State of Wisconsin
DEPARTMENT OF NATURAL RESOURCES
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December 21, 2015

DNR File No. DC-0170

Steve Steinhoff
Deputy Director
Capital Area Regional Planning Commission
City County Building, Room 362
210 Martin Luther King Jr. Blvd
Madison WI 53703

Subject: Adoption of 2040 Population, Housing, and Employment Projections; Adoption of Land Demand Projections for Service Areas within Dane County

Dear Mr. Steinhoff:

We have completed our review of the proposed update to the Dane County Water Quality Management Plan submitted to the Department on December 11, 2015 by the Capital Area Regional Planning Commission (CARPC). The plan update incorporates the population and employment projections, and associated land demands, created by CARPC using county-wide population projections from the Wisconsin Department of Administration. The Capital Area Regional Planning Commission adopted Resolution CARPC No. 2015-12 approving the plan update at its October 8, 2015 meeting, following a public hearing. The Department hereby approves the plan update.

The plan update becomes part of Wisconsin's Areawide Water Quality Management Plan, and will be forwarded to the US Environmental Protection Agency to meet the requirements of the Clean Water Act of 1987 (Public Law 92-500 as amended by Public Law 95-217) and outlined in the federal regulations 40 CFR, part 35.

This review is an equivalent analysis action under s. NR 150.20(2)(a)3, Wis. Adm. Code. By means of this review, the Department has complied with ch. NR 150, Wis. Adm. Code, and with s. 1.11, Stats.

The approval of this plan update does not constitute approval of any other local, state or federal permit that may be required for sewer construction or associated land development activities.

If you believe that you have a right to challenge this decision, you should know that the Wisconsin statutes and administrative rules establish time periods within which requests to review Department decisions must be filed. For judicial review of a decision pursuant to sections 227.52 and 227.53, Wis. Stats., you have 30 days after the decision is mailed, or otherwise served by the Department, to file your petition with the appropriate circuit court and serve the petition on the Department. Such a petition for judicial review must name the Department of Natural Resources as the respondent.

To request a contested case hearing pursuant to section 227.42, Wis. Stats, you have 30 days after the decision is mailed, or otherwise served by the Department, to serve a petition for hearing on the Secretary of the Department of Natural Resources. All requests for contested case hearings must be made in accordance with section NR 2.05(5), Wis. Adm. Code, and served on the Secretary in accordance with section NR 2.03, Wis. Adm. Code. The filing of a request for a contested case hearing does not extend the 30 day period for filing a petition for judicial review.

Sincerely,

Timothy R. Asplund
Monitoring Section Chief
Bureau of Water Quality

CAPITAL AREA REGIONAL PLANNING COMMISSION

210 Martin Luther King Jr. Blvd. Room 362 Madison, WI 53703 Phone: 608-266-4137 Fax: 608-266-9117 www.CapitalAreaRPC.org info@CapitalAreaRPC.org

Friday, December 11, 2015

Ms. Lisa Helmuth
Wisconsin Department of Natural Resources
101 S. Webster Street, WT/3
P.O. Box 7921
Madison, WI 53707-7921

RE: Population Projections and Land Demand for 2040

Dear Ms. Helmuth:

Enclosed are the Capital Area Regional Planning Commission's updated projection methodology for population and land demand. The attached documents detail the following:

- **Exhibit A "Overview of Population, Household, and Employment Projections"**—Highlights the revised CARPC methodology and explains the departures from previously adopted methods.
- **Exhibit B "Population, Household, and Employment Projections"**—Lists projections for each service area in Dane County in five-year increments.
- **Exhibit C "Future Land Demand Projections"**—Breaks down the increment of change for the current methodology. Tables included in this exhibit also compare the current and previously projected land demand (and projection counts) by Service Area.
- **Exhibit D "Description of Labor Force Projection"**—Outlines work conducted between 2012 and 2014 by former CARPC staff on trends in employment, commuting, and labor force participation. These assumptions and data serve as the starting place for employment projections and employment-related land demand in the current methodology.
- **Exhibit E "Methodology Review Summary"**—Lists the professionals who were consulted or with whom CARPC staff developed the projections and methodology. Email records are attached, specifically those indicating consistency with Department of Administration methods as outlined in NR121. A copy of CARPC Resolution No. 2015-12

We look forward to our continuing collaboration with the Department of Natural Resources in 2016. Please contact me if you require additional information or have any questions.

Sincerely,

Kamran Mesbah, PE, AICP
Deputy Director, and Director of Environmental Resources Planning
Capital Area Regional Planning Commission

Cc: Josie Lathrop, WDNR
Tim Asplund, WDNR

KM/sh

Enclosure

Exhibit A

"Overview of Population, Household, and Employment Projections"

"Overview of Population, Household, and Employment Projections"

December, 2015

Capital Area Regional Planning Commission

Employment Projection Summary

Projection of employment in the Capital Area Regional Planning Commission's (CARPC) land demand methodology is based on two main elements:

- Projected labor force at the county-level, which are used as a control total, and
- Projected rate of change in employment at the ZIP code level.

1. **Projected labor force** is derived from Department of Administration's (DOA) age-sex projections for Dane and its adjacent counties. The methodology projects the employed labor force as follows:
    a. Historical labor force participation rates (LFPR) by age group at the national level are used to project future LFPRs.
        i. Based on Bureau of Labor Statistics (BLS) analysis, LFPRs are assumed to decline further from their current levels for almost all age groups.
        ii. This decline in participation is slowed to account for Dane County's higher historical LFPRs.
        iii. The total working-age population projected by DOA is multiplied by its respective age group's LFPR.
        iv. The total number of labor force participants is adjusted to reflect the observed trend from 1990—2010 in the number of workers residing in Dane County who also work in Dane County.[1]
        v. The total from the previous step is further adjusted to reflect a 5% unemployment rate, which is held constant through the projection period.

    b. For adjacent counties, the proportion of employed workers commuting into Dane County is calculated for 1990, 2000, and 2010 based on Census Flow data.
        i. The change in proportion of employed workers from each county commuting into Dane County is then projected out to 2050.
        ii. Each contributing countys' total population aged 16—75+ is multiplied by its rate of residents commuting to Dane County for work.

    c. The totals from steps "v" of item "a" and "ii" of item "b" above are summed. *This is the total employed labor force projected for Dane County.*

[1] The observed trend suggests a near-constant value of around 92%.

2. **Change in employment** is based on 1994—2014 County Business Patterns (CBP) and ZIP Code Business Patterns (ZBP) data from BLS.
    a. Observed private employment at the ZIP code level is projected out to the year 2050.
        i. Data points for 2009, 2010, and 2011 are removed to control for the major drops in employment observed during the recession.
        ii. Average annual increase in employment is calculated for the remaining years and projected out to the year 2050 for each Urban Service Area (USA). For those USAs with rapidly declining growth or with negative projection values at or before the end year of the projection period, employment loss is slowed. The average annual loss is halved in each successive 5-year period. This stabilizes employment levels for these communities by the year 2050.[2]

    b. Government employment is calculated based on observed ratios of government employee class (local, state, and Federal) to population at the county level between 1994 and 2014.
        i. Due to no appreciable change in the ratios observed, the median ratio (1994—2014[3]) of local and Federal employees to residents is used.
        ii. The ratio of State employees to residents is based on the observed decrease in State employees from 1994—2014[3]. This trend is projected out to the end year of 2050.
        iii. The county-wide ratio of local governmental employees to residents is applied to the total population for each USA. The ratios of state and Federal employees per citizen is applied to the total Dane County population projection and then added to government employment within the Central Urban Service Area (CUSA).

    c. Totals from "a" and "b" above are summed to arrive at an employment projection for each USA.

