APPENDIX 5A

UDOT and MAG Travel Demand Model Meetings

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Summary

Project:	Heber Valley Corridor EIS
Subject:	Travel Demand Model and Growth Assumptions
Date:	Thursday, January 27, 2022
Time:	11 AM – 12 AM
Location:	Webex

Attendees

✓	Name	Representing	Project Role	Email	Phone
✓	Craig Hancock	UDOT	Project Manager	chancock@utah.gov	801.227.8034
✓	Naomi Kisen	UDOT	Environmental Manager	nkisen@utah.gov	385.226.7614
✓	Eric Rasband	UDOT	R3 Planning Manager	erasband@utah.gov	801.608.8870
✓	Andrea Clayton	HVC Team	Project Manager	andrea.clayton@hdrinc.com	801.815.0259
✓	Charles Allen	HVC Team	Traffic Lead	callen@parametrix.com	801.319.8271
✓	Tim Peterson	HVC Team	Traffic	tpeterson@parametrix.com	
✓	Shawn Seager	MAG	Planning Director	sseager@mountainland.org	801.824.1066
✓	Bob Allen	MAG	RPO Director	rallen@mountainland.org	801.836.2823
✓	Tim Hereth	MAG	Traffic/Land Use Modeling	thereth@mountainland.org	801.229.3843

Meeting Topics

The objective of the meeting was to validate growth assumptions in the travel demand model, understand MAG's perspective, and ensure the Heber Valley Corridor (HVC) team is using the best information available for the EIS.

1. Planned development north of Heber City:
    a. Many public comments received regarding growth north of Heber City (e.g., account for growth, tie in bypass alternatives farther to the north for a long-term solution).
    b. HVC team met with Wasatch County and Heber City to discuss planned development. Charles presented information provided by County and City. Concept board is available here: https://app.conceptboard.com/board/5bfb-3f4i-15x7-a3fb-6iac
    c. Planned developments provided by Heber City exceed growth assumed in travel demand model. However, some developments are conceptual, and timing is uncertain. Development could take place after 2050 (design horizon for travel demand model).
2. Travel demand model:
    a. HVC team using the Wasatch/Summit model. Model is updated on a regular basis with latest socioeconomic data available from Kem C Gardner Policy Institute (GPI). Model update planned for 2022 as part of the long-range planning process, but not updates will not be available for 6-8 months.
    b. GPI accounts for when growth is expected to happen within a county. Travel demand model population and employment numbers must stay within GPI county totals. It is

possible to move growth from one transportation analysis zone (TAZ) to another within the county.

c. MAG indicated that development plans frequently don't pan out to be as intense or timely as originally planned. Balancing the numbers between planned developments and GPI county growth totals is an ongoing issue.
d. New GPI forecasts for Wasatch County are the same as previous forecasts (population ~69,000 in 2050).
e. Primary homes v. secondary homes is a difficult issue, especially in areas with a lot of second homes (e.g., Midway in Wasatch County). Secondary homes to not count towards the county control totals.

3. Differences between Heber City's planned growth and travel demand model:
    a. Development plans provided by Heber City show about 7,000 more households east of U.S. 40 (between S.R. 32 and about 750 North) than is accounted for in the model. This represents about a 25% increase.
    b. Sorenson development is not included in the model. HVC team conducted a sensitivity analysis to evaluate the effect this development would have on traffic. The effect on Main Street in Heber City is 3-7%. However, north U.S. 40 is affected more, especially between Coyote Lane and ~750 North (Sorenson development would increase traffic to/from Coyote Lane). Sorenson development, especially on the east side of the ridge, may include a lot of second homes and may take a long time to build out.
    c. Challenging for HVC team because decisions made in EIS based on 2050 projections will have a long-term effect on how the area develops. For west bypass alternatives, the location to tie into U.S. 40 cannot be easily changed later in time. Comments from public indicate a desire to push location farther north for a long-term solution (fear that tying into U.S. 40 at ~750 North would result in congestion on U.S. 40 north of Heber City with planned growth). Would it make sense to tie into Coyote Lane because of future traffic from Sorenson development? Adding an additional lane to bypass would also be difficult if growth occurs in 2060 instead of 2050 due to wetlands.
4. Recommendations:
    a. MAG is not alarmed by Heber City's development plans. Unless HVC team identifies glaring issues, should stick with county control totals.
    b. If HVC team wants to move population from other areas of Wasatch County, further discussion with MAG needed.
    c. HVC team could account for a reasonable number of secondary units.
    d. HVC team could conduct sensitivity analysis to consider what may happen beyond 2050.

