2015-2040 RTP
Recommendation for Approval of Amendment #3
January 19, 2017
RTP And Amendment Process Overview

- RTP is updated every four years
  - Recently adopted May 2015

- Periodic adjustments are needed between adoption cycles

- WFRC’s RTP amendment process
  - Financial constraints
  - Public review and input
  - Modeling and Air quality conformity

- Proposed requests reviewed annually beginning in March
RTP And Amendment Process Overview

REGIONAL TRANSPORTATION PLAN AMENDMENT PROCESS

Receive and WFRC Staff Review of Request

WFRC Staff Determines Level of Amendment

Level 1: Staff Modification
  - WFRC Executive Director Approval per adopted procedure

Level 2: Board Modification For Non-Regionally Significant Projects
  - TAC Review and Recommendation to RGC
  - RGC Review and Release for Public Comment

Level 3: Full Amendment For Regionally Significant Projects
  - Air Quality Conformity Determination

WASATCH FRONT REGIONAL COUNCIL
RTP And Amendment Process Overview

1. Notification to County COG
2. 30-day Public Comment Period
3. WFRC Staff Review of Comments and Recommendation
4. Are there Regionally Significant Changes from the Comment Period?
   - Yes: RGC Review Staff Recommendation for Modification and New Public Comment Period
   - No: RGC Review Staff Recommendation for WFRC Approval and Website Update
5. WFRC Review and Approval
Bangerter Highway Interchange at 6200 South

Request: Utah Department of Transportation

Scope:
• Bangerter Highway Interchange at 6200 South
  o New Construction; Phase 3 to 1

Benefits:
• Provide better traffic flow along Bangerter Highway
• Moving towards a consistent grade separated facility from 5400 South to I-15
• Thorough review of active transportation crossing through interchange

Total Cost: $64.0 Million

Funding Source: Requesting TIF
Bangerter Highway Interchange at 12600 South

Request: Utah Department of Transportation

Scope:
- Bangerter Highway Interchange at 12600 South
  - New Construction; Phase 2 to 1

Benefits:
- Provide better traffic flow along Bangerter Highway
- Moving towards a consistent grade separated facility from 5400 South to I-15
- Thorough review of active transportation crossing through interchange

Total Cost: $49.2 Million

Funding Source: Requesting TIF
Bangerter Highway Interchange at 9800 South

Request: Utah Department of Transportation

Scope:
- Bangerter Highway Interchange at 9800 South
  - New Construction; Phase 2 to 1

Benefits:
- Provide better traffic flow along Bangerter Highway
- Moving towards a consistent grade separated facility from 5400 South to I-15
- Thorough review of active transportation crossing through interchange

Total Cost: $43.1 Million

Funding Source: Requesting TIF
I-80 from I-215 East to Lambs Canyon

Request: Utah Department of Transportation

Scope:
• This project is a widening project in the east bound direction in Parleys Canyon on I-80 from I-215 on the east to Lambs Canyon.
• New Construction; Phase 1 to 2

Benefits:
• Project would provide an additional uphill passing lane from I-215 East Belt interchange up to Lambs Canyon.
• Project may require the widening of several bridges and increased rock fall mitigation.

Cost: $44.9 million
Next Steps

Regional Growth Committee
December 15, 2016
• Motion to Release to Public Comment

Public Comment Period
Dec. 16, 2016 to Jan. 15, 2017
• Salt Lake COM December 15

Regional Growth Committee
January 19, 2017
• Review Comments
• Motion to Council

Wasatch Front Regional Council
January 26, 2017
• Approval

We’re Here
2015-2040 RTP
Recommendation for Approval of Amendment #3

January 19, 2017
Wasatch Choice 2050 Goals: Access to Opportunity

Regional Growth Committee

January 19, 2017
Wasatch Choice 2050 Goals: What do we want?