3. **Adjustment based on County control total**—The projected change in employment numbers in section "2" above are controlled to the county's employed labor force generated in section "1."

[2] Note: This applies to *private employment only*. In some instances, the final employment number for a USA appears to fluctuate. This is due to the addition of government employment, which is a function of population growth in the CARPC projections.
[3] Excluding the years: 2009, 2010, and 2011.

Projection of Population, Households, and Population in Households

CARPC's projections (population, households, and population in households) are based closely on DOA's adopted numbers for Dane County and its Minor Civil Divisions (MCDs). In developing the revised CARPC land demand methodology, staff relied on five primary projection numbers for each USA: population, population in households, households, labor force, and employees.

The analysis of these additional measurements reflects a more detailed, nuanced approach taken in this methodology. Residuals or remainders of these projection numbers provide additional measurements. For example, household size is a residual of households and population in households; changes in household size are not projected independently. The difference between population and population within households is subtle but meaningful. For the purpose of residential land demand, "population in households" was utilized. In the case of projecting future *per capita* land uses like civic or recreational functions, "population" was utilized. The difference between these numbers reflects the population in group homes, nursing homes, etc. So, while the entire population of a community is served by a civic land use; only increase of the population within households is considered when projecting land demand for residential uses.

1. **Changes to Existing CARPC Projection Methods**—Upon review of CARPC's current methodology, CARPC staff concluded that the distinction between MCDs and the USAs is no longer functionally meaningful for the purposes of generating population and household numbers because the USA process deals primarily with the increment of change. While there is a difference in population between an MCD and the corresponding USA, in most cases this is only a five percent difference in population and household numbers. DOA projection numbers are used *as the USA numbers* in cases where a USA contains or is contained by a single MCD e.g. City of Stoughton vs. Stoughton USA. In cases where multiple MCDs exist in a USA, e.g. the CUSA, the projection number are the aggregate of those MCDs. Since the focus of the USA amendment process is on the *addition of new development land* to service areas, and because new development overwhelmingly requires a full compliment of services, it can be assumed that—with very few exceptions—new urban development land in response to population changes will occur as additions to an existing civil division and its USA. In effect, it is not necessary to project USA populations independent from the existing DOA household projections. However, making minor adjustments in special cases is required.

2. **Adjustments to DOA Projections**—Assumptions about the growth of the Outlying Urban Service Areas (OUSAs) crossing county lines have been in place for several years. These assumptions about growth patterns of the Belleville, Brooklyn, Cambridge, and Edgerton USAs are continued in this methodology.

    a. Belleville and Cambridge USAs: All future growth is assumed to be in the Dane County portion of the USA. The population growth is based on the population projected for both sides of the Dane County border.

b. Brooklyn USA: Future growth is assumed to occur in both Dane and Green counties. The Dane County growth projection is based only on the Dane County portion of Brooklyn's population.

c. Edgerton USA: Based on the City's comprehensive plan and confirmation by the City Administrator, it is assumed that 42% of future growth will occur within Dane County. Forty-two percent of the total population change from the Dane County and Rock County portions of Edgerton—as forecast by the DOA—is allocated to the Edgerton USA.

3. **Unique Population Projection Cases**—In a handful of cases, the service area and MCD boundaries are not suitably coincident.

   a. *Central Urban Service Area (CUSA)* —The CUSA is comprised of the following communities either in whole or in part: City of Fitchburg[4], City of Madison, City of Middleton, City of Monona, Village of Maple Bluff, Village of McFarland, Village of Shorewood Hills, Town of Blooming Grove, and Town of Madison.[5] Additional minor adjustments were made to account for other town contributions. (See section "c." below.)

   b. *Northern*—The Northern USA is comprised of land in the Village of DeForest, Town of Vienna, and the Town of Windsor. There is also a small amount of land within the Town of Burke. For the purposes of residential projections, growth within the Village of DeForest and Town of Windsor are considered. Land in the USA contributed by Burke contains very few residents and is overwhelmingly industrial in use. An additional supporting factor in this assumption is the observed decline in both percentage and number of Vienna residents in "urban" areas between the 2000 and 2010 Census. It is assumed that all residential growth within DeForest and the balance of "urban" development reflected for the Town of Windsor in the Census will account for the residential growth within the Northern USA. Additionally, it is expected that the proportion of Windsor's population within the Northern USA will continue to increase. The percent of Windsor's population living in "urban areas" increased by *five percent* between the 2000 and 2010 Census. [59—64%] Windsor's proportion of households within "urban areas" increased by *six percent* over the

[4] An adjustment (subtraction) to the CUSA totals is made to compensate for the proportion of Fitchburg *not within* the CUSA. Although Fitchburg has become increasingly more "urban," by the Census definition [85—90%, in 2000—2010], a proportion of the population still exists in rural areas. It is assumed that this trend will continue, however the percentage of urban households has been fixed at 98% for 2040 to reflect the fact that some residents are likely to remain in "rural" areas.

[5] In addition there is a very small amount of land outside of these contributing entities that is within the CUSA. However, these fragments are inconsequential to the consideration of *future* land demand as the bulk of the land area is added at the request of the nine entities listed above in response to their growth; requests by other towns are the exception rather than the rule.

same period. [61—67%] For the purpose of USA growth, it is expected that this Census trend will continue over the coming decades. [6]

c. *Town Land within USAs*—The overwhelming majority of households and lands within USAs are found within the primary municipality for which each USA is named, e.g. the Sun Prairie Urban Service Area's households are over 99% City of Sun Prairie residences. Minor adjustments are made to each USA to account for the contributions of these non-primary communities. On average the increase to the DOA numbers to account for town contributions is on the order of *one-half of one percent*. While the adjustments are relatively minor when considering USA population and household totals, in some cases a larger proportion of a town's residents and households exist within a USA. One notable case is the Town of Westport; over half of the households in Westport are within the Central Urban Service Area. The 2010 Land Use Inventory is used to estimate the number of town households within each USA. This proportion is assumed to remain relatively consistent[7] and is multiplied by the DOA's projections so that, as the community grows, its contribution to the USA does as well. Population and Population-in-Household numbers were calculated for the adjustments based on the DOA's people-per-household averages by community (USA).

   The following are examples of USAs that contain more than *five percent* of one or more adjacent towns' households:

   i. *Central USA* —Towns of Westport (55.8%), Verona (12.9%), and Middleton (7.5%)
   ii. *Deerfield USA* —Town of Deerfield (5.3%)
   iii. *Stoughton USA* —Town of Dunkirk (15.8%)

   The actual adjustment made to each USA (percent change from the DOA/CARPC figure) is minor; the range of adjustment is between *zero and three-and-one-half percent. Two thirds* of the USA totals were unadjusted from the quantities generated by the base methodology. The following USAs were adjusted by more than *one-half of a percent* at one or more of the five-year intervals in the projection period:

   i. *Belleville USA*—Accounting for the Town of Montrose (15) households

[6] It should also be noted that the Town of Windsor elected to incorporate following a ballot in 2015. This may affect the balance within the Northern USA (Formerly—in part—the Deforest USA) to the point where Windsor contributes an ever-increasing quantity of households and requires additional lands. All the more reason that the projections should reflect an increasing concentration within "urban areas" and increasing proportion of Windsor's overall population and households within the Northern USA.

