

Ecoregions of Louisiana

Ecoregions denote areas of general similarity in ecosystems and in the type, quality, and quantity of environmental resources. They are designed to serve as a spatial framework for the research, assessment, management, and monitoring of ecosystems and ecosystem components. By ecoregions the general differences in the capacities and potentials of ecosystems, ecoregions stratify the environment by its probable response to disturbance (Byrne and others, 1999).

Ecoregions are spatial process regions that are critical for structuring and implementing ecosystem management strategies across federal agencies, state agencies, and nongovernment organizations responsible for different types of resources in the same geographical areas (Omernik and others, 2000). A Roman numeral hierarchical scheme has been adopted for different levels of ecological regions. Level I is the coarsest level, dividing North America into 15 ecological regions. Level II divides the continent into 52 regions (Commission for Environmental Cooperation Working Group, 1997). At a further III, the continental United States contains 104 ecoregions and the continental United States has 54 ecoregions (U.S. Environmental Protection Agency [USEPA], 2006). Level IV is a sub-division of level III ecoregions. Explanations of the methods used to define the USEPA's ecoregions are given in Omernik (1995, 2004), Omernik and others (2000), and Gallant and others (1989).

The approach used to compile the ecoregion map of Louisiana is based on the premise that ecological regions can be identified through the analysis of the spatial patterns and the composition of biotic and abiotic characteristics that affect or reflect differences in ecosystem quality and integrity (Wiken, 1986; Omernik, 1987, 1995). These characteristics include geology, physiography, vegetation, climate, soils, land use, wildlife, and hydrology. The relative importance of each characteristic varies from one ecological region to another regardless of ecoregion hierarchical level.

Louisiana contains barrier islands and coastal lowlands, large river floodplains, rolling and hilly coastal plains with evergreen and deciduous forests, and a variety of aquatic habitats. There are 6 level III ecoregions and 28 level IV ecoregions, and most of these continue into ecologically similar parts of adjacent states (Chapman and others, 2004; Griffith and others, 2004; Woods and others, 2004).

The ecoregion map on this poster was compiled at a scale of 1:250,000, and depicts revisions and subdivisions of earlier level III ecoregions that were originally compiled at a smaller scale (U.S.