Summary

Project:	Heber Valley Corridor EIS
Subject:	Travel Demand Model Update Discussion
Date:	Monday, December 11, 2023
Location:	Google Meet

Attendees

✓	Name	Representing	Project Role	Email
✓	Craig Hancock	UDOT	Project Manager	chancock@utah.gov
✓	Naomi Kisen	UDOT	Environmental Manager	nkisen@utah.gov
✓	Brandon Weston	UDOT	Environmental Program Manager	brandonweston@utah.gov
✓	Eric Rasband	UDOT	Region 3 Planner	erasband@utah.gov
✓	Natalia Brown	UDOT	Travel Demand Program Manager	nataliabrown@utah.gov
✓	Tim Hereth	MAG	Analytics Manager	thereth@mountainland.org
✓	Andrea Clayton	HDR	Project Manager	Andrea.clayton@hdrinc.com
✓	John McPherson	HDR	NEPA Advisor	John.McPherson@hdrinc.com
✓	Charles Allen	Parametrix	Traffic Lead	callen@parametrix.com

Meeting Topics

1. The objective of this meeting was to discuss the differences between the previous Wasatch-Summit travel demand model (v1) and the updated travel demand model (v2) and understand why the growth has shifted, and resultant traffic has substantially increased. The Heber Valley Corridor (HVC) team has developed an internal draft EIS and engineering analysis based on the lower growth forecast from the v1 model.
2. Preliminary results from sensitivity analysis:
    a. The v2 model is giving the HVC EIS team considerably higher results than the v1 model along US-40, especially north of downtown Heber City. This presents potential rework and time delays for the EIS.
    b. Charles ran the spring v2 model because the summer model is not available/calibrated yet. The v2 spring model also did not have the local transportation network coded in. Therefore, the comparison between v1 and v2 discussed today is not apples to apples.
    c. Work on the v2 model started in 2021. The new summer/winter v2 model is anticipated to be calibrated in the coming months.
    d. The spring v2 model resulted in substantially higher traffic volumes on US-40 between SR-32 and downtown Heber City (referred to as north US-40 here) compared to summer v1 model

used in EIS. Summer volumes in v2 are expected to be even higher than spring volumes. The HVC team is pausing to understand the differences before deciding on next steps.

3. Overview of changes in travel demand model between v1 and v2:
    a. The county control totals for households, population, jobs, and secondary homes are similar between v1 and v2.
    b. Growth shifted in v2 to TAZs that would be more likely to travel on north US-40. For example, there were large increases in the North Village Area on the east side of US-40 and in the Mayflower area. There were large decreases in the Red Ledges area (which would not need to use US-40 to travel to downtown Heber).
    c. The North Village area is currently developing at a faster rate than the Red Ledges, it made sense for MAG to put the growth in the North Village area.
    d. Heber City wanted MAG to increase density in the North Village area. MAG could not increase the density to what the city wanted and stay within county control totals.
    e. The v1 model did not account for secondary units (secondary homes and cabins) as well as v2, the v2 model was improved to better account for secondary unit growth.
        i. Secondary units don't show up in the number of households that Charles used in the sensitivity analysis – they are in a separate column in the associated database.
        ii. Secondary units don't have to stay within the county control total, so MAG allowed those to grow and much of that growth affects US-40.
        iii. There are more secondary units assumed in v2 compared to v1.
        iv. Secondary unit trips are expected to be higher in the summer and thus the summer model results will be higher when it becomes available.
        v. Secondary units have different trip characteristics (people are vacationing, not driving to work).
    f. A newer model is typically more accurate than an older model because of newer available data and more recent input from users resulting in corrections to networks and growth forecasts.
    g. The v2 model is a major revamp of v1 with multiple changes including:
        i. Socioeconomic (SE) assumptions discussed above.
        ii. Model v2 used 2020 census data; v1 used 2010 census data combined with a separate data source (Infogroup).
        iii. Updated general plans available for v2 (including North Village and MIDA/Mayflower). The North Village was annexed into Heber City.
        iv. Updated transportation network.
        v. New model components.
        vi. Updated parks (secondary units are attracted to parks more than jobs).

vii. Model v1 allows for telecommuting (although this should decrease trips).

viii. The biggest changes affecting the EIS project area between v1 and v2 are the number of secondary units and a shift in growth to TAZs that would be more likely to use north US-40.

h. The next model update (v3) is expected in 2027. Models become official after the RTP is adopted. The assumptions for MIDA were difficult in v2, they may change again in v3.

i. There was a hiccup in the v2 model that was corrected in May 2023. Charles used a file from October, so that issue was ruled out as a source for the major growth changes.