[7] This assumption is validated by comparing the 2000 and 2010 Census' "percent in urbanized area" statistics for the towns. In most cases, significant changes over the decade were attributable to changes in definition of "urban" by the Census Bureau or other reclassifications at the municipal level i.e. annexations, etc.

ii. *Black Earth USA* — Accounting for the Town of Black Earth (3) households
iii. *Cottage Grove USA* — Accounting for the Town of Cottage Grove (14) households
iv. *Central USA* — Accounting for the Towns of Westport (995), Middleton (149), Burke (139), and Verona (96) households
v. *Deerfield USA* — Accounting for the Town of Deerfield (29) households
vi. *Stoughton USA* — Accounting for the Towns of Dunkirk (124) households
vii. *Waunakee USA* — Accounting for the Town of Westport (28) households

d. *Koshkonong*—Koshkonong USA is presumed to follow the observed trend in population and number of households in those Census blocks most closely coinciding with its borders. Values are taken from Decennial Census counts. All of the land within the Koskonong USA exists in the Town of Albion.

Exhibit B

"Population, Household, and Employment Projections"

Vintage 2013 Urban Service Area Projections—Employment (v.01)							
	2010	2015	2020	2025	2030	2035	2040
Belleville	1,106	1,143	1,260	1,376	1,487	1,585	1,675
BlackEarth	477	465	446	436	432	429	427
BlueMounds	318	325	344	362	379	394	408
Brooklyn	275	293	344	394	442	485	524
Cambridge	778	736	672	642	629	624	623
Central	253,452	258,141	266,813	274,916	282,267	288,263	293,551
CottageGrove	1,881	1,959	2,188	2,415	2,633	2,826	3,006
CrossPlains	1,552	1,489	1,391	1,345	1,325	1,317	1,315
Dane	344	343	334	325	317	309	301
Deerfield	1,154	1,151	1,132	1,113	1,094	1,076	1,060
Edgerton-Koshkonong	1,846	1,842	1,820	1,798	1,775	1,755	1,734
Marshall	521	508	488	477	472	470	470
Mazomanie	1,016	961	878	841	826	820	819
MountHoreb	1,711	1,727	1,777	1,825	1,871	1,911	1,948
Northern	6,151	6,317	6,824	7,325	7,805	8,232	8,628
Oregon	2,996	3,048	3,139	3,229	3,316	3,390	3,458
Stoughton	6,936	6,957	6,988	7,015	7,038	7,056	7,072
Sun Prairie	10,364	10,535	11,064	11,583	12,078	12,516	12,921
Verona	8,495	12,348	15,497	17,444	18,645	19,428	20,013
Waunakee	5,600	5,743	6,088	6,427	6,752	7,040	7,307
County Total	**323,089**	**332,148**	**345,602**	**357,405**	**367,699**	**376,041**	**383,376**

Vintage 2013 Urban Service Area Projections—Population (v.02)							
	Pop2010	Pop2015	Pop2020	Pop2025	Pop2030	Pop2035	Pop2040
Belleville	1,885	1,920	2,041	2,156	2,255	2,325	2,369
Black Earth	1,346	1,358	1,378	1,398	1,409	1,409	1,404
Blue Mounds	855	895	965	1,030	1,090	1,140	1,185
Brooklyn	936	995	1,120	1,235	1,350	1,440	1,510
Cambridge	1,348	1,381	1,476	1,566	1,651	1,711	1,771
Central	302,935	313,183	327,042	340,481	352,548	361,025	367,749
Cottage Grove	6,230	6,568	7,228	7,884	8,504	9,029	9,509
Cross Plains	3,541	3,618	3,798	3,968	4,128	4,233	4,323
Dane	995	1,055	1,135	1,215	1,285	1,350	1,400
Deerfield	2,397	2,494	2,642	2,785	2,917	3,017	3,103
Northern	13,022	13,804	14,922	16,046	17,139	18,049	18,892
Edgerton	97	164	294	412	519	598	640
Koshkonong	620	639	657	676	695	713	732
Marshall	3,862	3,920	4,100	4,275	4,440	4,545	4,635
Mazomanie	1,657	1,680	1,735	1,785	1,830	1,855	1,870
Mount Horeb	7,023	7,224	7,640	8,056	8,431	8,717	8,962
Oregon	9,234	9,608	10,303	10,983	11,623	12,133	12,583
Stoughton	12,921	13,047	13,434	13,792	14,098	14,262	14,364
Sun Prairie	29,403	31,670	34,812	37,924	40,876	43,378	45,629
Verona	10,645	11,647	12,827	13,988	15,098	16,038	16,878
Waunakee	12,159	12,813	13,916	14,988	16,011	16,853	17,604

Vintage 2013 Urban Service Area Projections—Households (v.02)							
	HH2010	HH2015	HH2020	HH2025	HH2030	HH2035	HH2040
Belleville	782	815	879	938	994	1,037	1,065
Black Earth	562	578	594	608	618	623	624
Blue Mounds	336	358	391	421	450	475	497
Brooklyn	324	370	446	518	589	644	686
Cambridge	572	597	647	693	737	772	804
Central	132,522	139,738	147,681	155,086	161,812	166,824	170,606
Cottage Grove	2,224	2,387	2,660	2,928	3,188	3,417	3,621
Cross Plains	1,387	1,443	1,533	1,617	1,698	1,757	1,806
Dane	363	392	427	461	492	522	545
Deerfield	913	967	1,037	1,104	1,167	1,218	1,261
Northern	5,038	5,452	5,979	6,505	7,027	7,485	7,898
Edgerton	32	152	222	285	343	388	415
Koshkonong	334	353	371	390	409	427	446
Marshall	1,437	1,485	1,573	1,655	1,735	1,792	1,839
Mazomanie	691	713	746	774	801	820	832
Mount Horeb	2,701	2,831	3,031	3,226	3,405	3,551	3,671
Oregon	3,590	3,805	4,130	4,444	4,746	4,998	5,213
Stoughton	5,258	5,411	5,640	5,845	6,025	6,146	6,222
Sun Prairie	11,650	12,779	14,219	15,638	17,009	18,214	19,275
Verona	4,233	4,716	5,259	5,789	6,305	6,758	7,153
Waunakee	4,372	4,692	5,159	5,608	6,045	6,420	6,744

Vintage 2013 Urban Service Area Projections—Population in Households (v.02)							
	HHPop2010	HHPop2015	HHPop2020	HHPop2025	HHPop2030	HHPop2035	HHPop2040
Belleville	1,885	1,874	2,041	2,156	2,255	2,325	2,369
Black Earth	1,303	1,317	1,336	1,355	1,364	1,362	1,355
Blue Mounds	855	895	965	1,030	1,090	1,140	1,185
Brooklyn	936	1,022	1,202	1,367	1,527	1,642	1,732
Cambridge	1,348	1,381	1,476	1,566	1,651	1,711	1,771
Central	291,289	301,678	315,103	327,881	339,083	346,488	352,304
Cottage Grove	6,230	6,568	7,228	7,884	8,504	9,029	9,509
Cross Plains	3,541	3,618	3,798	3,968	4,128	4,233	4,323
Dane	995	1,055	1,135	1,215	1,285	1,350	1,400
Deerfield	2,397	2,494	2,642	2,785	2,917	3,017	3,103
Northern	13,022	13,804	14,922	16,046	17,139	18,049	18,892
Edgerton	97	163	292	407	512	590	629
Koshkonong	620	639	657	676	695	713	732
Marshall	3,850	3,908	4,088	4,262	4,426	4,530	4,619
Mazomanie	1,657	1,680	1,735	1,785	1,830	1,855	1,870
Mount Horeb	6,922	7,125	7,536	7,945	8,311	8,586	8,821
Oregon	9,157	9,531	10,221	10,895	11,527	12,027	12,468
Stoughton	12,658	12,793	13,174	13,521	13,812	13,957	14,043
Sun Prairie	29,301	31,565	34,697	37,797	40,735	43,220	45,456
Verona	10,585	11,584	12,758	13,912	15,013	15,943	16,774
Waunakee	12,068	12,721	13,817	14,880	15,892	16,721	17,460

