



**Capital Area Regional Planning Commission
2016 Annual Unified Planning Work Program**

and

2016-2021 Overall Program Design Report

Prepared by the Staff of the
Capital Area Regional Planning Commission
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Kamran Mesbah, Deputy Director, and Director of Environmental Resources Planning, who retired at the end of 2015, also contributed to the development of this work program.

WORK PLAN SUMMARY

The Capital Area Regional Planning Commission (CARPC) is an independent unit of government established by Executive Order of Governor Jim Doyle in 2007 at the request of units of local government in Dane County. The function of the Commission is to serve as the regional planning and the area-wide water quality management planning entity for the Dane County region, consistent with Wis. Stats § 66.0309 and State Administrative Code NR 121. For more information about CARPC go to www.CapitalAreaRPC.org.

CARPC prepares and adopts an Annual Work Program to guide and monitor staff activities, and for budgeting purposes. The Work Program reflects the primary functions of CARPC as a regional planning and water quality management planning agency.

Regional planning work carries out “the function and duty of making and adopting a master plan for the physical development of the region” (§66.0309(10)). Under these statutes, the Commission also “makes plans for the physical, social, and economic development of the region, consistent with the elements specified in §66.1001 [Wisconsin Comprehensive Planning statutes].”

The Community and Regional Development Planning (CRDP) Division carries out CARPC regional planning work. The Division consists of a Division Director and three Community Planners. Their work falls into the following general categories:

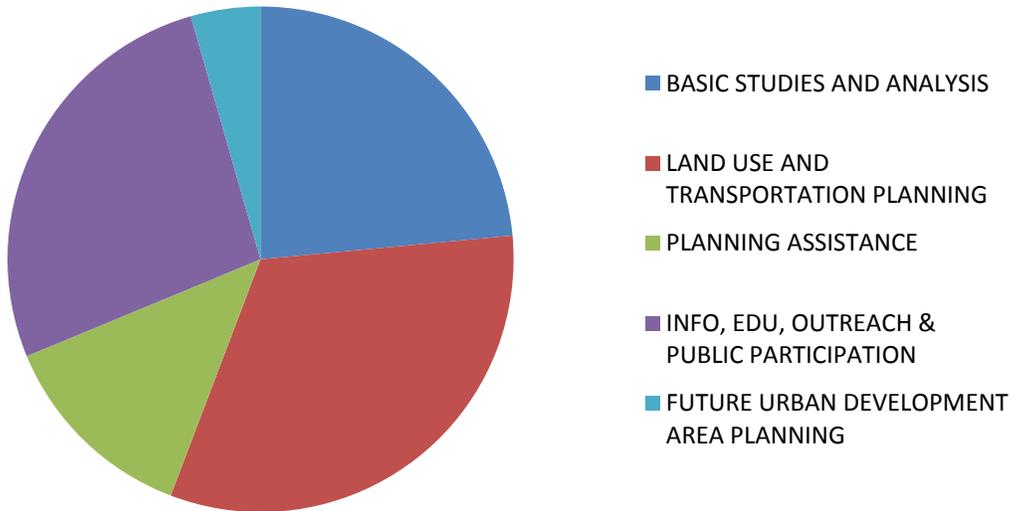
- Basic Studies and Analysis;
- Regional Master Planning;
- Planning Assistance;
- Information, Education, Outreach and Public Participation; and
- Future Urban Development Area Planning.

In 2016, about 80% of staff time in the CRDP Division is expected to focus on three functions: land use and transportation planning; outreach and public participation; and basic studies and analysis. This work allocation reflects 2016 emphasis on starting the update of the regional master plan, last completed in 1997. The plan update will involve extensive outreach and education, as well as preparation of scenario planning tools.

Land use and transportation planning also includes implementation of the current *Dane County Land Use and Transportation Plan*. Most of this implementation work involves staff analysis of applications for revisions to sewer service area boundaries, which, if adopted, amend the *Plan*.

Planning assistance includes helping units of government with planning activities and with data and information. Basic studies and analysis includes work with U.S. Census data as the area data repository, as well as analysis and studies of other data sources. It also includes maintaining and updating the land use inventory, a geographic information system of land use information in the region, and the quarterly publication of “regional trends” reports using demographic, economic, land use, and environmental data.

Community & Regional Development Planning 2016 Staff Allocation



The chart above shows the distribution of staff hours in the CRDP Division estimated to be spent in 2016. The largest number of hours will be spent on the land use and transportation plan, which will include additional work to start the update of the regional master plan. Information, education, outreach and public participation is a large category because it also includes work on the regional master plan update. Basic studies and analysis work includes the core, ongoing data work of the agency.

Water quality management planning is driven by the requirements of the federal Clean Water Act and various Wisconsin Administrative Code Chapters. State statutes outline the duties and responsibilities of area-wide water quality management planning agencies in areas of the state designated by the Governor as having “substantial water quality control problems,” as defined by the Clean Water Act.

The Environmental Resources Planning (ERP) Division carries out water quality management and related environmental planning. The Division includes a Division Director, a Senior Environmental Planner, and an Environmental Engineer.

The bulk of the ERP Division work (85% of staff time) focuses on water quality. This work includes:

- Monitoring and data gathering and analysis;
- Surface water and floodplain studies, assistance, and education;
- Groundwater studies and assistance;
- Water supply and waste water systems;
- Nonpoint pollution management; and
- Water quality planning.

