

Executive Summary

Milestones and Background

On August 2, 2019, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) certified that the Houston-Brazoria-Galveston region's *2045 Regional Transportation Plan (RTP)* and the *2019-2022 Transportation Improvement Program (TIP)* met all the requirements for a joint conformity determination to the Air Quality State Implementation Plan (SIP) for the Houston-Galveston-Brazoria (HGB) ozone nonattainment area.

This new conformity determination is being prepared to support the amendments to the 2045 RTP and to the 2021-2024 TIP. Major elements of the amendments include:

- a. Reconstruct and widen San Jacinto river bridge on IH 10 E
- b. Reconstruct Houston Ship Channel Bridge on IH 610 E
- c. Reconstruct IH 610 S between SH 35 (Mykawa Rd/SS 5) and SH 288 and IH 610 direct connectors at SH 35 (Mykawa Rd/SS 5)
- d. Widen Grand Parkway (SH 99) by adding Segments E and F.
- e. Reconstruct and Widen Beltway 8 (BW 8) frontage roads between E of Hardy Toll Rd to E of Aldine Westfield Rd
- f. Convert SH 288 to Freeway between future SH 99 to FM 1452
- g. Advance the IH 45 N interchange change at IH 10 W reconstruction and addition of IH 10 express lanes and IH 45 managed lanes part of the North Houston Highway Improvement Project (NHHIP) Segment 3 project to FY 2024.

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.

The Houston-Galveston-Brazoria region is in non-attainment of the 2008 8-hr ozone standard, with a classification of "serious". It is also in non-attainment of the 2015 8-hr ozone standard, with a classification of "marginal". This conformity will demonstrate compliance to both of these standards using the latest EPA approved emission budgets.

The latest EPA approved motor vehicle emission budgets are based on the latest revision to the air quality State Implementation Plan for the 2008 8-hr Ozone Standard due to the reclassification from "moderate" to "serious" with attainment year 2020. The Reasonable Further Progress (RFP) SIP budget was found adequate by the Environmental Protection Agency (EPA) on May 10, 2021, with effective date June 9, 2021.

Conformity Requirements

The Clean Air Act Amendments of 1990 (CAAA) require transportation plans, programs, and projects in nonattainment and maintenance areas, funded or approved by the FHWA or the FTA, to conform to the MVEBs established in the SIP. This ensures that transportation plans, programs, and projects do not produce new air quality violations, worsen existing violations, or delay timely

attainment to National Ambient Air Quality Standards (NAAQS). Conformity analysis requirements include:

- Use the latest planning assumptions
- Analysis based on the latest emission estimation model available
- Interagency consultation, and a public involvement process, must be conducted during the analysis
- Timely implementation of Transportation Control Measures (TCMs)
- An RTP and TIP that are consistent with the MVEBs established in the applicable SIP (if there is an adequate or approved SIP budget), and
- Inclusion of all regionally significant projects expected in the nonattainment and maintenance area in the RTP and TIP

Regional Inventory

This conformity analysis developed an air quality regional inventory of the HGB nonattainment area. It accounts for average ozone season (summer) weekday 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

The 2020 budgets established in the HGB RFP SIP for the serious classification are as follows:

HGB RFP 2020 MVEBs Serious classification for 2008 8-hr ozone standard

RFP Demonstration Budgets (t/d)		
Year	NO _x	VOC
2020	87.69	57.70

Source: HGB serious RFP SIP, TCEQ

Emissions Tests

As specified by the Code of Federal Regulations ([40 CFR 93.109\[c\]](#), as amended [by 62 FR 43807, Aug. 18, 1997](#)) all ozone nonattainment areas designated moderate and above must pass a MVEB test if an approved SIP budget exists. At the time of this conformity determination, the HGB region is classified as "serious" for the 2008 8-hr ozone standard, with an attainment year of 2020. The RFP SIP budget for the serious classification was found adequate and effective by the EPA on May 10 and June 9, 2021, respectively.