Exhibit C

"Future Land Demand Projections"

Acreage Calculations

October, 2015
Capital Area Regional Planning Commission

The Capital Area Regional Planning Commission's land demand projection contains the following types of land uses:

- Residential—determined by number of households
- Employment—determined by number employed persons by primary place of work
- Others civic uses—determined by total population i.e. public safety land uses, parks, municipal government buildings etc.
- Rights-of-way—determined as a fixed percentage of developed land use.

Total land requirements in each service area for 2040 are calculated as follows:

Residential:

$$(\text{Households}_{2040} - \text{Households}_{2010}) \times (\text{USA Dwelling Units}_{2010}/\text{Acres}_{2010})$$

Employment:

$$(\text{Employees}_{2040\ \text{Industry X}} - \text{Employees}_{2010\ \text{Industry X}})$$

$$\text{X County-wide Acreage}_{2010\ \text{Industry X}}/\text{County-wide Employees}_{2010\ \text{Industry X}})$$

$$= \text{Acres of Employment Demand}_{\text{Industry X}}$$

$$\sum \text{Acres of Employment Demand}_{\text{All Industries}} = \text{Total Employment-based Demand}$$

Civic Uses:

$$[(\text{Persons}_{2040} - \text{Persons}_{2010}) \times (\text{Acres of Non-Park Civic Uses}_{2010} / \text{Persons}_{2010})]$$

$$+ [((\text{Persons}_{2035} - \text{Persons}_{2010}) / 1{,}000) \times 15^{1}]$$

Rights-of-Way:

15% of the sub-total of employment, residential, and civic demand

[1] 15 Acres per 1,000 Citizens reflects the Countywide standard for parks and open space dedication. Note: The Environmental Corridors, water, rights-of-way categories are excluded from the tabulation of all acreage types. Park acreages use a special tabulation including EC and open space.

Belleville				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*1,376*	*39*	485	16
Housing Units	*592*	*17*	282	9
Population-Based Land Demand	*158.6*	*4.5*	97.6	3.3
Employment-Based Land Demand	*65.0*	*1.9*	64.2	2.1
Right-of-Way (Acreage)	*73.9*	*2.1*	39.7	1.3
Additional Acres Required	*297.4*	*8.5*	**201.5**	**6.7**
2015 USA Size (Acres)			1,071.9	
Undeveloped Acres (2010)			303.1	

Black Earth				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*217*	*6*	57	2
Housing Units	*113*	*3*	61	2
Population-Based Land Demand	*30.7*	*0.9*	16.6	0.6
Employment-Based Land Demand	*4.3*	*0.1*	-6.2	-0.2
Right-of-Way (Acreage)	*10.2*	*0.3*	3.0	0.1
Additional Acres Required	*45.3*	*1.3*	**13.4**	**0.4**
2015 USA Size (Acres)			370.0	
Undeveloped Acres (2010)			56.7	

Blue Mounds				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*695*	*20*	330	11
Housing Units	*292*	*8*	161	5
Population-Based Land Demand	*127.2*	*3.6*	58.6	2.0
Employment-Based Land Demand	*26.9*	*0.8*	8.5	0.3
Right-of-Way (Acreage)	*25.0*	*0.7*	18.7	0.6
Additional Acres Required	*179.1*	*5.1*	**85.8**	**2.9**
2015 USA Size (Acres)			476.1	
Undeveloped Acres (2010)			121.2	

Brooklyn				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*1,126*	*32*	574	19
Housing Units	*433*	*12*	362	12
Population-Based Land Demand	*121.4*	*3.5*	114.0	3.8
Employment-Based Land Demand	*6.0*	*0.2*	30.1	1.0
Right-of-Way (Acreage)	*68.0*	*1.9*	55.9	1.9
Additional Acres Required	*195.4*	*5.6*	**200.0**	**6.7**
2015 USA Size (Acres)			498.9	
Undeveloped Acres (2010)			86.2	

Cambridge				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*997*	*28*	423	14
Housing Units	*441*	*13*	232	8
Population-Based Land Demand	*110.1*	*3.1*	71.7	2.4
Employment-Based Land Demand	*99.0*	*2.8*	-17.7	-0.6
Right-of-Way (Acreage)	*61.0*	*1.7*	12.3	0.4
Additional Acres Required	*270.1*	*7.7*	**66.3**	**2.2**
2015 USA Size (Acres)			554.5	
Undeveloped Acres (2010)			128.9	

Central				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*110,561*	*3,159*	62,161	2,072
Housing Units	*52,143*	*1,490*	36,901	1,230
Population-Based Land Demand	*7,178.1*	*205.1*	6,637.5	221.2
Employment-Based Land Demand	*7,312.0*	*208.9*	4,232.9	141.1
Right-of-Way (Acreage)	*3,765.7*	*107.6*	2,681.6	89.4
Additional Acres Required	*18,255.8*	*521.6*	**13,552.0**	**451.7**
2015 USA Size (Acres)			87,466.6	
Undeveloped Acres (2010)			6,890.9	

Cottage Grove				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*7,958*	*227*	3,278	109
Housing Units	*3,140*	*90*	1,395	47
Population-Based Land Demand	*807.0*	*23.1*	453.4	15.1
Employment-Based Land Demand	*120.0*	*3.4*	117.3	3.9
Right-of-Way (Acreage)	*309.1*	*8.8*	139.4	4.6
Additional Acres Required	*1,236.1*	*35.3*	**710.1**	**23.7**
2015 USA Size (Acres)			2,779.3	
Undeveloped Acres (2010)			749.5	

Cross Plains				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*2,238*	*64*	782	26
Housing Units	*901*	*26*	419	14
Population-Based Land Demand	*193.6*	*5.5*	111.6	3.7
Employment-Based Land Demand	*68.0*	*1.9*	-26.4	-0.9
Right-of-Way (Acreage)	*57.0*	*1.6*	18.5	0.6
Additional Acres Required	*318.6*	*9.1*	**103.7**	**3.5**
2015 USA Size (Acres)			1,039.7	
Undeveloped Acres (2010)			175.4	

Dane				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*754*	*22*	405	14
Housing Units	*309*	*9*	182	6
Population-Based Land Demand	*81.1*	*2.3*	71.2	2.4
Employment-Based Land Demand	*52.0*	*1.5*	-4.7	-0.2
Right-of-Way (Acreage)	*31.1*	*0.9*	15.1	0.5
Additional Acres Required	*164.2*	*4.7*	**81.6**	**2.7**
2015 USA Size (Acres)			415.7	
Undeveloped Acres (2010)			127.2	