4. Suggestions for sensitivity analysis to isolate what is driving changes:

   a. Put new SE data into old model (to see how much change is from the model itself).

   b. Put new secondary units in old model (to see how much change is from secondary units).

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Heber Valley Corridor

ENVIRONMENTAL IMPACT STATEMENT

North 40 Sensitivity Analysis Update 12/12/23

DRAFT

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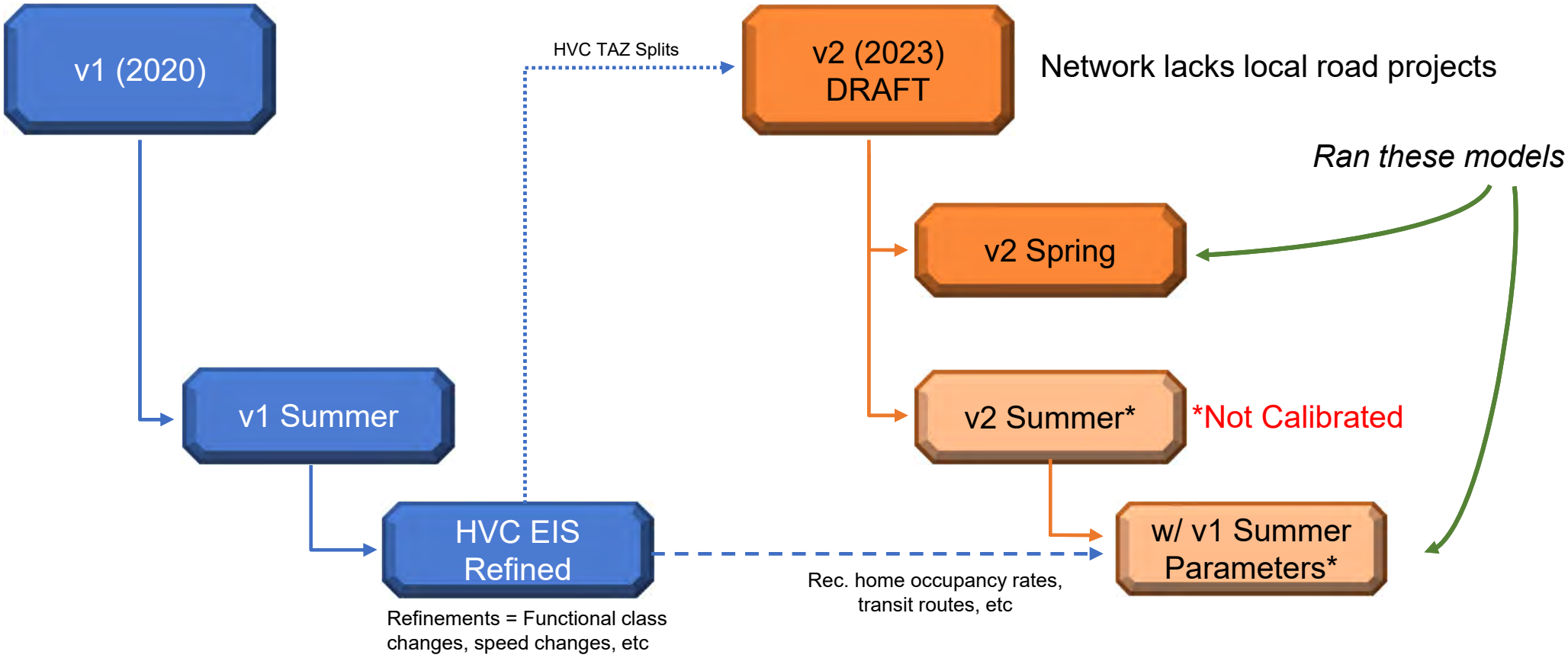
DEIS Model Version Sensitivity Analysis

Heber Valley Corridor
ENVIRONMENTAL IMPACT STATEMENT

	v1 (2020)	v2 (2023) DRAFT
Season	Summer season used for HVC EIS	Spring season – Calibrated Summer season – Not calibrated
Land Use		Updates/shifts population and employment
Local Road Projects	Incorporated • North 40 area connectivity • Portions of East bypass • 500 E extension • Etc	Pending incorporation
TAZ Structure	TAZs split to improve applicability to HVC EIS	HVC TAZ splits carried forward
Other Refinements	Various refinements to improve applicability to HVC EIS • Function class changes • Speed reduction through Daniel • Etc	None

