



Title VI Service Equity Analysis: September 2022 Emergency Service Changes

November 28, 2022

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I. Executive Summary

TriMet is proposing to retroactively adopt emergency service changes from September 2022. In accordance with Title VI of the Civil Rights Act of 1964 and FTA Circular 4702.1B, TriMet conducts a Service Equity Analysis to ensure that minority and low-income populations are not unfairly impacted any time Major Service Changes are proposed. The emergency service changes includes Major Service Changes to seven bus lines, which require an analysis prior to action by the TriMet Board of Directors.

A. Methodology

TriMet's Title VI Program outlines the agency's Major Service Change, Disparate Impact, and Disproportionate Burden policies and Equity Analyses. TriMet analyzes Major Service Changes for potential adverse effects and distribution of benefits based on race/ethnicity or income at the individual line-level and system-level.

B. Major Service Changes

The proposed changes to seven lines meet TriMet's thresholds for Major Service Changes:

Line 1-Vermont
Line 18-Hillside
Line 26-Thurman/NW 18th
Line 50-Cedar Mill
Line 81-Kane/257th
Line 82-South Gresham
Line 92-South Beaverton Express

C. Findings

1. **There is a potential line level disparate impacts** for 1 major service decrease.
2. **There are potential line level disproportionate burdens** for 4 major service decreases.
3. **No system level disparate impact or disproportionate burden** for the 7 major service decreases.
4. **The Major Service Reductions will not impact Minority and low-income populations substantially more** than non-minority and higher income populations.

II. Background

On September 18, 2022, TriMet instituted emergency service reductions due to an ongoing worker shortage. Reducing service to match TriMet’s staffing levels meant that buses would run more true to schedule and riders would encounter far fewer canceled buses. The following Major Service Changes represent TriMet’s emergency service changes.