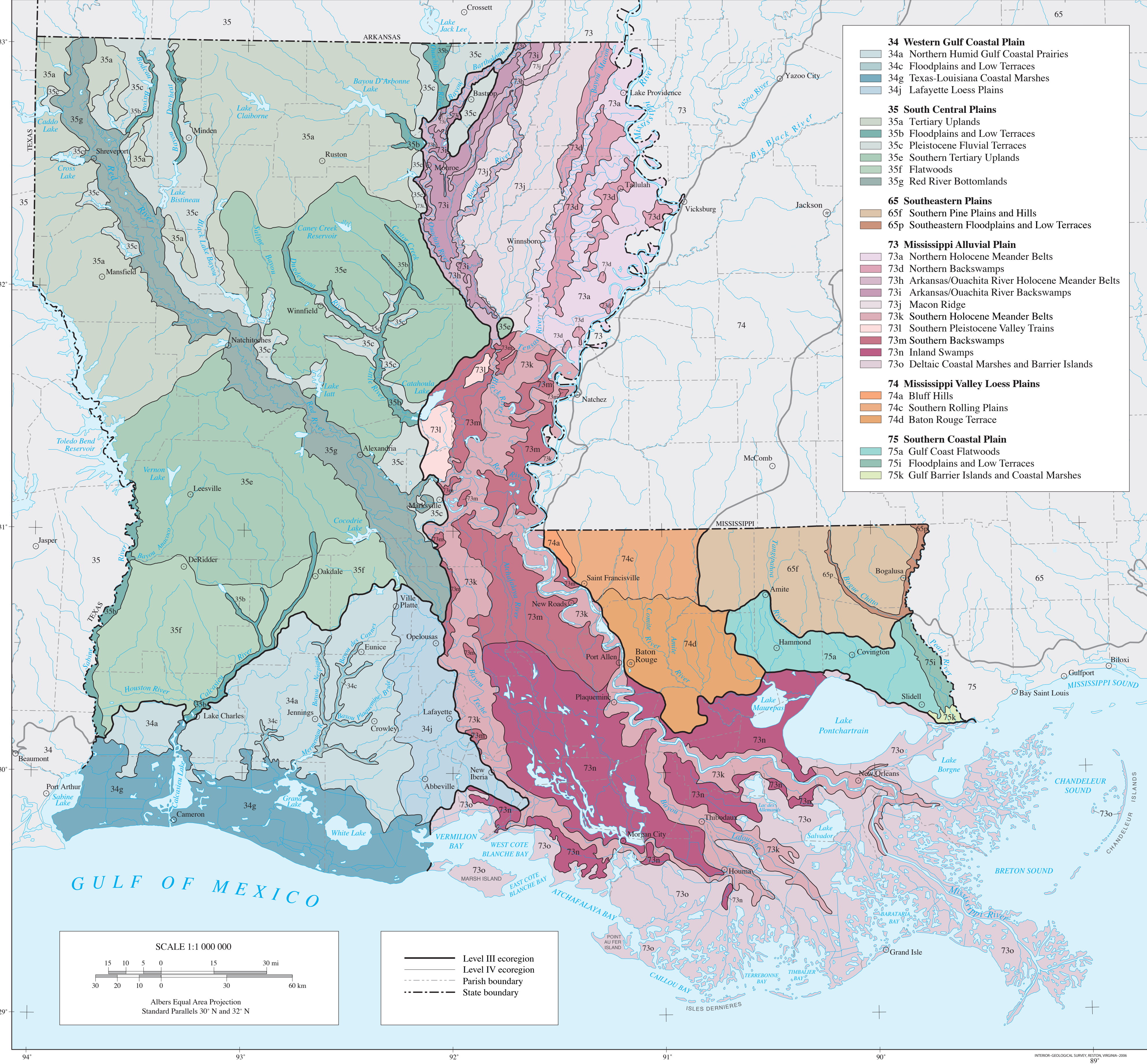
Environmental Protection Agency, 2006; Omernik, 1987). It is part of a collaborative project primarily between USEPA-National Health and Environmental Effects Research Laboratory (Corvallis, Oregon), U.S. Geological Survey (USGS), U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS), Louisiana Natural Resource Program (LNRP) within the Louisiana Department of Wildlife and Fisheries (LDWF), Louisiana Geological Survey (LGS), and Louisiana Department of Environmental Quality (LDEQ). Collaboration and consultation also occurred with the Louisiana Department of Agriculture and Forestry (LDAF), Louisiana Department of Natural Resources, Louisiana Department of Agriculture and Forestry (LDAF), U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), and USGS Center for Earth Resources Observation and Science. This project is associated with an interagency effort to develop a common framework of ecological regions (McMahon and others, 2001). Reaching that objective requires recognition of the differences in the conceptual approaches and mapping methodologies applied to develop the most common ecoregion type frameworks, including those developed by the USFS (Bailey and others, 1994), the USEPA (Omernik, 1987, 1995), and the U.S. Department of Agriculture-Natural Resources Conservation Service (1981). As such, these frameworks are further refined, their differences are becoming less discernible. Each collaborative ecoregion project, such as this one in Louisiana, is a step toward attaining consensus and consistency in ecoregion frameworks for the entire nation.

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Level III Ecoregions of the Conterminous United States