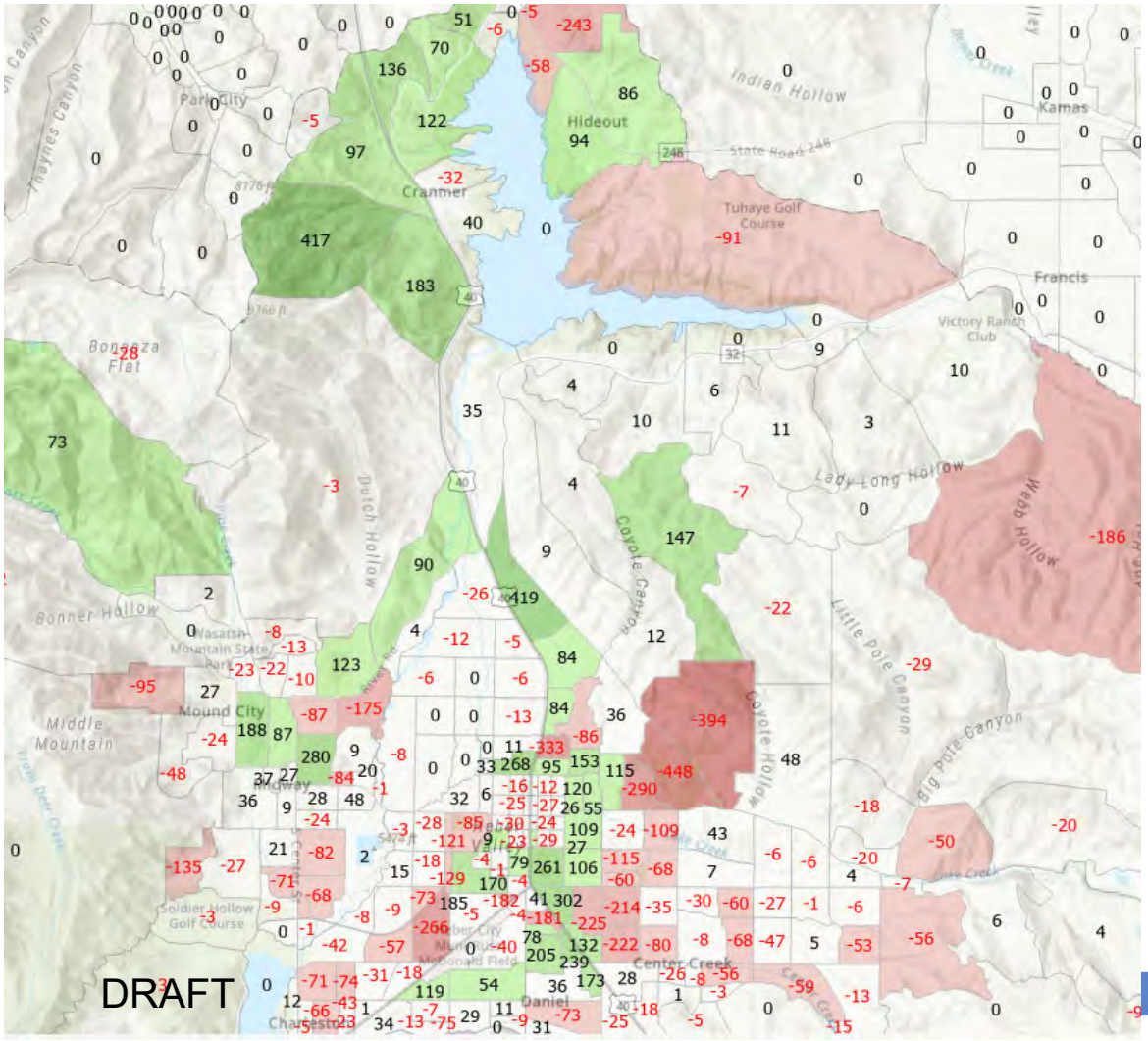
DEIS Model Version Sensitivity Analysis

Heber Valley Corridor
ENVIRONMENTAL IMPACT STATEMENT



DEIS Model Version Sensitivity Analysis

Heber Valley Corridor
ENVIRONMENTAL IMPACT STATEMENT

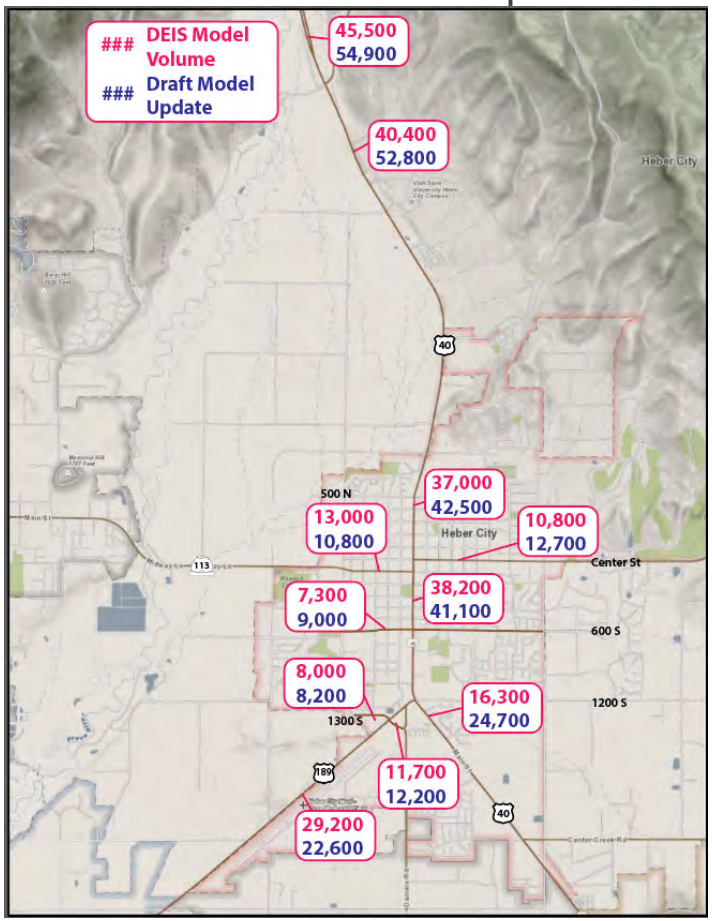


- Map shows change in households between v1 and v2
- County household and population totals remain about the same.
- But many households are shifted to TAZs that may be more likely to use US-40