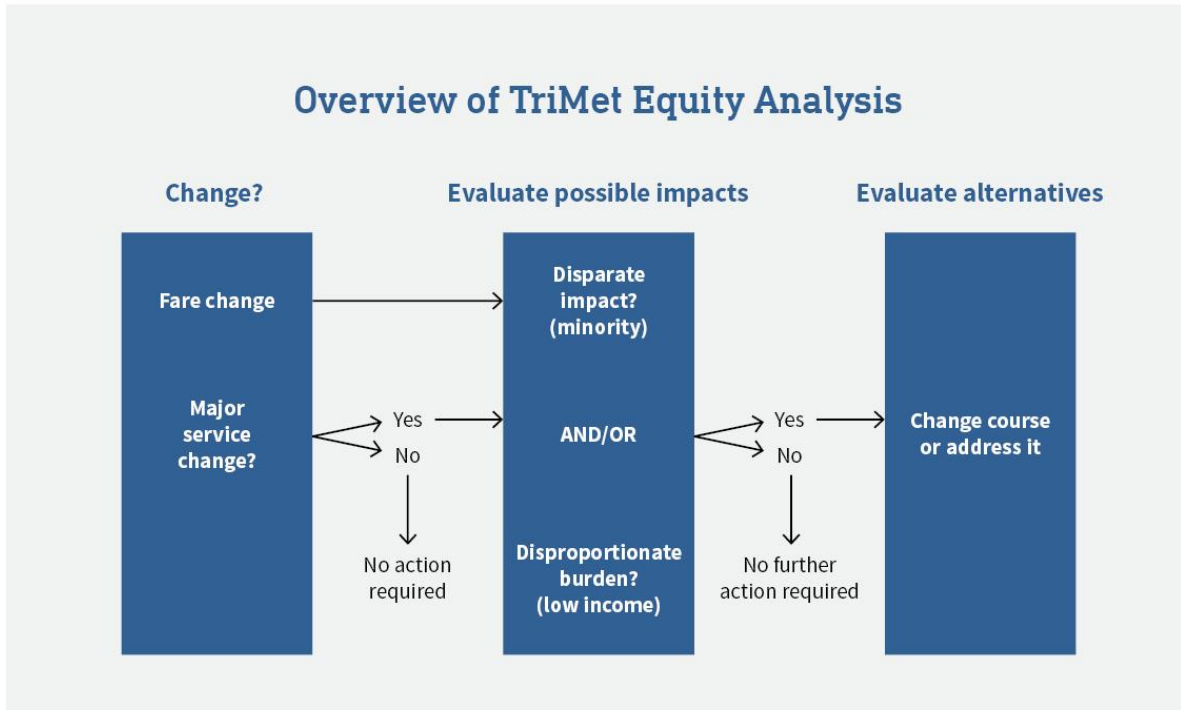
III. TriMet Title VI Compliance

As a recipient of Federal Transit Administration (“FTA”) financial assistance, TriMet must ensure that service changes – both increases and reductions – comply with Title VI of the Civil Rights Act of 1964, which states:

“No person in the United States shall, on the ground of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

The FTA has provided specific implementing guidelines and regulations for complying with Title VI in Circular 4702.1B (“Circular”). The Circular instructs transit agencies to consider impacts of Major Service Changes on low-income populations and minority populations by conducting a service equity analysis. Figure 1 shows the general sequence of steps and considerations in the equity analysis process.

Figure 1: Overview of TriMet's Title VI Equity Analysis process



TriMet's Title VI Program outlines the agency's policies, definitions and procedures for complying with Title VI and performing equity analyses. As required by the Circular, this includes the agency's Major Service Change, Disparate Impact, and Disproportionate Burden policies, outlined below.

A. Major Service Change Policy

Any service change that meets the Major Service Change threshold is subject to a Title VI Equity Analysis prior to Board approval. The completed Title VI Equity Analysis must be presented to the Board for consideration and included in the subsequent TriMet Title VI Program with a record of action taken by the Board.

A **Major Service Change** is:

1. A change to **15% or more of a line's route miles**. This includes routing changes where route miles are neither increased nor reduced (i.e. re-routes), or;
2. A change of **15% or more to a line's span** of service on a daily basis for the day of the week for which a change is made, as measured by revenue hours, or;
3. A change of **15% or more to a line's frequency** of service on a daily basis for the day of the week for which a change is made, as measured by revenue hours, or;
4. A single transit line is **split** into two or more transit lines,
5. A transit line is retired or eliminated from service, or;
6. A **new transit line** is established.

A Major Service Change occurs whether the above thresholds are met:

- a) Within a single service proposal, or;
- b) Due to a cumulative effect of routing, span, or frequency changes over the three years prior to the analysis

B. Disparate Impact Policy

Testing for Disparate Impact evaluates effects on minority riders or populations as compared to non-minority riders or populations. "Minority" is defined as all persons who identify as being part of racial/ethnic groups besides white, non-Hispanic.

In the course of performing a Title VI Equity Analysis for possible disparate impact, TriMet will analyze how the proposed major service change or fare change action could impact minority populations, as compared to non-minority populations.

In the event the proposed action has an adverse impact that affects protected populations more than other populations at a level that exceeds the benchmarks established in the adopted Disparate Impact Policy, or that restricts the benefits of the service change to protected populations, the finding would be

considered as a potential Disparate Impact. Given a potential Disparate Impact, TriMet will evaluate whether there is an alternative that would serve the same objectives and with a more equitable impact. Otherwise, TriMet will take measures to minimize or mitigate the adverse impact of the proposed action.

The Disparate Impact Policy defines measures for determination of potential Disparate Impact on minority populations resulting from Major Service Changes or any change in fares. The policy is applied to both adverse effects and benefits of Major Service Changes. Adverse effects of service changes are defined as:

1. A decrease in the level of transit service (hours, days, and/or frequency); and/or
2. Decreased access to comparable transit service, which is defined as an increase of the access distance to beyond one-quarter mile of bus stops or one-half mile of rail stations.

The determination of disparate impact associated with service changes is defined separately for impacts of changes on an individual line, and for system-level impacts of changes on more than one line, as well as for both service reductions and service improvements.