Deerfield				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*1,710*	*49*	696	23
Housing Units	*667*	*19*	342	11
Population-Based Land Demand	*174.5*	*5.0*	124.4	4.1
Employment-Based Land Demand	*152.0*	*4.3*	-10.0	-0.3
Right-of-Way (Acreage)	*42.9*	*1.2*	23.7	0.8
Additional Acres Required	*369.4*	*10.6*	**138.0**	**4.6**
2015 USA Size (Acres)			1,051.0	
Undeveloped Acres (2010)			208.4	

Edgerton				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*971*	*28*	543	18
Housing Units	*420*	*12*	383	13
Population-Based Land Demand	*95.5*	*2.7*	189.3	6.3
Employment-Based Land Demand	*48.5*	*1.4*	-15.0	-0.5
Right-of-Way (Acreage)	*-26.5*	*-0.8*	0.0	0.0
Additional Acres Required	*117.5*	*3.4*	**174.3**	**5.8**
2015 USA Size (Acres)			192.8	
Undeveloped Acres (2010)			14.0	

Marshall				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*2,438*	*70*	773	26
Housing Units	*1,016*	*29*	402	13
Population-Based Land Demand	*281.3*	*8.0*	105.2	3.5
Employment-Based Land Demand	*31.0*	*0.9*	-5.6	-0.2
Right-of-Way (Acreage)	*94.9*	*2.7*	21.3	0.7
Additional Acres Required	*407.2*	*11.6*	**121.0**	**4.0**
2015 USA Size (Acres)			1,267.7	
Undeveloped Acres (2010)			381.4	

Mazomanie				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*728*	*21*	213	7
Housing Units	*304*	*9*	141	5
Population-Based Land Demand	*73.8*	*2.1*	38.9	1.3
Employment-Based Land Demand	*157.0*	*4.5*	-21.5	-0.7
Right-of-Way (Acreage)	*83.8*	*2.4*	4.0	0.1
Additional Acres Required	*314.6*	*9.0*	**21.4**	**0.7**
2015 USA Size (Acres)			943.2	
Undeveloped Acres (2010)			201.3	

Mount Horeb				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*5,808*	*166*	1,936	65
Housing Units	*2,464*	*70*	968	32
Population-Based Land Demand	*579.5*	*16.6*	292.1	9.7
Employment-Based Land Demand	*146.0*	*4.2*	24.6	0.8
Right-of-Way (Acreage)	*188.9*	*5.4*	78.6	2.6
Additional Acres Required	*914.3*	*26.1*	**395.3**	**13.2**
2015 USA Size (Acres)			2,506.0	
Undeveloped Acres (2010)			505.9	

Northern				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*10,753*	*307*	5,866	196
Housing Units	*4,523*	*129*	2,858	95
Population-Based Land Demand	*1,176.5*	*33.6*	790.3	26.3
Employment-Based Land Demand	*516.0*	*14.7*	266.9	8.9
Right-of-Way (Acreage)	*530.0*	*15.1*	167.5	5.6
Additional Acres Required	*2,222.5*	*63.5*	**1,224.7**	**40.8**
2015 USA Size (Acres)			6,960.3	
Undeveloped Acres (2010)			1,860.4	

Oregon				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*8,088*	*231*	3,349	112
Housing Units	*3,106*	*89*	1,623	54
Population-Based Land Demand	*714.5*	*20.4*	450.6	15.0
Employment-Based Land Demand	*207.0*	*5.9*	51.1	1.7
Right-of-Way (Acreage)	*221.6*	*6.3*	112.6	3.8
Additional Acres Required	*1,143.1*	*32.7*	**614.3**	**20.5**
2015 USA Size (Acres)			2,722.8	
Undeveloped Acres (2010)			205.4	

Stoughton				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*7,139*	*204*	1,469	49
Housing Units	*2,988*	*85*	967	32
Population-Based Land Demand	*555.2*	*15.9*	236.9	7.9
Employment-Based Land Demand	*243.0*	*6.9*	14.7	0.5
Right-of-Way (Acreage)	*200.5*	*5.7*	51.5	1.7
Additional Acres Required	*998.7*	*28.5*	**303.1**	**10.1**
2015 USA Size (Acres)			3,409.1	
Undeveloped Acres (2010)			452.4	

Sun Prairie				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*27,673*	*791*	16,216	541
Housing Units	*12,826*	*366*	7,620	254
Population-Based Land Demand	*2,359.5*	*67.4*	1,753.1	58.4
Employment-Based Land Demand	*1,472.0*	*42.1*	259.3	8.6
Right-of-Way (Acreage)	*1,497.8*	*42.8*	495.7	16.5
Additional Acres Required	*5,329.3*	*152.3*	**2,508.1**	**83.6**
2015 USA Size (Acres)			8,846.1	
Undeveloped Acres (2010)			1,277.7	

Verona				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*11,458*	*327*	6,231	208
Housing Units	*4,399*	*126*	2,919	97
Population-Based Land Demand	*957.3*	*27.4*	721.4	24.0
Employment-Based Land Demand	*368.0*	*10.5*	1,094.2	36.5
Right-of-Way (Acreage)	*415.8*	*11.9*	560.6	18.7
Additional Acres Required	*1,741.1*	*49.7*	**2,376.3**	**79.2**
2015 USA Size (Acres)			4,434.5	
Undeveloped Acres (2010)			670.4	

Waunakee				
	2000-2035 Change	Annual Change	2010-2040 Change	Annual Change
Population	*12,572*	*359*	5,433	181
Housing Units	*5,005*	*143*	2,364	79
Population-Based Land Demand	*1,384.0*	*39.5*	658.5	22.0
Employment-Based Land Demand	*450.0*	*12.9*	171.1	5.7
Right-of-Way (Acreage)	*384.2*	*11.0*	160.8	5.4
Additional Acres Required	*2,218.2*	*63.4*	**990.4**	**33.0**
2015 USA Size (Acres)			3,937.1	
Undeveloped Acres (2010)			647.2	

Exhibit D

"Description of Labor Force Projection"

Description of Labor Force Projection 2013

Labor Force Projections

1. Start with DOA county population projections for six age groups
    a. 15-24
    b. 25-34
    c. 35-44
    d. 45-54
    e. 55-64
    f. 65 and over
2. Look at participation rate for each age group from 2009-2011 3-yr ACS data and apply that to projected populations. Assume that Labor Force Participation Rate will decline each decade of the projection period.
    a. DCRPC projection in 2003 assumed increase of 1.35 percentage points per decade
    b. LFPR has grown over the last several decades due to baby boom generation and increased participation of women in the workforce.
    c. The baby boom generation is aging out of the workforce
    d. Women's LFPR has stabilized, slightly decreasing since 1999
    e. BLS projects that overall labor force participation rate will continue gradual decrease each decade and reach 64.5% in 2020 61.7% I 2030, 60.8% in 2040 and 60.4% in 2050 (2006 projection).
        i. It peaked at 67.1% during 1997-2000. After that, rate has declined gradually to 66% in 2005.
        ii. Decrease accelerated during 2007-2009 recession and aftermath, dropping 2.4 percentage points from 2000-2010.
        iii. In 2011, BLS projects overall LFPR to decline from 64.7% in 2010 to 62.5% in 2020
        iv. Youth labor force participation decreasing due to school attendance. The decrease, especially in 16-19 yr old men, has been a major contributor to decrease in overall LFPR.
        v. Prime-aged workers 25-54 will make up a smaller share of the total labor force
        vi. Workers 55 and older are more likely to work than they were. This will slow decline in total LFPR, but participation rate is still lower than prime-aged workers.
3. Assume that same percentage of Dane County workforce will continue working in Dane County (94.7%) per WiDOA OEA 2011 report based on ACS 2006-2010 data.
4. Add % of Green, Columbia and Iowa county workers based on OEA reports, and adding an assumed increase of 2 percentage points per decade
    a. assumption of 4 points per decade in 2000 Labor Force work done by DCRPC
        i. Columbia Co increased by about 4 points 2000-2010
        ii. Iowa Co increased by about 4 points 2000-2010
        iii. Green Co increased by more than 4 points 2000-2010
    b. 2 percentage point increase takes much of growth but still keeps at least the base amount within the home county