- Livable and healthy communities
- Access to economic and educational opportunities
- Manageable and reliable traffic conditions
- Quality transportation choices
- Safe, user friendly streets
- Clean air
- Housing choices and affordable living expenses
- Fiscally responsible communities and infrastructure
- Sustainable environment, including water, agricultural, and other natural resources
- Ample parks, open spaces, and recreational opportunities
An approach utilized by our partners
Access to Opportunity:
How many valued destinations can be reached in a reasonable period of time

Examples:

“How many job opportunities are within 30 minutes?”

“If I locate my firm there, how many skilled laborers are within 30 minutes?”
Labor access within 30 minutes
Labor access within 30 minutes

Transportation Improvement
Labor access within 30 minutes
Labor access within 30 minutes
Analyzing Access

>760,000 jobs within 30 minutes

130,000 jobs within 30 minutes

>760,000 jobs within 30 minutes
Analyzing Access: by Transit

< 15,000 jobs within 30 minutes

>160,000 jobs within 30 minutes

Job Accessibility via Transit
- 0 jobs
- 1 - 15,000
- 15,000 - 45,000
- 45,000 - 95,000
- 95,000 - 150,000
- 150,000 - 235,000
Access to Opportunity helps answer "where"

Which areas would have their job access increased the most by transportation?
Access to Opportunity helps answer “where to locate what”

Affordable Housing: Which TODs are the most effective?

Business recruitment: Which locations are more accessible to labor?

Community College: How can we maximize student access without a car?

Community Services: Where are the strategic locations?
Comparing Subareas

Region’s jobs accessible within 30 minutes by car

Access to economic and educational opportunities

[Bar chart showing job accessibility in different subareas for Auto 2014 and Auto 2050]
Comparing Subareas

Region’s jobs accessible within 30 minutes by transit

Access to economic and educational opportunities

- Box Elder
- North Weber
- East Weber
- West...
- North Davis
- South Davis
- Northwest SLCo
- Northeast SLCo
- Southwest SLCo
- Southeast SLCo

Transit 2014
Transit 2050
Methods to increase ATO

- Better speed
- Bring growth near transportation
- Reduce necessary travel distance
Comparing Subareas

Development near transit

- Box Elder
- North Weber
- East Weber
- West Weber/North Davis
- North Davis
- South Davis
- Northwest SLC
- Northeast SLC
- Southwest SLC
- Southeast SLC
Comparing Subareas

Jobs / Housing Balance

- Box Elder
- North Weber
- East Weber
- West Weber/North...
- North Davis
- South Davis
- Northwest SLCo
- Northeast SLCo
- Southwest SLCo
- Southeast SLCo

Housing poor

Job poor
Do those that need access the most have it?
A definition of Vulnerable Communities?

(1) low-income households

(2) minority, zero-car households
Where are Vulnerable Communities?

Ogden – Layton Urbanized Area

Salt Lake City – West Valley City Urbanized Area
Why focus on Vulnerable Communities?

“The relationship between transportation and social mobility is stronger than that between mobility and crime, elementary-school test scores or the percentage of two-parent families in a community”
How accessible are jobs for Vulnerable Communities currently?

Low job accessibility and vulnerable communities

Ogden – Layton Urbanized Area

Salt Lake City – West Valley City Urbanized Area
How does this affect decision-making?

Access to Opportunity helps answer “where” for transportation

Which areas would have their job access increased the most by transportation?
Wasatch Choice 2050 Process

Explore
- Establish Goals
- Develop Scenarios
- Evaluate Scenarios

Choose
- Draft & Evaluate Preferred Scenario
- Adopt Preferred Scenario

Prioritize
- Assess Financial Considerations
- Phase Projects
- Plan Impacts & Benefits

We Are Here

Stakeholder Input

REGIONAL TRANSPORTATION PLAN
2019-2050

The Regional Transportation Plan is an element of

WASATCH CHOICE 2050
Scenario
Workshops
February 23 – March 30, 2017
Wasatch Choice 2050 Goals: Access to Opportunity

Regional Growth Committee

January 19, 2017
Job access within 20 minutes
Access to Opportunity lens identified that one TOD was more valuable than the others.
UTA BACKGROUND

- The Utah State Legislature and FTA have allowed UTA to enter into joint development agreements.
- UTA presently holds more than 390 Acres of real estate within 1/2 mile of fixed transit stations.
- Development of this real estate will lead to a healthier and more equitable economy along the Wasatch Front.
The **UTA Board of Trustees** has identified goals to guide our involvement with transit-oriented development.

