

Chapter 6

TRANSPORTATION CONFORMITY

The U.S. EPA has established health-based standards for six criteria pollutants – referred to as the National Ambient Air Quality Standards (NAAQS). The Houston-Galveston-Brazoria (HGB) region does not meet the standard for ground level Ozone. The Clean Air Act requires the Houston-Galveston-Brazoria region to demonstrate that transportation projects contained in the TIP and the RTP conform to the Motor Vehicle Emission Budget (MVEBs) established in the air quality State Implementation Plan (SIP). This process is called transportation air quality conformity (conformity).

Conformity is the way to ensure that federal funding and approval is only given to those projects and activities that are consistent with air quality goals. Under the Clean Air Act, proposed transportation projects and air quality modeling must be coordinated to ensure the TIP and RTP are consistent with or conform to the targets set by the SIP. This integration of transportation planning and air quality review is designed to ensure that transportation plans, programs, and projects do not aggravate an existing NAAQS violation, cause a new violation, or delay the attainment of designated regional milestones.

MILESTONES AND BACKGROUND

On April 20, 2018, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) certified that the amendments to the Houston-Brazoria-Galveston region's *2040 Regional Transportation Plan) Update* and the *2017-2020 Transportation Improvement Program* met all the requirements for a joint conformity determination to the SIP for the Houston-Galveston-Brazoria (HGB) ozone nonattainment area.

This new conformity determination is being prepared to support the new 2045 Regional Transportation Plan (RTP) and amendments to the 2019-2022 Transportation Improvement Program (TIP). Major elements of the amendments include:

- Adjustment to the scope, schedule, and funding of projects;
- Addition of TxDOT projects that are undergoing environmental review and project development activities.
- New development of SH 35 from Bellfort to Downtown
- Bus Rapid Transit through IH 10

In accordance with 23 CFR§450.324, all projects are constrained by the financial resources estimated to be reasonably available within the RTP timeframe. A complete listing of the projects in the RTP and TIP that affect this conformity analysis will be included in Appendix 3 of the conformity report.

This conformity will comply with the non-attainment designation for the 2015 8-hr Ozone Standard (effective date August 3, 2018) with "marginal" classification. Under the Clean Air Act, the conformity demonstration is required within one year of designation to avoid a conformity lapse. In addition, this conformity complies with the 2008 8-hr Ozone NAAQS.

This conformity will demonstrate compliance to the latest emission budgets based on the latest revision to the air quality State Implementation Plan for the 2008 8-hr Ozone Standard due to the reclassification from “marginal” to “moderate” with attainment year 2017. The Reasonable Further Progress (RFP) SIP budget was found adequate by the Environmental Protection Agency (EPA) on June 6, 2017 with an effective date of June 21, 2017.

The February 16, 2018 court decision on South Coast Air Quality Management District versus EPA does not affect transportation conformity requirements for the 2015 ozone NAAQS.¹

CONFORMITY REQUIREMENTS

H-GAC demonstrates transportation conformity by using a modeling network to estimate the motor vehicle emissions from all the regionally significant, nonexempt projects in the TIP and RTP, and comparing those emissions against the motor vehicle emission budgets established by the state air quality plan. Conformity analysis is a robust procedure that consists of:

- The latest planning assumptions;
- Analysis based on the latest emission estimation model available;
- Interagency consultation, and a public involvement process;
- Timely implementation of Transportation Control Measures (TCMs);
- An RTP and TIP that are consistent with the MVEBs established in the applicable SIP; and
- All regionally significant projects expected in the nonattainment and maintenance are in the RTP and TIP.

REGIONAL INVENTORY

This conformity analysis developed an air quality regional inventory of the HGB nonattainment area. It accounts for emissions resulting from the nonattainment area’s transportation plans, including all regionally significant projects and the effects of emission control programs, such as the inspection and maintenance programs.

Motor Vehicle Emission Budgets

Table 6-1 describes the budgets established in the RFP SIP.

RFP MVEB

RFP Demonstration Budgets (t/d)		
Year	NO _x	VOC
2017	121.81	68.04

Table 6-1: RFP Demonstration Budgets
Source: RFP SIP, TCEQ, effective June 21, 2017

EMISSIONS TESTS

As specified by the Code of Federal Regulations (40 CFR 93.109[c], as amended by 62 CFR 43807, Aug. 15, 1997) all ozone nonattainment areas designated moderate and above must pass a MVEB test if an approved SIP budget exists. The HGB region has been re-classified as “moderate” for the 2008 8-hr Ozone Standard, with an attainment year of 2017. The RFP SIP budget was found adequate by the EPA on June 6, 2017 with an effective date of June 21, 2017. In addition, the HGB region has been re-classified as “marginal” for the 2015 8-hr Ozone Standard.

Since the “marginal” classification, the HGB region did not get new MVEBs, and therefore, according with the conformity rule, must use previous ones established in the SIP for the 2008 Eight-Hour. In this case, the budget test must be satisfied using the MVEBs established in the RFP SIP mentioned above. Specifically, this test is satisfied when ozone precursor (VOC and NO_x) emissions for each analysis year are less than or equal to the MVEBs established in the SIP. For the test, the regional emission analysis should be performed for any years selected according to the conformity rule. Table 6-2 shows the results of this conformity analysis.