Source of Labor for Dane County Jobs

According to Commuting Patterns data from the 2006-2010 5-yr American Community Survey (ACS) reported by the Wisconsin Department of Workforce Development (DWD) Office of Economic Advisors (OEA), 83.4% of people who work in Dane County live in Dane County. Other workers come from Columbia County (3.4%), Rock County (2.8%), Green County (1.8%), Jefferson County (1.7%), Sauk County (1.4%), Iowa County (1.2%), Dodge County (0.8%), and elsewhere.

This analysis of the future labor market for Dane County jobs will focus on employees available within the Madison Metropolitan Statistical Area (MSA). MSAs are geographical areas delineated by the United States Office of Management and Budget (OMB) based on Census Bureau data and defined as a core area containing a substantial population nucleus, together with adjacent communities having a high degree of economic and social integration with that core. The commuting patterns represent that economic and social integration. The Madison MSA consists of Dane, Columbia, Iowa and Green Counties.

94.7% of workers residing in Dane County work in Dane County. Dane County jobs are also filled by 35.8% of the workers living in Columbia County, 28.2% of workers living in Iowa County, and 27.6% of workers living in Green County.

In the 2003 analysis of the labor market, it was assumed that Columbia, Iowa and Green counties would continue to maintain their employment, but growth in the number of workers residing in those counties would be added to the labor force available for Dane County employment.

Population Projections

Population projections for each county are provided by the Wisconsin Department of Administration, Demographic Services Center (WDOA). The latest data provides population projections by age group for 5 year increments through 2040. The breakdown of age groups available in the DOA projections that are relevant for labor force analysis are in five year increments from age 15 through 89, and age 90+ (e.g. 15-19, 20-24, 25-29, etc.)

Labor Force Participation Rates

Assumptions about labor force participation rates area based on data from the American Community Survey, provided by the U.S. Census Bureau. The 2009-2011 3-yr ACS provides data for each county about labor force participation by age groups. The age groups for which ACS data is provided are different than the DOA population projection age groups, but age groups for can be combined to bring the two data sets into a close approximation. Discrepancies occur in the youngest age group, where the ACS data is provided for age 16-19 (not including 15 year olds), and in the oldest ages where ACS data combines all ages 75 and older. These discrepancies are relatively minor as they fall at the fringes of the labor participation groups. The 15 year age group should be a relatively small population group and not make a significant impact on the labor force analysis, and the differences in labor force participation for population age groups over 75 should also be insignificant in the analysis.

Assumptions About Changes in the Labor Force Participation Rate

Most of the changes in labor force growth area the result of changes in the population. The growth is also influenced by changes in participation rates. In a 2006 report, the Bureau of Labor Statistics (BLS) projected that the growth rate of the national labor force will continue to decline, with an annual growth rate of 0.6% over the

2005-2050 period. The growth rate peaked at 2.6% in the 1970's, and has decreased each decade since. While population continues to grow, the labor force participation rate is projected to gradually decline to 60.4% in 2050 from a peak of 67.1% between 1997 and 2000. The participation rate has declined every year after 2000, and was at 66.0% in 2005. When examined by age, the BLS projects declines in labor force participation among the youth (age 16-24) due to an increase in school attendance seen over the last couple of decades. The participation rate of 16-19 year olds is projected to drop from 43.7% in 2005 to 34.5% by 2050. Among 20-24 year olds, the participation rate is projected to decrease from 74.6% in 2005 to 73.1% in 2050.

The prime-aged workers, from 25-54 years old, are projected to continue strong labor force participation rates, with the participation of men projected to decrease slightly from 90.5% in 2005 to 90.2% in 2050, while women's rates are expected to increase from 75.3% in 2005 to 76.6% in 2050. Overall this age group is projected to have a 83.4% participation rate in 2050, compared to 82.8% in 2005.

The oldest workers, age 55 and over, are anticipated to have a higher labor participation rate than in the past. Due to better health and financial concerns the 55 and up group are likely to increase the labor force rate above the 62.9% seen in 2005.

A BLS report published in 2012 took into account the impact of the recession of 2007-2009 on the labor force as it provided projections for the labor force for 2010-2020. The Employment Outlook included a slow growth of the labor force as a result of decline projected in the annual growth rate, and a decrease of the labor force participation rate. Both are continuations of trends.

Labor Force participation rate by age:

25-54
Participation rates declined from 2000-2010 and are projected to decline further.
All age subgroups declining slightly.
84.0% in 2000 and 82.2% in 2010
Projected at 81.3% in 2020

16-19
Participation rates for 16-19 has declined and is projected to decline further
52.8% in 2000 and 34.9% in 2010 (bad economy resulted in more school attendance)
Projected at 26.5% in 2020

20-24
More stable than 16-19
77.8% in 2000 and 71.4% in 2010
Projected at 65.9 in 2020

55 and older
In 2020, all baby boomers will be older than 55 years
Participation rate of older workforce is increasing
Older workforce is making up a larger part of workforce, but participation rate is still significantly lower than prime working population.
32.4% in 2000 and 40.2% in 2010
Projected 43.0% in 2020

Subgroup 55-64
59.3% in 2010 and 64.9% in 2010
Projected 68.8% in 2020

Subgroup 65+
12.9% in 2000 and 17.9 in 2010
Projected 22.6% in 2020

Subgroup 65-74
19.2% in 2000 and 25.7% in 2010
Projected 31.0% in 2020

Subgroup 75+
5.3% in 2000 and 7.4% in 2010
Projected 10% in 2020

The BLS projections for LFPR by age from 2010 to 2020 and from 2005-2050 can be broadly characterized as follows:
16-19
Decrease by 8.4 points between 2010 and 2020, then down about 0.4 points per decade
20-24
Decrease by 5.5 points from 2010 to 2020, then down about 0.2 points per decade
25-54
Decrease by 0.9 points from 2010 to 2020, then down about 0.1 point per decade
55-64
Increase by 3.9 points from 2010 to 2020, then fairly stable with slight up and down over the decades
65-74
Increase by 4.4 points from 2010 to 2020, then decline slightly over the next decades
75 & over
Increase by 2.6 points from 2010 to 2020, then increasing small declines over the decades

Overall, Dane and surrounding counties generally have higher participation rates in each age group than the national average. Therefore, the assumptions used in this analysis works from the pattern established by the BLS projections, but tempers the magnitude of the changes.