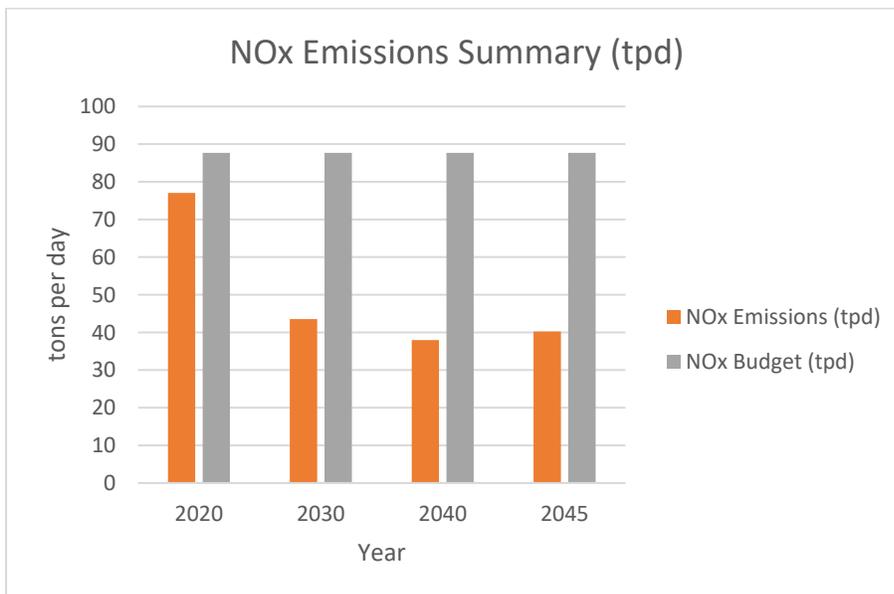
In addition, the HGB region is classified as “marginal” for the 2015 8-hr Ozone Standard, with attainment year also 2020. Since the “marginal” classification, the HGB region did not get new MVEBs, and therefore, according with the conformity rule, must use previous ones established in the SIP for the *2008 Eight-Hour Ozone Standard*.

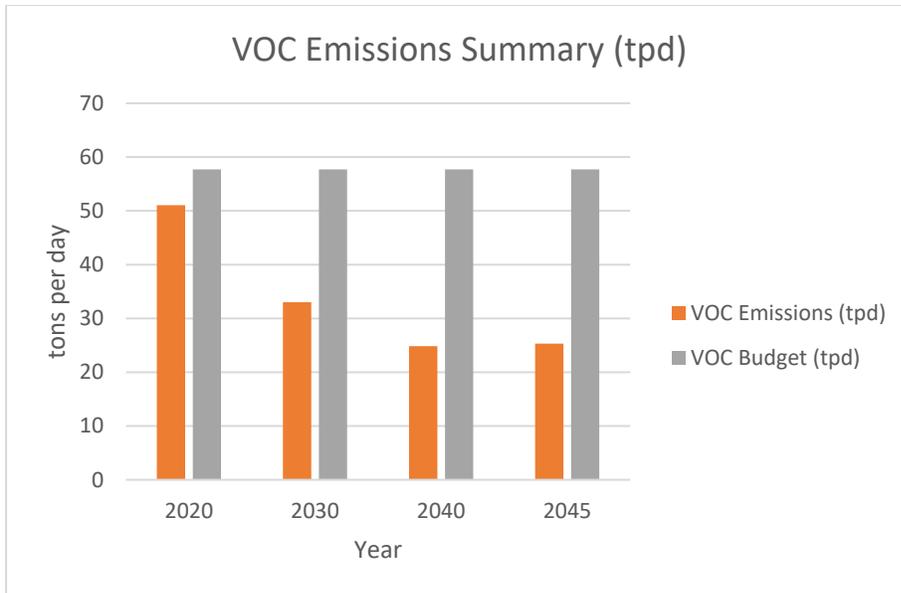
In this case, the budget test must be satisfied using the MVEBs established in the RFP SIP mentioned above. Specifically, this test is satisfied when ozone precursor (VOC and NOx) average summer weekday emissions for each analysis year are less than or equal to the MVEBs established in the SIP. For the test, the regional emission analysis should be performed for any years selected according to the conformity rule. The table below shows the results of this conformity analysis.

Conformity Analysis Results versus HGB RFP MVEBs for serious classification

Year	NOx Emissions (tpd)	NOx Budget (tpd)	VOC Emissions (tpd)	VOC Budget (tpd)	VMT
2020	77.00	87.69	51.59	57.70	187,732,361
2030	43.71	87.69	33.41	57.70	228,925,926
2040	38.15	87.69	25.05	57.70	268,588,372
2045	40.42	87.69	25.63	57.70	286,704,219

Note: emissions represent the average summer weekday





The results of this conformity determination demonstrate that the amendments to the *2045 RTP and to the 2021-2024 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).

Background Information on Conformity

More information on what conformity is and the regulations that apply to it can be found at: https://www.fhwa.dot.gov/environment/air_quality/conformity/index.cfm

This conformity determination involved a pre-analysis review discussion with the review agencies (Chapter 8) and a public comment period (Chapter 9).