1. In the event of potential adverse effects resulting from service reductions:
 - a) A Major Service Change to a *single line* will be considered to have a potential Disparate Impact if the percentage of impacted minority population in the service area of the line exceeds the percentage of minority population of the TriMet District as a whole by at least 3 percentage points (e.g., 34 percent compared to 31 percent).
 - b) To determine the *system-wide* impacts of Major Service Change reductions on more than one line, the percentage of the TriMet district's minority population that is impacted is compared to the percentage of the TriMet district's non-minority population that is impacted. If the percentage of the minority population impacted is at least 20 percent greater than the percentage of the non-minority population impacted (e.g., 12 percent compared to 10 percent), the overall impact of changes will be considered disparate.
2. In the event of service improvements:
 - a) A major service change to a *single line* will be considered to have a potential Disparate Impact if:
 - i. The improvement is linked to other service changes that have disproportionate and adverse effects on minority populations, or;
 - ii. The percentage of impacted minority population in the service area of the line is less than the percentage of minority population of the TriMet District as a whole by at least 3 percentage points (e.g., 28 percent compared to 31 percent).
 - b) To determine the *system-wide* impacts of major service change improvements on more than one line, the percentage of the TriMet district's minority population that is impacted is compared to the percentage of the TriMet district's non-minority population that is

impacted. If the percentage of the minority population impacted is at least 20 percent less than the percentage of the non-minority population impacted (e.g., 8 percent compared to 10 percent), the overall impact of changes will be considered disparate.

3. Additional considerations to complement the quantitative Disparate Impact analysis above may include evaluating impacts to accessing employment, education, food, or health care for minority populations.

Upon determination of Disparate Impact, TriMet will either:

- a) Alter the service proposal to avoid, minimize, or mitigate potential Disparate Impacts, or;
- b) Provide a substantial legitimate justification for keeping the proposal as-is, and show that there are no alternatives that would have a less Disparate Impact on minority riders but would still accomplish the project or program goals.

C. Disproportionate Burden Policy

Testing for Disproportionate Burden evaluates potential effects on low-income riders or populations, defined as at or below 150% of the federal poverty level. The line and system level evaluations are identical to those used to determine potential Disparate Impacts, but compare low-income and higher income populations rather than minority and non-minority populations.

IV. Proposed Service Changes

A. Description of Changes

Table 1 lists the proposed changes by the type of service change:

Table 1: September 2022 Emergency Service Changes

Line	Service Change Description
Line 1-Vermont Line 18-Hillside Line 81-Kane/257th Line 82-South Gresham	➤ Reduce weekday frequency
Line 26-Thurman/NW 18th	➤ Reduce weekday & weekend frequency
Line 50-Cedar Mill Line 92-South Beaverton Express	➤ Eliminate line

Note: The emergency service change also included minor changes to several bus lines (8, 9, and 72) that are not included in this analysis because they do not meet the Major Service Change threshold.

B. Major Service Change Test

To determine whether individual service changes meet the definition of Major Service Change, current and proposed route length and/or revenue hours are compared. Changes of 15% or more qualify as Major Service Changes, including changes meeting this threshold cumulatively over three years.

Results of the comparison are shown in Table 2:

Table 2: Results of Major Service Change Test By Line

Line	Route Length Change	Span Change	Frequency Change	Line Split	Eliminate Line	New Line or Service
Line 1-Vermont			>-15%			
Line 18-Hillside			>-15%			
Line 26-Thurman/ NW 18th			>-15%			
Line 50-Cedar Mill					X	
Line 81-Kane/257th			>-15%			
Line 82-South Gresham			>-15%			
Line 92-South Beaverton Express					X	

C. Line-level Analyses

Having identified the service changes which meet the definition of Major Service Change, the next step in the analysis is to look at each line individually to determine potential Disparate Impacts (minority populations) and/or Disproportionate Burdens (low-income populations).

Both service reductions and service increases are analyzed. For service increases, the analysis examines the extent to which the *benefits* of the improvements are inclusive of minority and low-income populations.