The assumptions about change in the LFPR in Dane and surrounding counties used in this analysis are as follows:

16-19
Decrease by 5 percentage points from 2010 to 2020, then decrease by 0.4 points per decade
20-24
Decrease by 3 percentage points from 2010 to 2020, then decrease by 0.2 points per decade
25-54
Decrease by 0.5 percentage points from 2010 to 2020, then stabilize for the remaining decades
55-64
Increase by 2 percentage points from 2010 to 2020, then stabilize for the remaining decades
65-74

Increase by 3 percentage points from 2010 to 2020, then decrease by 0.4 percentage points per decade
75 & over
Increase by 2 percentage points between 2010 and 2020, then decrease by 0.2 points per decade

Labor force age subgroups

The following subgroups are used for participation projections. These seem to be the breakdowns with variation in participation rates. The 16-19 are participating less in favor of attending school. The 20-24 are also participating less due to more schooling, but have a higher participation rate than teens. The 25-54 age group is the core of the labor market and have a fairly consistent high level of participation. The 55-64 age group shows the start of the drop off in participation, but their rate is increasing as that age group is healthier and more active that previously. They also have more financial need to work than previous generations at that age. The 65-74 age group also is seeing increasing participation, but their rate is much lower than the 55-64 year olds. The participation rate takes another big drop after age 75, although even this group is more likely to be working than they used to be.

These breakdowns are important so that the baby boomers can be tracked through the labor force. As the baby boomers move through the age groups, their drop in participation rate will have a significant effect on the labor force.

In Dane County, it is also important to account for differences in participation of youth in the labor force because there is a larger youth population in the county.

16-19 decreasing
20-24 slight decrease
25-54 slight decrease
55-64 increasing
65-74 increasing
75+ stable

Commuting of Columbia, Green and Iowa county labor force to Dane County

In 2000, DCRPC assumed the percentage of Columbia, Green and Iowa County workers commuting to Dane County would increase by 4 percentage points per decade. The increase from 2000-2010 shows the assumption to be fairly accurate. In 2000, 32% of Columbia County workers commuted to Dane County and in 2010 it was 36%. Iowa County commuters to Dane County went from 24% in 2000 to 28.2% in 2010, and Green County exceeded the assumption by increasing from 19% to 27.6%. Due to the accuracy of these 2000 assumptions, the assumptions are continued in this analysis.

As in 2000, the percentage of Dane County workers staying in Dane County for work is expected to be unchanged from the current 2010 rate of 94.7% (it was 96.2% in 2000).

Exhibit E

"Methodology Review Summary"

Methodology Review Summary

October, 2015

Capital Area Regional Planning Commission

The constituent parts of the Capital Area Regional Planning Commission's projection methodology were reviewed by the following individuals/organizations and were developed with their consultation:

Dan Barroilhet, Demographer

Research Analyst

WI Dept. of Administration, Division of Intergovernmental Relations

David Egan-Robertson

Demographer

University of WI, Applied Population Laboratory

Jeff Greger

Planning Technician

Madison Area Transportation Planning Board

David Kanning

Transportation Planner II

Madison Area Transportation Planning Board

William Schaefer

Transportation Planning Manager

Madison Area Transportation Planning Board

Mike Slavney, FAICP

Principal Planner

Vandewalle & Associates, Inc.

Matías Scaglione, Ph.D.

Economist

Wisconsin Department of Workforce Development, Office of Economic Advisors

Higgins, Sean

From: Barroilhet, Dan - DOA <Dan.Barroilhet@wisconsin.gov>
Sent: Monday, October 26, 2015 9:50 AM
To: Higgins, Sean
Cc: David Egan-Robertson <daeganrobert@wisc.edu>
Subject: RE: CARPC Projection Methodology

Hello Sean,

As the CARPC's draft methodology summary indicates, your projections for population and households match DOA's for non-border urban service areas. For the urban service areas that straddle county borders, I have conferred with DOA's previous demographer, David Egan-Robertson, who completed DOA's population projections before I was hired. Upon reviewing the CARPC's assumptions about border-straddling urban service areas' future growth patterns, David and I agreed that the assumptions were reasonable.

We did not conduct an in-depth review of labor force or jobs projections. Please let me know if we can be of further help.

Dan Barroilhet,
Demographer, Research Analyst
WI Dept. of Administration, Division of Intergovernmental Relations
101 E. Wilson 925.08
(608) 266-1755
http://doa.wi.gov/demographics

From: Higgins, Sean [mailto:SeanH@capitalarearpc.org]
Sent: Wednesday, October 21, 2015 2:31 PM
To: Barroilhet, Dan - DOA
Subject: CARPC Projection Methodology

Hi Dan,

I was hoping that DOA could review our methodology for consistency with the DOA projection methodology. Though it is not explicitly required under NR121, I would prefer if you could send a written response just so we have a paper trail. As I mentioned in my call, our numbers are—with few exceptions—DOA's numbers. The only major difference is our inclusion of employment projections. Service area projections are the same numbers as MCDs of matching names. In cases like our Central and Northern service areas, projections are the sum of communities within the USA boundaries. Please let me know if you would like to sit down together to go over materials or if you need other information.

Regards,

Sean Higgins, AICP
Community Planner
Capital Area Regional Planning Commission
(608)283-1267

Higgins, Sean

From: Higgins, Sean
Sent: Wednesday, September 16, 2015 10:47 AM
To: Mike Slavney
Cc: Orum, Greg; Mesbah, Kamran
Subject: RE: Growth Projections

Hi Mike,

Thanks so much for bringing the timeliness-of-data issue to the forefront. Yes, it is our full intent to incorporate the 2015 data. The LUI for the County is currently underway. As we move further from the censal period and the DOA timeline the data become less and less relevant.So at this point, they are about as stale as they ever will be. We are planning to update at five year increment during the inter-censal period. The next methodology rework will occur around the same time as the freshest Census data and DOA projections. This round has been an unfortunate confluence of stale data due to staff retirement and delays in publishing these projections.

Thanks again for the input and the extra set of eyes.

Best,
Sean

-------- Original message --------
From: Mike Slavney <mslavney@vandewalle.com>
Date:2015/09/16 09:18 (GMT-06:00)
To: "Higgins, Sean" <SeanH@capitalarearpc.org>
Cc: "Orum, Greg" <grego@capitalarearpc.org>, "Mesbah, Kamran" <KamranM@capitalarearpc.org>
Subject: RE: Growth Projections

Hi Sean

I am comfortable with the methodology. I agree with all of the assumptions and steps.

However, I do have a concern about the timeframes used in the analysis. This applies to Mount Horeb, and may apply elsewhere in the County.

Specifically, between 2010 and 2015, Mount Horeb has seen a significant rebound in non-residential development that is not reflected in the 2010 land use inventory. Off the top of my head, the following projects have occurred:

- Coop expansion on the west side
- Expansion of John Deere implement store/shop on East Springdale Street
- Kwik Trip expansion at Wis 78
- New Miller's grocery store on East Springdale Street – old location has been re-occupied

- New Bank on East Springdale Street
- Car dealer expansion on East Springdale Street
- New Hotel in North Cape Commons
- New Daycare center in North Cape Commons
- New Chocolate maker / coffee shop in North Cape Commons

Due to the sharp slow-down in development prior to 2010, I think the approach could be improved by using a current (2015) land use inventory. The Village is small enough, that should not take much time. Using this data will help demonstrate to the village that you are using the most recent information that accounts for the recent rebound in development. It will also help the analysis pass the giggle test. I further note that a 2015 land use inventory is significantly closer to the 2014 employment numbers, and the 2010 land use inventory.

This may not affect employment projections, but it ought to make a difference in land use projections.

