And thanks for being here this morning. My name is Andrew Bomberger and I’m a Regional Planner at Tri-County Regional Planning Commission.

We’ve asked you to be part of this steering committee because we’ve identified you or your organization as an important member of our regional community. As we develop the 2040 Regional Growth Management Plan, you are being asked to provide direction and insight into the process.
Welcome back.
OK. Since it has been so long since we last met, I wanted to review what the Steering Committee has done so far.

At our Kick-Off meeting, we compiled a list of Regional Issues. At the second meeting, we prioritized and ranked them. For a summary of the Regional Issues, and the results of the Steering Committees’ prioritization and ranking, please see this sheet in your materials.

Here is an overview of the ranking for all 16 Regional Issues. The Issues that ranked better were primarily those concerned with land use and transportation – issues directly associated with Tri-County’s regional planning efforts. Many of the lower ranked Issues are social/policy driven consequences of our decisions and actions related to the higher-ranked Regional Issues.
The highest ranked Regional Issue is Comprehensive Transportation. This issue covers the need to provide safe, convenient, and effective transportation for all users – motorists, cyclists, transit riders, walkers – and how that need connects to land use and economic development.

The second highest ranked Regional Issue is Aging Infrastructure. This issue covers the long-term maintenance of supporting infrastructure that is not always fully accounted for during development.

The third highest ranked issue is Future Infrastructure Needs. This issue covers the need to plan for and accommodate our ever evolving technology, and its demands on both policy and physical infrastructure.

As the RGMP development progressed, it became more and more evident that these two Regional Issues (Aging Infrastructure and Future Infrastructure Needs) needed to be combined. The research and analysis done for one was applicable to the other. So, while the final report document will still individually address each issue, we will discuss them under the broader topic of “infrastructure”.

The next highest ranked issue is Natural Resource Protection. This issue covers the need to address the pressures that development can put on our region’s vast natural resources.

The fifth ranked Regional Issue is Inefficient Land Use Patterns. This issue covers the non-contiguous nature of much our Region’s development. These inefficient development patterns increase the cost of development, service provision, and maintenance of infrastructure.

The sixth ranked Regional Issue is Unrealized Potential for Reuse. The development market and regulations often encourages “cheaper” new development, instead of accommodating reuse and redevelopment.

Similar to the issue with the two “infrastructure” issues, we’ve decided to combine the previous two issues into a broader “land use” issue. Again, each issue will still be individually addressed in the final document, but we will discuss them under the broader topic of “land use”.
As we began the early stages of development of the 2040 RGMP, we decided that we would incorporate scenario development.

Broadly, scenario development is an analytical tool or framework that allows us to incorporate many different environmental, regulatory, and community factors and examine how they will affect the projected growth of the Tri-County Region over the next 25 years. The goal of scenario planning is to identify issues and trends and compare possible strategies, not to perfectly model what the solution to those issues and trends will look like. Scenario planning is analytical, not predictive. Using GIS modeling and analysis, we are able to identify areas suitable and not suitable for development, and examine how the projected growth can impact our Region’s municipalities going forward.

At the previous steering committee meeting, we discussed the results of our high level land needs analysis. The scenarios we discuss today will expand on that analysis.
On this slide, you can see a description of the four different scenarios we will be examining. The first scenario is our trend scenario, which has been split into two different “sub-scenarios”. Scenario 1A uses the densities of our recent development activity (from about 2010 to 2015, depending on the county). Scenario 1B uses the densities found in the existing municipal zoning regulation.

Scenario 2 concentrates development around existing transportation corridors. Scenario 3 concentrates development around existing and proposed public transportation routes and facilities. Finally, Scenario 4 concentrates development around our region's urban areas, boroughs, and other population centers.
All our scenarios follow the same basic logic, which I'll cover in the next few slides.

FIRST, using GIS data, we identified the environmentally sensitive areas that precluded development. SECOND, using current zoning data, supplementing with land use data for areas without zoning, we identified areas in which housing was permitted.

NEXT, we used the growth projections established in the 2040 Regional Transportation Plan, which the Region's municipalities have already approved, to determine amount of additional housing expected over the next 25 years.

FINALLY, we analyzed our both land development and zoning data to determine the both the density we've been building at and the density allowed by local ordinances.