**TOD GOALS**

- Improve Transit **Ridership**
- Support Regional **Vision**
- Stimulate **Economy**
- Encourage **Sustainability**
- Integrate **All Modes** of transportation
- Open opportunities for **Affordable Housing**
- Maintain **Transparency**
- Capture **Value**
A process that prioritizes development, mitigates risk, and engages markets to cultivate a realistic and progressive vision.
SELECTION CRITERIA

**Land**  Availability
   Land ownership, environmental constraints, and parking demand

**Connectivity**
   Transit service, multi-modal connections, and access

**Market**  Strength
   Socioeconomic context and key market indicators

**Public Support**
   TOD-Supportive zoning, political support, and public finance
Facilitates the **transparent** identification and **selection** of development partners who are best suited to carry out a planned vision.
Provides an overview of what will be included in a specific TOD project, and when it will happen.
Prepares a single phase of a Master Plan for municipal review and construction
Mitigates potential ethical and financial risks associated with a single phase of a master plan, and ensures that the proposed development is viable per market standards.
Coordinate construction and property management in order to reduce the associated risks.
• QUESTIONS/COMMENTS •
Role of RGC

- Guide Wasatch Choice 2050 and the Regional Transportation Plan
- Inform performance-based planning activities
- Explore air quality issues
RGC priorities?

• Wasatch Choice 2050 and Regional Transportation Plan

• Special topics? E.g.,
  – Implication of an aging population
  – Shifts in transportation technology
  – Implications of land use market shifts, including online retail

• Studies? E.g.,
  – First/ Last Mile TIGER project
  – Transportation and Land Use Connection projects
  – Utah Street Connectivity Study

• Other?
RGC Priorities for 2017

January 19, 2017
Utah experiences good air quality, except for about 5% of days on average when we exceed current federal health standards.
Air Quality

Policy

Emissions

Chemistry/ Meteorology/ Topography

Population Exposure/ Impairment

Available Controls

Transport

Growth
Land Ownership and Topography
Nine of every 10 Utahns now live in urban areas — and crowd together onto just 1.1 percent of the state’s land mass, according to 2010 Census data released Monday.

That makes Utah the eighth most-urbanized state in the nation. It is more urban than such states as New York, Illinois and Connecticut.

By Lee Davidson
The Salt Lake Tribune
First Published Mar 26 2012 04:14 pm • Last Updated Mar 27 2012 11:42 am
# National Ambient Air Quality Standards