Mike

From: Higgins, Sean [mailto:SeanH@capitalarearpc.org]
Sent: Tuesday, September 15, 2015 5:59 PM
To: Mike Slavney
Cc: Orum, Greg; Mesbah, Kamran
Subject: Growth Projections

Hi Mike,

Kamran asked me to send the following information on to you so that you can look it over. Population and Households follows DOA's numbers, as they are not significantly different than those we would generate on our own.

Employment Projection Summary
Projection of employment in the Capital Area Regional Planning Commission's (CARPC) land demand methodology is based on two main elements:

- Projected labor force at the county-level, which are used as a control total, and
- Projected rate of change in employment at the ZIP code level.

1. **Projected labor force** is derived from Department of Administration's (DOA) age-sex projections for Dane and its adjacent counties. The methodology projects the employed labor force as follows:
    a. Historical labor force participation rates (LFPR) by age group at the national level are used to project future LFPRs.
        i. Based on Bureau of Labor Statistics (BLS) analysis, LFPRs are assumed to decline further from their current levels for almost all age groups.
        ii. This decline in participation is slowed to account for Dane County's higher historical LFPRs.

iii. The total working-age population projected by DOA is multiplied by its respective age group's LFPR.

iv. The total number of labor force participants is adjusted to reflect the observed trend from 1990—2010 in the number of workers residing in Dane County who also work in Dane County.[1]

v. The total from the previous step is further adjusted to reflect a 5% unemployment rate, which is held constant through the projection period.

b. For adjacent counties, the proportion of employed workers commuting into Dane County is calculated for 1990, 2000, and 2010 based on Census Flow data.

i. The change in proportion of employed workers from each county commuting into Dane County is then projected out to 2050.

ii. Each contributing countys' total population aged 16—75+ is multiplied by its rate of residents commuting to Dane County for work.

c. The totals from steps "v" of item "a" and "ii" of item "b" above are summed. *This is the total employed labor force projected for Dane County.*

2. **Change in employment** is based on 1994—2014 County Business Patterns (CBP) and ZIP Code Business Patterns (ZBP) data from BLS.

a. Observed private employment at the ZIP code level is projected out to the year 2050.

i. Data points for 2009, 2010, and 2011 are removed to control for the major drops in employment observed during the recession.

ii. Average annual increase in employment is calculated for the remaining years and projected out to the year 2050 for each Urban Service Area (USA). For those USAs with rapidly declining growth or with negative projection values at or before the end year of the projection period, employment loss is slowed. The average annual loss is halved in each successive 5-year period. This stabilizes employment levels for these communities by the year 2050.[2]

b. Government employment is calculated based on observed ratios of government employee class (local, state, and Federal) to population at the county level between 1994 and 2014.

i. Due to no appreciable change in the ratios observed, the median ratio (1994—2014[3]) of local and Federal employees to residents is used.

ii. The ratio of State employees to residents is based on the observed decrease in State employees from 1994—2014[3]. This trend is projected out to the end year of 2050.

iii. The county-wide ratio of local governmental employees to residents is applied to the total population for each USA. The ratios of state and Federal employees per citizen is applied to the total Dane County population projection and then added to government employment within the Central Urban Service Area (CUSA).

c. Totals from "a" and "b" above are summed to arrive at an employment projection for each USA.

3. **Adjustment based on County control total**—The projected change in employment numbers in section "2" above are controlled to the county's employed labor force generated in section "1."

Employment-Based Land Demand Projection Summary

Additional acres of land required to 2040 is calculated by taking the total USA employment growth (above) and applying 2014 observed proportions at the 2-digit NAICS level, i.e. "Leisure and Hospitality" is 10% of total employment. The number of new employees by industry is multiplied by an observed county-wide acres-per-employee ratio based on the 2010 Land Use Inventory and each land use category's nearest match under the NAICS hierarchy. Acreage of all industries is summed. We aren't reporting the individual industries in our tables, but below is a look into that calculation.

Mount Horeb				2010	Units	Ratio	A
Non-Residential	(Employees)						
		NAICS	Industry				
	Goods Producing	*101*		*38*	*291*		
		1012	Construction	9	*67*	*0.04*	
		1013	Manufacturing	29	*224*	*0.13*	
	Service Providing	*102*		*185*	*1,420*		
		1021	Trade, Transportation, and Utilities	51	*388*	*0.23*	
Employment		1022	Information	3	*25*	*0.01*	
		1023	Financial Activities	10	*79*	*0.05*	
		1024	Professional and Business Services	3	*20*	*0.01*	
		1025	Education and Health Services	87	*663*	*0.39*	
		1026	Leisure and Hospitality	16	*119*	*0.07*	
		1027	Other Services	16	*126*	*0.07*	
Employment-Based Sub-Total				**223**	**1,711**	**0.15**	

Let me know if you'd like clarification on the above information. I realize it might be a bit much to digest without any other background. I'm in a training tomorrow during the day, but I would be happy to talk on the phone Thursday.

Regards,

Sean Higgins, AICP
Community Planner
Capital Area Regional Planning Commission
(608)283-1267

[1] The observed trend suggests a near-constant value of around 92%.
[2] Note: This applies to *private employment only.* In some instances, the final employment number for a USA appears to fluctuate. This is due to the addition of government employment, which is a function of population growth in the CARPC projections.
[3] Excluding the years: 2009, 2010, and 2011.

Higgins, Sean

From: Scaglione, Matias D - DWD <Matias.Scaglione@dwd.wisconsin.gov>
Sent: Monday, March 03, 2014 1:04 PM
To: Weber, Barbara
Subject: Dane Projection Info Request

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Barbara,

Sorry for the long delay. We've been pretty busy lately.
I think that your assumptions are reasonable. We've been using the same assumptions for other exercises here.
Please feel free to contact me if you have more questions.
Best,

Matías

Matías Scaglione, Ph.D.
Economist
Office of Economic Advisors
Wisconsin Department of Workforce Development
Madison, WI
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Resolution CARPC No. 2015-12

Adoption of 2040 Population, Housing and Employment Projections;
Adoption of Land Demand Projections for Service Areas within Dane County

WHEREAS, the Capital Area Regional Planning Commission has adopted, amended and reaffirmed the *Dane County Land Use and Transportation Plan* and *Water Quality Plan*; and

WHEREAS, said plans have been amended through June 2015; and

WHEREAS, the *Dane County Land Use and Transportation Plan* and the *Dane County Water Quality Plan* are based on population and employment projections and associated land demands as outlined in Wisconsin Administrative Codes Chapter NR121; and

WHEREAS, population and employment projections and associated land demands are routinely updated with the availability of new Census data and using county-wide population projections from the Wisconsin Department of Administration; and

WHEREAS, population and employment projections address recommendations made by Curt Paulsen, Professor of Urban and Regional Planning at the University of Wisconsin-Madison, in his review and evaluation of CARPC land demand methodology, at the request of CARPC; and

WHEREAS, CARPC staff has followed a population and employment projection protocol with consultation with, and concurrence from, the Wisconsin Department of Administration as required by NR121.

NOW, THEREFORE, BE IT RESOLVED that in accordance with Chapter NR 121, the Capital Area Regional Planning Commission adopts the 2040 population and employment projections and associated land demand quantities shown in Table 1 (attached) as an amendment to the *Dane County Water Quality Plan* and the *Dane County Land Use and Transportation Plan.*

October 8, 2015
Date Adopted

Larry Palm, Chairperson