So, now we'll get a little more in-depth about each of those steps.
The first step was determining the excluded areas, which were primarily based on environmental factors.
On this slide, you can see the different things we considered when excluding areas – Public Rights of Way, Existing Development, State/Publicly Owned Land, Agricultural Easements, Wetlands, Floodplain, and Riparian Areas, and areas with slopes greater than 25%.
The next few slides will show these mapped individually, ending with a composite of all the excluded land.
Scenario Planning

Excluded Areas - Agricultural Easements
Scenario Planning

Excluded Areas - Publicly Owned Land
Scenario Planning

Excluded Areas - Wetlands, Floodplains, Riparian areas
Scenario Planning

Excluded Areas - Existing Development
Scenario Planning
Excluded Areas - Steep Slopes (> 25%)
This is the composite of our excluded land. As you can see, just over 565,000 acres has been deemed “undevelopable”. Our region is approximately 1.07 million acres, meaning, in our scenarios, we’ll be dealing with about 52% of the Region’s total area.
The next step is to determine the areas that allow housing.
Using existing municipal zoning data, we identified areas in which residential development was permitted. Broadly, these zones included the traditional residentially zoned land, but also any village or mixed use zoned, and even agricultural zoned land.

This map shows the result.
For municipalities that have no zoning regulations, we used our recently updated land use land cover data to determine areas in which housing could be built. This basically meant that we extracted any existing development, as well as open water and quarries or mining areas.

This map shows the result.
This slide illustrates the combination of the land on which housing is permitted. As you can see, this includes a lot of area in the Region. That will come up again later.
Next, we overlaid our excluded areas from the previous step. Those are shown in yellow. This will remove the areas deemed “undevelopable” because of physical and environmental factors from the areas in which housing is permitted.
The final result is shown here. This image shows our Region’s land available for housing. Again, this is the land on which housing is permitted, minus all lands excluded for environmental or physical constraints.
The next step was determining the amount of growth expected in each municipality. As part of the 2040 Regional Transportation Plan, adopted in June 2014, HATS and Tri-County developed these projections, which were approved by each municipality. We project our region to grow by approximately 32,000 households, or 14.5%, over the next 25 years.

This connection to the RTP and our transportation planning efforts is important as we continue to recognize the vital link between land use and transportation planning. Any connection made between the two is a good thing, and we at Tri-County are always looking for ways to strengthen that link.
This map shows the raw numbers of housing projections. The darker the color, the more housing units are projected to be added to the municipality. As you can see, and as would be expected, the highest numbers are around existing development, particularly the Harrisburg and Carlisle urban centers.

Interestingly, four of our Region’s municipalities are projected to experience negative housing growth. They are Harrisburg, Lykens borough, Williamstown borough, and Steelton borough. The scale of the loss is fairly low, but it is still a factor that must be considered in our future growth projections.
This map shows the % growth from 2010 to 2040. As you can see, Cumberland County municipalities are projected to grow at a higher rate than Dauphin and Perry County municipalities.

The values this map is illustrating are not directly used for any of the modeling purpose, but I wanted to present it to provide a fuller picture of how our Region is projected to grow over the next 25 years.
Finally, we need to determine the densities at which development will occur.

To determine these densities, we developed two different numbers – one reflecting the recent land development data and one reflecting the minimum lot areas allowed under existing zoning regulations. For each number, the value “in- and out-of-sewer service area” was determined, allowing us to have a little more detail and nuance in our analysis.

So, that's the basic underlying logic for each scenario. Before we move onto the individual scenarios, are there any questions? Anything that was unclear? I've been staring at this data for weeks and sometimes I tend to skip over some parts that are very important to actually understanding how the scenario works.
The first scenario is our trend analysis. Simply put, we determined the amount of land needed to accommodate the projected growth for each municipality, and using GIS modeling, allocated which land would be “consumed” by that growth. For all the scenarios, the amount of land needed to accommodate that growth is determined by the density numbers used. For this scenario, we based the density numbers on recent land development data.

On the map displayed here, the red areas show land that would be consumed by 2020, the orange shows land that would be consumed by 2030, and the red show land that would be consumed by 2040.
Unfortunately, some municipalities are unable to accommodate all of their growth in this scenario. This map shows which municipalities are projected to lose growth if we were to continue to develop at the density we’ve been developing. The municipalities shown in red would lose growth, with the municipalities shown in green absorbing that unaccommodated growth. For all the scenario, we assumed the unaccommodated growth would generally fall equally into adjacent municipalities within the same County. The municipalities in yellow can accommodate their growth, but do not gain any. **In total, about 1,325 households would “change municipalities”**.
Scenario 1B is virtually identical to Scenario 1A. The key difference is the density numbers, which changes the amount of land needed to accommodate the projected growth. For this scenario, we based the density on the minimum lot size allowed by the local zoning ordinance.