1 Core Range	29 Cross Timbers	57 Blue-ridge/Lake Plains
2 Piedmont Plateau	30 Eastern Hardwoods	58 Northern Highlands
3 Williams Valley	31 Southern Texas Plains	59 Northeastern Coastal Zone
4 Coteau du Lac	32 Eastern Blackland Plains	60 Northern Appalachian Plateau and Uplands
5 Sierra Nevada	33 East-Central Texas Plains	61 Erie Drift Plain
6 Southern Central California Chaparral and Oak Woodlands	34 Western Gulf Coastal Plains	62 North-Central Appalachians
7 Central California Valley	35 South-Central Plains	63 Middle-Atlantic Coastal Plain
8 Southern California Woodlands	36 Northern Plains	64 Southern Plains
9 Eastern Cascades Slopes and Foothills	37 Northern Great Plains	65 Northeastern Plains
10 Columbia Plateau	38 Boston Mountains	66 Ridge and Valley
11 Blue Mountains	39 Canadian Hardwoods	68 Southern Appalachians
12 Ozark Plateaus	40 Central Inland Plains	69 Western Appalachians
13 Central Basin and Range	41 Eastern Highlands	70 Western Allegheny Plateau
14 Mojave Basin and Range	42 Northwestern Great Plains	71 Interior Plains
15 Northern Rockies	43 North-Central Plains	72 Interior River Valleys and Hills
16 Idaho Batholith	44 North-Central Uplands	73 Mississippi Alluvial Plain
17 Windy River	45 West-Central Plains	74 Northern Valley Lowlands
18 Windy River	46 Northern Great Plains	75 Southern Coastal Plain
19 Colorado Plateau	47 Western U.S. Plateaus	76 Southern Coastal Plain
20 Southern Rockies	48 Northern Minnesota Wetlands	77 North-Central Plains
21 Arizona-New Mexico Mountains	49 Northern Forests	78 Eastern Uplands
22 Arizona-New Mexico Mountains	50 Northern Hardwood Forests	79 Middle Atlantic Coastal Plain
23 High Plains	51 Northern Hardwood Forests	80 Northern Basin and Range
24 Chihuahuan Deserts	52 Distilled Area	81 Eastern Great Lakes and Hudson Lowlands
25 Great Plains	53 Southern Wisconsin Till Plains	82 Laurentian Great Plains
26 Pine Hills	54 Central Coast Range	83 Eastern Great Lakes and Hudson Lowlands
	55 Southern Coastal Plain	84 Atlantic Coastal Plain Barrens
	56 Southern Mountain/Northern Inland Drift Plains	

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34. Western Gulf Coastal Plain
The principal distinguishing characteristic of the Western Gulf Coastal Plain is its relatively flat topography and mainly grassland potential natural vegetation. Inland from this region, the plains are older, more irregular, and have mostly forest vegetation in the Louisiana portion (Ecoregion 35) or savanna-type vegetation (Ecoregion 33). Largely because of this flat land and relatively fertile soils, a higher percentage of the land in cropland than in bordering ecological regions. Rice is grown mostly in the Texas portion of the region, and in the Louisiana portion, it is grown in some parts of the region, and in the Louisiana portion, it is grown in some parts of the region. The region is primarily a rice-growing region, and in the Louisiana portion, it is grown in some parts of the region.

34a **Quaternary-age deltaic sands, silts, clays, and gravel underlie much of the Northern Coastal Gulf Coastal Plain.** This region is underlain by Quaternary-age deltaic sands, silts, clays, and gravel. It is a relatively flat region, and in the Louisiana portion, it is grown in some parts of the region.

34b **The Texas-Louisiana Coastal Marshes region is characterized by extensive freshwater and brackish water coastal marshes and salt marshes.** This region is characterized by extensive freshwater and brackish water coastal marshes and salt marshes. It is a relatively flat region, and in the Louisiana portion, it is grown in some parts of the region.

34c **Soils are primarily from the humid pine belt of Ecoregion 35.** Soils are very poorly drained and are primarily from the humid pine belt of Ecoregion 35. They are very poorly drained and are primarily from the humid pine belt of Ecoregion 35.

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35. South-Central Plains
Ecoregion 35 is composed of rolling plains that are broken by nearby flat fluvial terraces, bottomlands, sandy low hills, and low cuestas. Its terrain is unlike the flatter, less dissected Mississippi Alluvial Plain (73) or the Western Gulf Coastal Plain (34). Uplands are underlain mainly by poorly consolidated Tertiary coastal plain deposits, and soils are mostly acidic sandy loams, silts, loams, and sandy clay loams. Bottomlands are complex and dissected from the strictly Quaternary deposits of Ecoregion 34. Natural vegetation of uplands was historically dominated by longleaf pine woodlands and savannas in the south (35c and 35f), and shortleaf pine-woodlands in the north (35a). Southern hardwood forests of the Louisiana portion occur in the northern part of the region.

35a **The rolling Tertiary Uplands have a great diversity of habitats and species.** In Louisiana, there are many habitats and species, with some common to the entire region. They are very poorly drained and are primarily from the humid pine belt of Ecoregion 35.