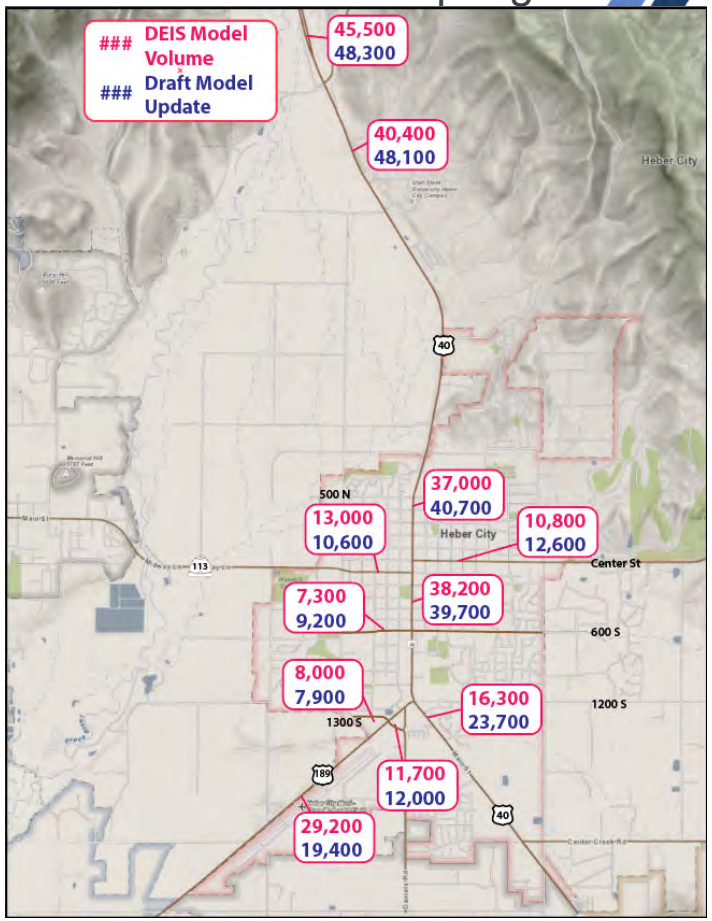
DEIS Model Version Sensitivity Analysis

Heber Valley Corridor
ENVIRONMENTAL IMPACT STATEMENT

HVC vs v2 Summer w/ v1 parameters



HVC vs v2 Spring



- v2 volume increases on North 40 are significant
- v2 volumes also higher in Heber city, but less pronounced
- v2 volumes likely due to several factors: land use changes, lack of local road projects, HVC refinements, etc

DEIS Model Version Sensitivity Analysis

Heber Valley Corridor
ENVIRONMENTAL STATEMENT