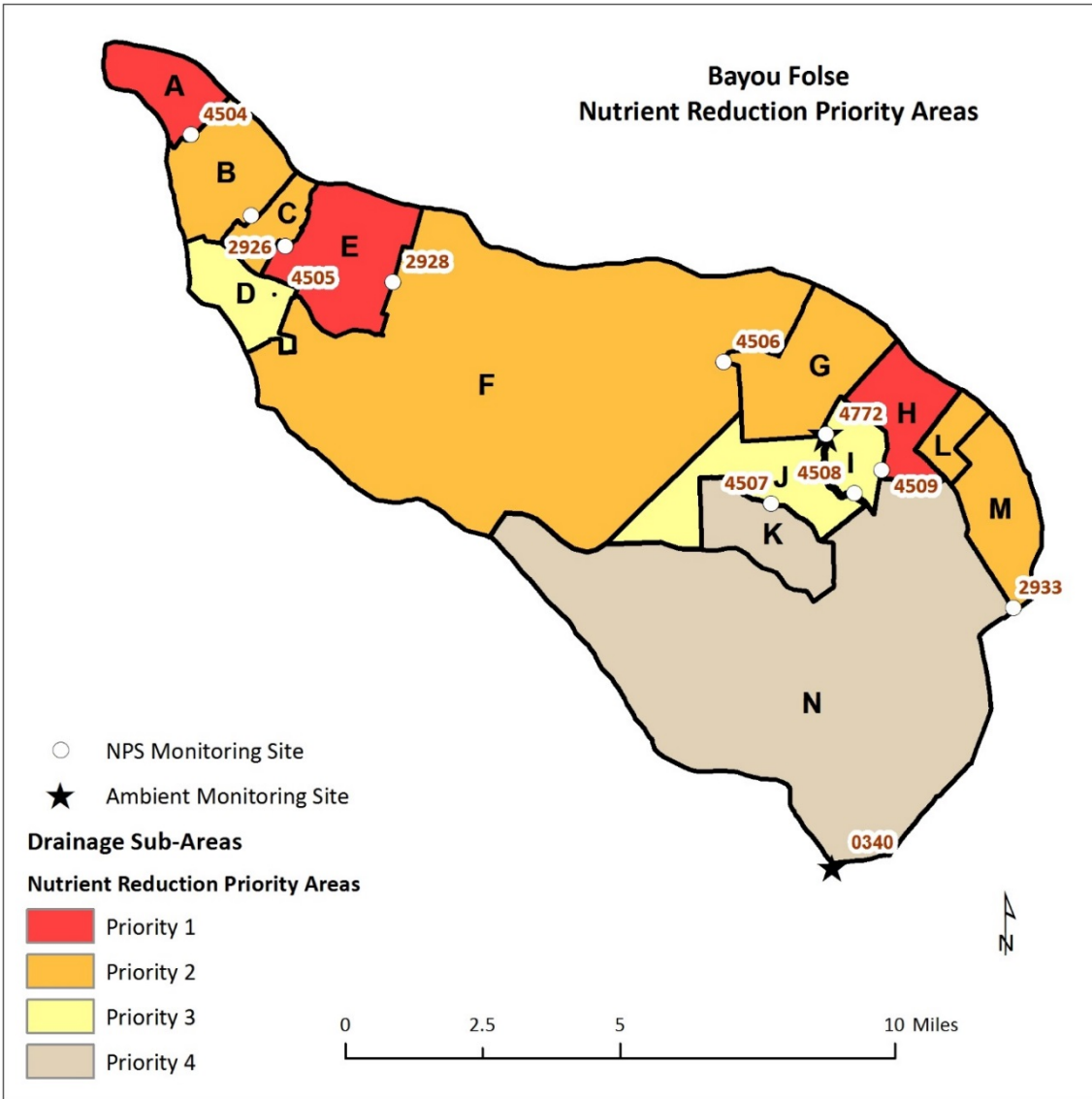


Figure 3. Nutrient Reduction Priority Areas

EPA: In selecting and siting the BMPs at the sub-watershed level, are the estimates, assumptions and other data used in this analysis technically sound? N

LDEQ Response: The WIP did not identify areas for BMPs at the sub-watershed level. This response provides that delineation. Identifying and prioritizing sub-areas for siting pollution reduction work was a data-driven effort, using monitoring data from Oct 2016 – July 2018

throughout the subsegment, along with supplemental GIS data and field reconnaissance. Relative concentrations of pollutant constituents were assumed to indicate relative runoff contributions from sources mapped in the WIP. The exception was Sub-area A with regard to bacteria. In that case, it is known the City of Thibodaux is tied into municipal treatment, and OSDS systems are not a source of bacteria. There is no pastureland in that sub-area. Permitted dischargers are assumed to be the primary contributing source of bacteria. GIS data used to further identify sources and contributing runoff areas of constituents throughout the subsegment include: Hydrology data (LSU levees and pump stations, USGS LiDAR elevation data, and field reconnaissance), USDA land use data (CDL 2016), aerial photography (USDA 2015), and OSDS locations (Louisiana Department of Health 2016). Field reconnaissance of the watershed on several occasions validated or refined this data, particularly OSDS locations and hydrology. Figures 1-3 show these sub-areas and rankings.

EPA: Does the education process prepare stakeholders for continued proper operation and maintenance of BMPs after project(s) Is completed? N

LDEQ Response: BTNEP will conduct OSDS inspections. The inspection effort occurs in a context of public service announcements via radio and print materials designed to communicate the need for continued maintenance. Part of the door-to-door inspection process is a homeowner education component. Inspectors discuss with the homeowner any malfunctions identified and necessary repairs, how to maintain their systems over time, and the importance of doing so. A follow-up visit determines whether the resident made the necessary repairs to their home treatment system. Throughout this process, educating homeowners face-to-face and through radio and print on the importance of maintaining the system is conducted. This education is supplemented by regional workshops on how to maintain systems (Louisiana Rural Water Association holds regular technical workshops on home systems throughout the state).

For agricultural BMPs: USDA-NRCS, through NWQI and EQIP programs, determine eligibility for participation. Participants are ranked and must begin implementation within a specified time frame. Part of the participant's agreement with NRCS is to continue practice implementation according to a schedule specified in the contract. Continuance of practices after contract expiration is not guaranteed. District conservationists in the Bayou Folsé region encourage conservation practices after the contract with NRCS expires, and are available to producers for continued technical assistance after this time. Also, BTNEP has small additional funds available for agricultural technical assistance.

EPA: Are target achievement dates identified? N

LDEQ Response: The WIP projects load reductions necessary to achieve water quality standards will be achieved by 2024. These projected reductions are shown on Pages 22-23 of the WIP. The schedule of tasks necessary to achieve these reductions is shown on Page 30, and interim milestones for reductions of each constituent are in the table on Page 32. Interim milestones show incremental target achievement dates by year. These will need to be reached in order to achieve estimated necessary load reductions by 2024. Some unknowns remain, however, due to the voluntary nature of the program. An additional unknown is the relative contribution of the benthic load to low DO, and the time lag between reducing runoff and benthic load reduction.