CONFORMITY ANALYSIS RESULTS

Year	NO _x Emissions (tpd)	NO _x Budget (tpd)	VOC Emissions (tpd)	VOC Budget (tpd)	VMT
2020	79.62	121.81	45.92	68.04	186,102,566
2030	34.20	121.81	22.66	68.04	227,527,778
2040	43.09	121.81	22.87	68.04	261,487,989
2045	47.43	121.81	23.89	68.04	284,677,064

Table 6-2: VOC and NO_x emissions for Conformity Analysis Years

The results of this conformity determination demonstrate that the 2045 RTP and the 2019-2022 TIP for the HGB TMA meet the requirements of the air quality SIPs for the HGB ozone nonattainment area and are in accordance with the Clean Air Act (42 U.S.C. 7504, 7506 (c) and (d)), as amended on November 15, 1990, and the final conformity rule (40 CFR Parts 51 and 93). See Figure 6-1 and Figure 6-2.

This conformity determination involved a pre-analysis review discussion with the review agencies, and a public comment period.

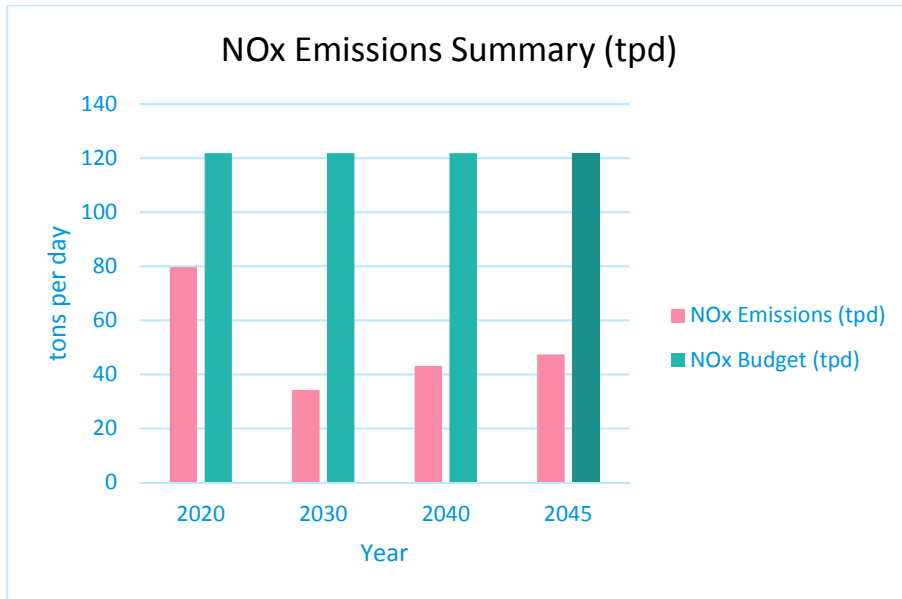


Figure 6-1: NOx Emissions Summary

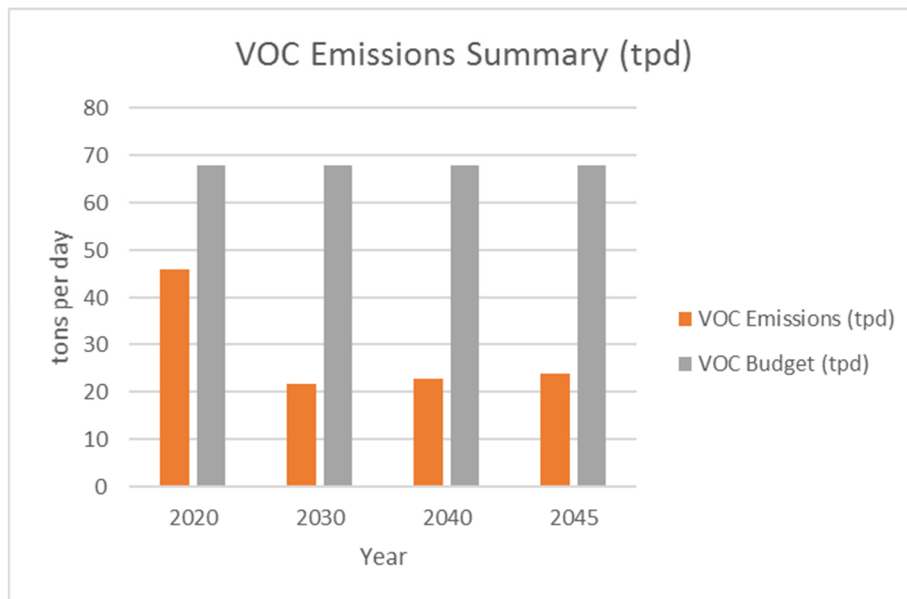


Figure 6-2: VOC Emissions Summary