The line-level analysis compares minority and low-income populations within ¼ mile buffers of bus stops on each line proposed for a Major Service Change to the minority and low-income populations of the TriMet District as a whole. The analysis is separated by type of service change being proposed:

1. Major Service Reduction
2. Major Service Increases
3. Other Major Service Changes

1. Major Service Reduction

For service reductions, the analysis examines whether *adverse effects* are disproportionately borne by minority or low-income populations. If *adverse effects* are identified and a line’s minority and/or low-income populations are at least 3 percentage points greater than the minority or low-income populations for the TriMet District as a whole, the proposed change is flagged as a potential Disparate Impact or Disproportionate Burden.

The emergency service changes include seven Major Service Reductions and the results of the line-level potential Disparate Impact and Disproportionate Burden analyses shown in Tables 3 & 4:

Table 3: Potential Line-Level Disparate Impact Analysis

<p>A Major Service Change to a single line will be considered to have a potential Disparate Impact if the percentage of impacted minority population in the service area of the line exceeds the percentage of minority population of the TriMet District as a whole by at least 3 percentage points (e.g., 34 percent compared to 31 percent).</p> <p style="text-align: center;">Percent minority population for entire TriMet District: 31.0%</p>				
Line	Total Line Population	Minority Population	Percent Minority Population	Single Line Disparate Impact (>=34.0%)
1	33,649	8,659	25.7%	NO
18	14,669	3,141	21.4%	NO
26	15,434	3,989	25.8%	NO
50	18,957	6,462	34.1%	YES
81	16,238	5,393	33.2%	NO
82	19,642	5,853	29.8%	NO
92	29,709	8,193	27.6%	NO
<p>Sources: TriMet GIS, Metro Regional Land Information System, and US Census American Community Survey Table: 2016-2020 (5-Year Estimates) Table B03002-Hispanic or Latino Origin By Race https://trimet.org/equity/pdf/TriMet-2022-Title-VI-Program-Update.pdf#page=40</p>				

➤ **Line 50 (Eliminate line)**

This change would eliminate service for a population that is 34.1% minority, which is above the Disparate Impact (34%) thresholds for Major Service Decreases. This indicates a **potential Disparate Impact**, calling for further examination in the system-level analysis section

Table 4: Potential Line-Level Disproportionate Burden Analysis

A Major Service Change to a single line will be considered to have a potential Disproportionate Burden if the percentage of impacted low-income population in the service area of the line exceeds the percentage of low-income population of the TriMet District as a whole by at least 3 percentage points (e.g., 20.1 percent compared to 17.1 percent).

Percent population earning below 150% federal poverty level for the entire TriMet service district: 17.1%

Line	Total Line Population	Population Below 150% FPL	Percent Population Below 150% FPL	Single Line Disproportionate Burdens (>=20.1%)
1	30,940	6,875	22.2%	YES
18	14,657	2,873	19.6%	NO
26	15,337	3,217	21.0%	YES
50	18,931	1,352	7.1%	NO
81	16,097	4,804	29.8%	YES
82	19,471	5,220	26.8%	YES
92	28,657	5,412	18.9%	NO

Sources: TriMet GIS, Metro Regional Land Information System, and US Census American Community Survey
 Table: Table C17002-Ratio Of Income To Poverty Level In The Past 12 Months (Block Group Level Data)
<https://trimet.org/equity/pdf/TriMet-2022-Title-VI-Program-Update.pdf#page=42>

➤ **Line 1** (Reduce weekday frequency)

This change would reduce service for a population that is 22.2% low-income, which is above the Disproportionate Burden (20.1%) thresholds for Major Service Decreases. This indicates a **potential Disproportionate Burden**, calling for further examination in the system-level analysis section

➤ **Line 26** (Reduce weekday & weekend frequency)

This change would reduce service for a population that is 21% low-income, which is above the Disproportionate Burden (20.1%) thresholds for Major Service Decreases. This indicates a **potential Disproportionate Burden**, calling for further examination in the system-level analysis section