As in the previous scenario, the red indicates 2020 growth, the orange indicates 2030 growth, and the yellow indicates 2040 growth.

Looking at Hampden and Silver Spring Townships shows an important difference between this scenario and the previous scenario. **Silver Spring Township is shown receiving 1,928 more households in this scenario than the previous scenario (3,861 vs 1,933).**

This difference is due to current zoning ordinances mandating densities much lower than we've seen in recent land development activity. This is the case in East Pennsboro, which pushes some of its growth into Hampden (which can't even accommodate its own growth), which pushes even more into Silver Spring Township. In the end, Silver Spring ends up with 3,861, even though our projections only have them receiving 1,712 households.
This map shows which municipalities are projected to lose, gain, or be “household neutral”.

In total, approximately 3,600 households would “change municipality”.
Scenario 2 concentrates development along existing transportation corridors. Urban and Rural arterials and collector roads, as well as limited access highway exits, were used to generate the buffers that define the corridors.
Scenario 2: Transportation Corridors
Concentrating development around existing transportation corridors

This image shows just the buffer areas.
Scenario 2: Transportation Corridors
Concentrating development around existing transportation corridors

Red is 2020 growth, orange is 2030 growth, and yellow is 2040 growth.
Here's the map showing which municipalities gain and lose growth in Scenario 2.

Under this scenario, approximately 4,210 households would “change municipality”.

Scenario 2: Transportation Corridors
Concentrating development around existing transportation corridors

HH “changing municipality”:
4,210
Scenario 3 looks at concentrating development around existing transit routes and facilities. It also incorporates the proposed Southern Dauphin Circulator, the Bus Rapid Transit concept proposed for the CAT bridge, and a conceptual Perry County transit line that travels between Harrisburg and Newport Borough.
This is the area considered for the conceptual CAT bridge transit facility.
This image shows the total buffer area for Scenario 3.
Red is 2020 growth, orange is 2030 growth, and yellow is 2040 growth.
Here's the map showing which municipalities gain and lose growth in Scenario 3.

Under this scenario, approximately 2,351 households would “change municipality”.
And now our last scenario. This one focuses development around our urban centers and boroughs.

For all other scenarios, the municipal growth numbers were kept (assuming the municipality could accommodate its growth). For this scenario, however, we created 9 different municipal groups, with growth numbers aggregated for each group. The result is a much greater concentration of households migrating to our region’s urban areas and boroughs.
Red 2020, Orange 2030, Yellow 2040.
It also results in many more households “changing” municipality. In fact, 9,172 households “change” municipalities under this scenario, more than double any other scenario.
Our final scenario slide shows the number of “changing municipalities” for Scenarios 1A, 1B, 2 and 3. Scenario 4 is excluded from this image because it is an outlier and its “changing municipality” number is inflated by the method of analysis.

As you can see, most of the region is consistent. And most of the region can accommodate its growth. However, the municipalities surrounding Harrisburg, on both sides of the river, are at risk of not being able to accommodate the growth we’ve projected for them.

Keep in mind, this graphic doesn’t address degree or scale at all. A municipality losing 1 HH would be displayed the same as a municipality losing 1,000 HH.
The following Performance Measures will be used to evaluate and compare the scenarios. They plainly illustrate the impacts of each scenario.
This is a ranking of how each scenario performed for this measure.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Scenario</th>
<th>Acres</th>
<th>Acres per Household</th>
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<tr>
<td>1</td>
<td>Scenario 4 Regional Population Centers</td>
<td>29,132</td>
<td>0.90</td>
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<td>2</td>
<td>Scenario 3 Expanded Transit</td>
<td>38,534</td>
<td>1.17</td>
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<td>3</td>
<td>Scenario 1B Trend (Zoning)</td>
<td>40,693</td>
<td>1.23</td>
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<td>4</td>
<td>Scenario 1A Trend (Land Development)</td>
<td>44,831</td>
<td>1.35</td>
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<td>5</td>
<td>Scenario 2 Transportation Corridors</td>
<td>49,105</td>
<td>1.47</td>
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<table>
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<tr>
<th>Rank</th>
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<th>Households</th>
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<td>1</td>
<td>Scenario 2 Transportation Corridors</td>
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<tr>
<td>2</td>
<td>Scenario 1B Trend (Zoning)</td>
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<td>3</td>
<td>Scenario 4 Regional Population Centers</td>
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<td>4</td>
<td>Scenario 1A Trend (Land Development)</td>
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<td>5</td>
<td>Scenario 3 Expanded Transit</td>
<td>27,552</td>
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<tbody>
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<td>Scenario 1B Trend (Zoning)</td>
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<td>2</td>
<td>Scenario 2 Transportation Corridors</td>
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<td>3</td>
<td>Scenario 4 Regional Population Centers</td>
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<td>4</td>
<td>Scenario 3 Expanded Transit</td>
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<tr>
<td>5</td>
<td>Scenario 1A Trend (Land Development)</td>
<td>2,365</td>
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</tbody>
</table>
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The handouts include a Performance Measure Matrix. This allows you to easily compare the scenarios. The numbers listed are merely the ranking. They do not account for degree.

