

Gila River Indian Community (GRIC) Air Emissions Inventory

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ABSTRACT

The Gila River Indian Community, a federally-recognized tribe, is a rural community located on 374,000 acres in south-central Arizona. It is located south of and borders on the cities of Phoenix, Tempe and Chandler. The Phoenix metropolitan area is one of the fastest growing areas in the nation. The Community has an on-reservation population of approximately 15,000 people. A portion of the GRIC (92,000 acres) lies within Maricopa County. This portion of the GRIC was designated as a Federal Non-Attainment Area for PM₁₀, carbon monoxide and ozone in the 1970's. EPA classified the Non-Attainment areas as serious. GRIC was included in the non-attainment areas because the Maricopa County portion of the reservation is in the Maricopa Association of Governments Metropolitan Statistical area.

The Community houses approximately 45 industrial facilities and currently has approximately 40,000 acres of agricultural land under production. The Community is in the process of expanding their agricultural acreage to approximately 140,000 acres. In addition, Interstate 10 runs between Phoenix and Tucson bisecting the Community. There are other area sources of air pollution within the Community including unpaved roads and open burning. An ongoing concern for the Community is the transport of air pollution from neighboring jurisdictions.

The GRIC received assistance on September 27, 1996 from EPA under Section 103 of the CAA for development of a needs assessment and emissions inventory. An air quality specialist was hired on November 10, 1997 and a comprehensive needs assessment and emissions inventory were completed in October 1998.

The emissions inventory is a comprehensive and accurate accounting of air pollutant emissions from sources located within the Community. The GRIC emissions inventory documented emissions from all sources within the Community including, industrial facilities, paved and unpaved roads, Mobile sources, non-road mobile sources, area sources and nonanthropogenic sources. The GRIC emissions inventory was further broken down to emissions from the non-attainment area portions of GRIC and attainment portions of GRIC. This information was used to compare to neighboring jurisdictions to determine if GRIC sources have any impact on the non-attainment status of neighboring jurisdictions.

The information gathered through the GRIC emissions inventory was used as the basis for development of the GRIC Air Quality Program. GRIC has been successful in removing portions of the Community from the Maricopa County Non-attainment areas mentioned above and used the data as a basis for establishing three monitoring stations throughout the Community. In addition, GRIC is in the final stages of completing a multi-program Tribal Implementation Plan (TIP) that will allow the regulation of air pollution emissions from all sources at GRIC.

Once the TIP is submitted, GRIC expects to begin annual surveys of air emissions using emission inventory mail-out packets to document air pollution emissions within the Community.

This presentation will discuss the methodologies used to estimate emissions from the various source categories and where to acquire emissions factors for estimating emissions. In addition, the presentation will discuss stumbling blocks encountered during the development of the emissions inventory.

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