➤ **Line 81** (Reduce weekday frequency)

This change would reduce service for a population that is 29.8% low-income, which is above the Disproportionate Burden (20.1%) thresholds for Major Service Decreases. This indicates a **potential Disproportionate Burden**, calling for further examination in the system-level analysis section

➤ **Line 82** (Reduce weekday frequency)

This change would reduce service for a population that is 26.8% low-income, which is above the Disproportionate Burden (20.1%) thresholds for Major Service Decreases. This indicates a **potential Disproportionate Burden**, calling for further examination in the system-level analysis section

2. Major Service Increases

There are no Major Service Increases.

3. Other Major Service Changes

There are no Other Major Service Changes.

D. System-level Analysis

Because more than one line is proposed for a Major Service Change, a system-level analysis is required in addition to the line-level analysis. The system-level analysis aims to measure impacts of all Major Service Changes combined to determine how equitable the impacts would be across racial/ethnic and economic lines. Service increases and service reductions are analyzed separately in order to examine both potential system-level *adverse effects* and distribution of *benefits*.

➤ ***System-level Disparate Impact Analysis: Major Service Increases***

The system-level Disparate Impact analysis of Major Service Increases is completed by determining what portion of the TriMet District's minority population stands to benefit from the Major Service Change improvements, and comparing that to the portion of the District's non-minority population that potentially benefits. A potential Disparate Impact would exist if minority populations benefitted substantially less than non-minority populations. The way we measure this is to test whether 20% less (or 4/5) of the District's minority than non-minority population stood to benefit from the improvements.

There are no Major Service Increases to be analyzed.

➤ ***System-level Disproportionate Burden Analysis: Major Service Increases***

The System-level Disproportionate Burden analysis is completed by determining what proportion of the TriMet District's low-income population is positively impacted by the Major Service Increases, and comparing that to the District's higher income population that is positively impacted. "Higher income" includes all persons above the low-income threshold of 150% of the federal poverty level. A potential Disproportionate Burden would exist if low-income populations benefitted substantially less than higher income populations. The way we measure this is to test whether 20% less (or 4/5) of the District's low-income than higher income population stands to benefit from the improvements.

There are no Major Service Increases to be analyzed.

➤ ***System-level Disparate Impact Analysis: Major Service Reductions***

The system-level Disparate Impact analysis of Major Service Reductions is completed by determining what proportion of the TriMet District's minority population is potentially adversely impacted from the service reductions and comparing that to the District's non-minority population that may be adversely impacted. A potential Disparate Impact would exist if minority populations were impacted substantially more by service reductions than non-minority populations. The way we measure this is to test whether 20% more of the District's minority than non-minority population were impacted by the service reductions.

Table 5 compares the impacted minority and non-minority populations:

Table 5: System-Level Disparate Impact Analysis

Population Category	District-Wide Population	Fall 2022 Service Reduction Impacted Population	Percent Impacted Population	System-wide Disparate Impact (Minority Pop Percentage >= 10.0%)
Minority	511,388	37,456	7.3%	NO
Non-Minority	1,135,659	94,393	8.3%	
Sources: TriMet GIS, Metro Regional Land Information System, and US Census American Community Survey Table: 2016-2020 (5-Year Estimates) Table B03002-Hispanic or Latino Origin By Race https://trimet.org/equity/pdf/TriMet-2022-Title-VI-Program-Update.pdf#page=40				

A lower percentage of the District’s minority population (7.3%) is negatively impacted by the proposed Major Service Reductions, compared to the non-minority population (8.3%). Therefore, a **system-level Disparate Impact is not found for the proposed Major Service Reductions.**

➤ **System-level Disproportionate Burden Analysis: Major Service Reductions**

The system-level Disproportionate Burden analysis is completed by determining what proportion of the TriMet District’s low-income population is potentially adversely impacted from the service reductions and comparing that to the District’s higher income population that may be adversely impacted. “Higher income” includes all persons above the low-income threshold of 150% of the federal poverty level. A potential Disproportionate Burden would exist if low-income populations were impacted substantially more by service reductions than higher income populations. The way we measure this is to test whether 20% more of the District’s low-income than higher income population were impacted by the service reductions.