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65. Southeastern Plains
Although mostly tree-covered, these irregular plains have a mosaic of cropland, pasture, woodland, and forest land cover. Natural vegetation in the Louisiana portion was predominantly upland longleaf pine woodlands, with smaller areas of oak, pine, and mixed hardwood forests. Uplands are underlain by poorly consolidated Pleistocene and Pliocene deposits, and soils are mostly acidic sandy loams, silts, loams, and sandy clay loams. Although Pleistocene loess deposits do infiltrate the region, they are less extensive than in Ecoregion 74 to the west. Elevations and relief are greater than in the Southern Coastal Plain (75) and the Mississippi Alluvial Plain (73). Streams are low to moderate gradient with mostly sandy substrates. Commercial agriculture, timber production, and dairy and beef cattle ranching are major land uses. The region is primarily a rice-growing region, and in the Louisiana portion, it is grown in some parts of the region.

65a **The Southern Pine Plains and Hills ecoregion extends across northern Mississippi and Arkansas.** This region is characterized by extensive upland longleaf pine woodlands, with smaller areas of oak, pine, and mixed hardwood forests. Uplands are underlain by poorly consolidated Pleistocene and Pliocene deposits, and soils are mostly acidic sandy loams, silts, loams, and sandy clay loams.

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73. Mississippi Alluvial Plain
This diverse ecoregion extends from southern Illinois, to the confluence of the Ohio River with the Mississippi River, south to the Gulf of Mexico. The Mississippi River watershed drain of or parts of thirty-one states, two Canadian provinces, and approximately 1,243,000 square miles before the river finally reaches the Gulf. The Gulf of Mexico Plain is mostly a broad, flat alluvial plain with parts of the region dissected by low hills. The region is primarily a rice-growing region, and in the Louisiana portion, it is grown in some parts of the region.

73a **The Northern Holocene Meander Belts ecoregion is a narrow strip along the northern edge of the Mississippi River.** This region is characterized by extensive upland longleaf pine woodlands, with smaller areas of oak, pine, and mixed hardwood forests. Uplands are underlain by poorly consolidated Pleistocene and Pliocene deposits, and soils are mostly acidic sandy loams, silts, loams, and sandy clay loams.

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74. Mississippi Valley Loess Plains
This ecoregion stretches from the Ohio River in western Kentucky to Louisiana. It consists primarily of irregular plains, some gently rolling hills, and bluffs near the Mississippi River. The presence of thick deposits of loess is one of the distinguishing characteristics. The Bluff Hills in the western portion contain soils that are very deep, steep, silty, and erodible. Flatter topography is found to the east, and streams tend to have less gradient and more silty substrates than in the Southern Plains ecoregion (65). To the east, upland forests dominated by oak, hickory, and both loblolly and shortleaf pine, and to the west, southern mesophytic forests characterized by beech, southern magnolia, and American holly, were the dominant natural vegetation. Agriculture is now the typical land cover in the Kentucky and Tennessee portions of the region, while in Mississippi and Louisiana there is a mosaic of forest, agriculture, pasture, and cropland. The region is primarily a rice-growing region, and in the Louisiana portion, it is grown in some parts of the region.

74a **The Bluff Hills in the western portion contain soils that are very deep, steep, silty, and erodible.** This region is characterized by extensive upland longleaf pine woodlands, with smaller areas of oak, pine, and mixed hardwood forests. Uplands are underlain by poorly consolidated Pleistocene and Pliocene deposits, and soils are mostly acidic sandy loams, silts, loams, and sandy clay loams.

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75. Southern Coastal Plain
The Southern Coastal Plain extends from South Carolina through coastal central Florida, and along the Gulf coast lowlands of the Florida Panhandle, Alabama, Mississippi, and eastern Louisiana. Consisting mostly of flatlands, this also includes barrier islands, coastal mangroves, marshes, and swampy lowlands along the Gulf and Atlantic coasts. In Florida, it is an area of discontinuous habitats containing numerous lakes. This ecoregion is lower in elevation with less relief and wetter soils by longleaf pine and slash pine. This ecoregion is lower in elevation with less relief and wetter soils by longleaf pine and slash pine. This ecoregion is lower in elevation with less relief and wetter soils by longleaf pine and slash pine.

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