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Primary/Secondary</th>
<th>Averaging Time</th>
<th>Level</th>
<th>Form</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Carbon Monoxide (CO)</strong></td>
<td>Primary</td>
<td>8 hours</td>
<td>9 ppm</td>
<td>Not to be exceeded more than once per year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 hour</td>
<td>35 ppm</td>
<td></td>
</tr>
<tr>
<td><strong>Lead (Pb)</strong></td>
<td>Primary and</td>
<td>Rolling 3 month period</td>
<td>0.15 μg/m³ (1)</td>
<td>Not to be exceeded</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Nitrogen Dioxide (NO₂)</strong></td>
<td>Primary</td>
<td>1 hour</td>
<td>100 ppb</td>
<td>98th percentile of 1-hour daily maximum concentrations, averaged over 3 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Primary and</td>
<td>1 year</td>
<td>53 ppb (2)</td>
<td>Annual Mean</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ozone (O₃)</strong></td>
<td>Primary and</td>
<td>8 hours</td>
<td>0.070 ppm (3)</td>
<td>Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years</td>
</tr>
<tr>
<td></td>
<td>Secondary</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Particle Pollution (PM)</strong></td>
<td>PM2.5</td>
<td>Primary</td>
<td>12.0 μg/m³</td>
<td>annual mean, averaged over 3 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secondary</td>
<td>15.0 μg/m³</td>
<td>annual mean, averaged over 3 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary and</td>
<td>35 μg/m³</td>
<td>98th percentile, averaged over 3 years</td>
</tr>
<tr>
<td></td>
<td>secondary</td>
<td>24 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary and</td>
<td>150 μg/m³</td>
<td>Not to be exceeded more than once per year on average over 3 years</td>
</tr>
<tr>
<td></td>
<td>secondary</td>
<td>24 hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sulfur Dioxide (SO₂)</strong></td>
<td>Primary</td>
<td>1 hour</td>
<td>75 ppb (4)</td>
<td>99th percentile of 1-hour daily maximum concentrations, averaged over 3 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 hours</td>
<td>0.5 ppm</td>
<td>Not to be exceeded more than once per year</td>
</tr>
</tbody>
</table>
Non-attainment and Maintenance Areas

State of Utah
National Ambient Air Quality Standards

Areas of Non-attainment and Maintenance
(Updated March 2010)

Fine Particulate (PM2.5) Non-attainment

Carbon Monoxide (CO) Maintenance

Sulfur Dioxide (SO2) Non-attainment

Ozone (O3) Maintenance
Staff Review of Area Recommendations for the 2015 Ozone Standard
Number of Days That Are and Those That Would Have Been Above the Current Federal Standards
Salt Lake, Cache, and Utah County Areas

* Days with monitored values above the level of the current National Ambient Air Quality Standards combined for PM2.5 and ozone (PM2.5 standard revised in 2006, ozone standard revised in 2015) + pending final quality assurance
Sources of Air Pollution

- Mobile (on-road vehicles)
- Area (residential, consumer and commercial, and non-road vehicles)
- Natural Sources (biogenics/dust/fires)
- Point Sources (smoke stack industries)

http://www.airquality.utah.gov/Planning/Emission-Inventory/Available_inventory.htm
http://www.epa.gov/ttn/chief/net/2011inventory.html
Wasatch Front Counties: Utah, Salt Lake, Davis and Weber
- Average Winter Day
- NO\textsubscript{x}, VOC, SO\textsubscript{2} and Direct PM\textsubscript{2.5} (most important contributors)

<table>
<thead>
<tr>
<th>Year</th>
<th>Large Industry</th>
<th>Area</th>
<th>Mobile</th>
<th>Tons/Day</th>
</tr>
</thead>
<tbody>
<tr>
<td>2002</td>
<td>13%</td>
<td>39%</td>
<td>48%</td>
<td>471</td>
</tr>
<tr>
<td>2008</td>
<td>10%</td>
<td>34%</td>
<td>56%</td>
<td>386</td>
</tr>
<tr>
<td>2014</td>
<td>13%</td>
<td>39%</td>
<td>48%</td>
<td>320</td>
</tr>
</tbody>
</table>
Nitrogen Dioxide Pollution Levels
Utah gave EPA its SIPs for Utah’s non-attainement areas in 2014.

These were Moderate Area SIPs

• Each nonattainment area had until December 31, 2015 to monitor attainment of the 24-hr health standard.

• None of the three areas was able to do so.

By law, this means that EPA will re-classify our nonattainment areas from Moderate to Serious.