One of the biggest surprises for me was the relatively poor performance of Scenario 2. Although, after reviewing the data, a few reasons become apparent. 1.) Our transportation system is expansive. Using it as a constraining factor, while reasonable, doesn't do all that much restraining. 2.) Zoning regulations in some areas (particularly East Pennsboro – Hampden – Silver Spring) requiring low densities, causes the issues to multiple.
The following slides show the proposed changes to the policy statements.

**WE DID NOT COVER THESE IN THE MEETING.**

However, please feel free to review the statements and provide feedback related to any changes or oversights.

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Land Use

Promote the use of planning best management practices (BMPs)

- Promote municipal coordination of land use planning at multiple levels
- Facilitate participation from the public and private sectors
- Coordinate and disseminate community planning training opportunities

Promote the creation of livable, sustainable communities

- Develop affordable housing in proximity to existing or planned infrastructure, wherever possible
- Promote compact development and redevelopment consistent with applicable plans, policies, and ordinances
- Promote infill development and redevelopment consistent with capacities and planned facilities and services
- Encourage energy and resource efficient development
Land Use

Manage growth toward areas with existing or planned public facilities and services

- Promote development within Community Service Areas (CSAs) and Planned Growth Areas (PGAs) as appropriate

- Promote adoption and implementation of ordinances to meet land use requirements of existing and future residents and businesses

Promote economic development in conjunction with regional needs

- Determine regional commercial, industrial, and office development needs

- Promote the strategic location and networking of facilities and services

- Promote goals, objectives, and strategies from PA DCED Land Use, Transportation, and Economic Development (LUTED) and Regional Action Plan (RAP)
Transportation

Integrate Land Use and Transportation

- Consider the effects on land use when evaluating and implementing transportation improvements
- Consider the current and future transportation system when making land use decisions

Expand transportation choices

- Channel transportation funds toward alternate modes
- Increase transit ridership and carpooling
- Facilitate increased travel by bicycle and pedestrian modes
- Encourage innovative transit solutions to transportation issues including bus rapid transit (BRT), light/commuter rail and ITS upgrades
Transportation

Improve quality of life, promote human health and provide a safe experience for all users

- Encourage context sensitive design (aesthetics, urban design, and environmental stewardship) in transportation and greenway corridors
- Promote a full range of transportation choices concurrent with development
- Support development of adequate facilities to link different modes of transportation and connect developed areas
Natural Resources

Protect, preserve, and conserve the region’s natural resources

- Promote the protection of environmentally sensitive areas
- Promote the protection of water quality and quantity
- Promote the protection of air quality
- Protect, preserve, and conserve agricultural land and open space/greenways

Protect, preserve, and conserve the region’s historic, cultural, and scenic resources

- Promote the designation of historic buildings, districts, and corridors
- Promote the cultural and historic character of individual communities
- Protect the integrity of the region’s scenic resources

2040 Regional Growth Management Plan
Steering Committee Meeting
Infrastructure

Encourage provision of an adequate amount and mix of safe and sustainable utility facilities and services

- Facilitate development and connection of utility facilities and services to accommodate existing and projected population through the year 2040
- Promote the update of municipal utility plans and development of multi-municipal utility plans
- Encourage the use of and planning for “green infrastructure” and other clean, efficient innovations
- Integrate utilities planning and land use planning
Infrastructure

Provide an adequate amount of community services and facilities

• Provide public safety facilities and services as needed to serve existing and projected development

• Provide civil institutions and services as needed to serve existing and projected development

• Support the development of connected greenspaces, recreational areas, and trails
Upcoming schedule

Strawberry Square Public Outreach Kickoff
- April 12 from 11:30 am to 1:00 pm

Public Outreach continues through April to mid May

Next Steering Committee meeting Mid May

Presentation to TCRPC May 25
Thank you.