Table 6 compares the impacted low-income and higher income populations:

Table 6: System-Level Disproportionate Burden Analysis

Population Category	District-Wide Population	Fall 2022 Service Reduction Impacted Population	Percent Impacted Population	System-Wide Disproportionate Burden (Low-Income Pop Percentage >=9.2%)
Below 150% of FPL	277,968	25,214	9.1%	NO
Above 150% of FPL	1,347,331	103,463	7.7%	
Sources: TriMet GIS, Metro Regional Land Information System, and US Census American Community Survey Table: Table C17002-Ratio Of Income To Poverty Level In The Past 12 Months (Block Group Level Data) https://trimet.org/equity/pdf/TriMet-2022-Title-VI-Program-Update.pdf#page=43				

A greater percentage of the District’s low-income population is negatively impacted by the proposed Major Service Reductions (9.1%) compared to the higher income population (7.7%). However, this does not exceed the low-income population disproportionate burden threshold (9.2%). Therefore, a **system-level Disproportionate Burden is not found for the proposed Major Service Reductions.**

V. Community Engagement

Due to the sharp decline in bus operators, service reductions were implemented on September 18, 2022 on an emergency basis. As a result, TriMet staff was not able to conduct its traditional public outreach process.

Typically, TriMet staff conducts two rounds of public outreach for the annual service changes, known as the Annual Service Plan, which results in hundreds of comments being submitted. The first outreach process occurs in the fall. This process asks for public comment on the initial set of proposed service changes. Staff reaches out to the public in multiple ways: a webpage, email blasts to TriMet's Riders Club and other lists, social media posts, press releases, mailed post cards to people living within a ¼ mile of impacted bus lines, and live interactions.

Prior to the pandemic, live interactions generally included multiple open house meetings in different locations around the District and staff riding buses to speak with customers when needed. Over the last several years, TriMet also has contracted with community-based organizations to contact underserved communities, allowing us to engage with culturally specific communities that we may not otherwise reach.

However, given the urgency of the bus operator shortage and its effect on schedules, staff was not able to conduct its typical outreach process for the September 2022 emergency service reductions. Although TriMet communicated to the public that the service changes were happening through the same means as it usually does, there was not time for the usual interaction between staff and the community concerning the emergency service reductions. As a result, TriMet staff was not able to conduct its traditional public outreach process.

The following is a summary of themes across the feedback received:

TriMet received 20 customer complaints following the announcement of the service change. The most common complaints referred to:

- Reduced frequency – Riders would like increased frequency outside of the commute period
- Walking distance – Riders report having to walk further to use alternate service
- Overcrowding – Riders report increased crowding on some of the remaining trips

VI. Summary of Findings

Table 7 summarizes the results of the line-level and system-level Disparate Impact and Disproportionate Burden analyses:

Table 7: Summary of Disparate Impact and Disproportionate Burden Analysis Results

		Potential Disparate Impact?	Potential Disproportionate Burden?
Major Service Reductions	1-Vermont	No	Yes
	18-Hillside	No	No
	26-Thurman St.	No	Yes
	50-Cedar Mill	Yes	No
	81-Kane/257th	No	Yes
	82-South Gresham	No	Yes
	92-South Beaverton Express	No	No
	Combined Reductions (System-level)	No	No
Major Service Increase	-	-	
Other Major Service Changes	-	-	

While one potential disparate impact was identified for Line 50 and four potential disproportionate burdens were identified for Lines 1, 26, 81, & 82, TriMet staff recommended reducing service on those lines due to the very low ridership and the immediate need to address the operator shortage.

And as no system-level Disparate Impact or Disproportionate Burden was found, minority and low-income populations will not be impacted substantially more by the Major Service Reductions than non-minority or higher income populations.