• Utah will now have to give EPA another plan for each area.
## Major Sources: SIP and NNSR Requirements

<table>
<thead>
<tr>
<th>PM2.5</th>
<th>State Implementation Plan (SIP)</th>
<th>New Source Review (NSR)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moderate Area</strong></td>
<td><strong>Serious Area</strong></td>
<td><strong>Within a Serious PM2.5 Nonattainment Area</strong></td>
</tr>
<tr>
<td>&quot;Point Source&quot;</td>
<td>* 100 tpy</td>
<td>* 70 tpy = &quot;Major Source&quot;</td>
</tr>
<tr>
<td>Must Meet:</td>
<td>Source-specific RACT Review</td>
<td><strong>BACT and Offsetting Requirements</strong></td>
</tr>
<tr>
<td>Source-specific BACT Review</td>
<td></td>
<td><strong>...where “Significance” for “Major Modification” determination is set at:</strong></td>
</tr>
<tr>
<td>Then Meet:</td>
<td>Unless Not Able to Demonstrate Attainment by December 31, 2019</td>
<td>10 tpy for direct PM2.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40 tpy for SO2, NOx, and VOC</td>
</tr>
<tr>
<td>PM2.5 Precursors</td>
<td>SO2, NOx, and VOC</td>
<td>For Ammonia – to be defined in SIP</td>
</tr>
<tr>
<td></td>
<td>SO2, NOx, VOC, and Ammonia (NH3)</td>
<td></td>
</tr>
</tbody>
</table>

* For PM2.5 or any PM2.5 Plan Precursor
SL County Area Source Emissions

Download emissions data at:
http://www.deq.utah.gov/Pollutants/P/pm/pm25/dataexplorer/index.htm
Utah County Area Source Emissions

Download emissions data at:
http://www.deq.utah.gov/Pollutants/P/pm/pm25/dataexplorer/index.htm
Tier 3 Volume-weighted average fuel sulfur levels from refineries serving Utah

Source: EPA
Vehicle Emission Standards

Tier 1, 2, 3: VOC & NOx (mg/mile)

- 1972 (Pre-Control)
- 1996 (Tier 1)
- 2004 (Tier 2)
- 2017 (Tier 3)*

*30mg/mile is comparable to a Honda Civic CNG.

Utah is not guaranteed to receive Tier 3 fuel.
Tier 3 NOx Reductions

Salt Lake County Vehicle Emissions - NOx

- Tier 2
- Tier 3 Vehicles
- Tier 3 Veh&Fuel

2016: Tier 2 reduces emissions by 8%
2020: Tier 3 Vehicles reduce emissions by 9%
2030: Further reductions, but percentages not specified.
Tier 3 VOC Reductions

Salt Lake County Vehicle Emissions - VOC

- Tier 2
- Tier 3 Vehicles
- Tier 3 Veh&Fuel

Reductions:
- Tier 3 Vehicles: -3% for 2016, 4% for 2020, -3% for 2030
Winter Air Chemistry Study
* Using growth and decline factors to project VOC emissions from oil and gas production, Journal of the Air & Waste Management Association Volume 65, Issue 1, 2015
Workload Challenges

Multiple Air Quality Planning Programs

2015 | 2020 | 2025 | 2030
---|---|---|---
O₃ 2008 NAAs | | | |
SO₂ 2010 NAAs | | | |
RH 2nd 10-yr RP | | | |
PM₂·₅ 2006/2012 NAAs | | | |
O₃ CSAPR Update | | | |
O₃ 2015 Transport | | | |
O₃ 2015 NAAs | | | |
CO₂ Clean Power Plan | | | |

Plan Development ▲ Submission Date - Implementation Period - Compliance Period
Three Day Forecast and App

- Notify the Public of:
  - Forecast Air Quality Conditions to allow the Public to Plan Activities
  - Public Health Advisories
  - Air Pollution Alert and Action Days

![Three Day Forecast and App Image]
Have you changed any of your personal behavior to help improve Utah’s air quality?

68% SAID YES

Which of the following air quality strategies have you tried in the past two months in order to help improve Utah’s air quality?

- 65% Lowered Thermostat
- 64% Stopped Idling Vehicle
- 38% Carpooled
- 38% Reduced Wood Burning
- 34% Used Public Transit
- 21% Other
- 14% None
Questions?

www.deq.utah.gov
www.airquality.utah.gov