Monitoring and data gathering and analysis includes coordination of the Water Quality Monitoring Partnership in the region; analysis of data from the monitoring program and other sources; and ongoing maintenance and updating of the regional hydrologic model.

Surface water and floodplain studies, assistance, and education work focuses on stream and lake water quality and wetland and floodplain protection. This work includes regularly updating technical appendices to the *Dane County Water Quality Plan*.

Groundwater studies and assistance work involves providing assistance to Dane County and other management agencies in implementing the *Appendix G: Groundwater Protection Plan* of the *Dane County Water Quality Plan*, updated in 2015 and scheduled to be adopted in 2016.

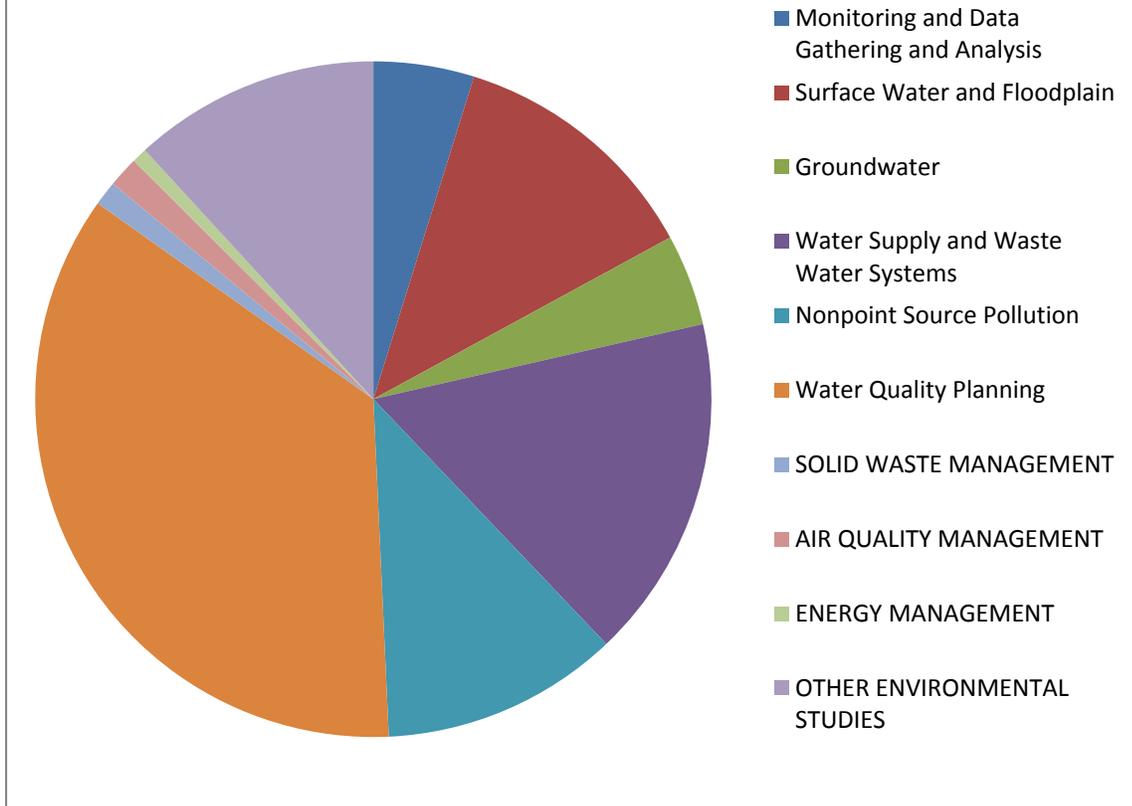
Water supply and wastewater systems work involves assisting local units of government with planning and technical review services related to public water and wastewater systems.

Nonpoint pollution management work includes reviewing stormwater management plans for new development; assisting urban units of government in developing and implementing detailed watershed plans and projects; assisting communities in implementing urban nonpoint source recommendations of the *Dane County Water Quality Plan*; and incorporating urban nonpoint source recommendations into community land use and comprehensive plans, including Future Urban Development Area (FUDA) planning activities. Staff also assist the Dane County Land Conservation Committee and state and federal agencies in implementing the agricultural nonpoint source recommendations of the *Dane County Water Quality Plan*, the Dane County Land and Water Resource Management Plan, and the State Nonpoint Source Pollution Control Program.

Water quality planning focuses on implementing and updating the *Dane County Water Quality Plan* (WQP). The WQP is the official area-wide water quality management plan for Dane County, Wisconsin. The purpose of the WQP is to provide a policy framework and guidance for federal, state, and local water quality protection programs in Dane County. Implementing the WQP includes revising and updating urban service area and environmental corridor delineations. The adoption of the update of the Environmental Corridors Report is scheduled for 2016. Water quality planning also involves lake and watershed management planning, and drainage and flood management planning and services.

ERP staff also work on **other environmental resource planning**. Because water quality does not exist isolated from other parts of the environment, staff also conduct other environmental resource planning and services. This work includes preparing Environmental Condition Reports for FUDA planning; solid waste, air quality, and energy management planning and services; and environmental impact studies.

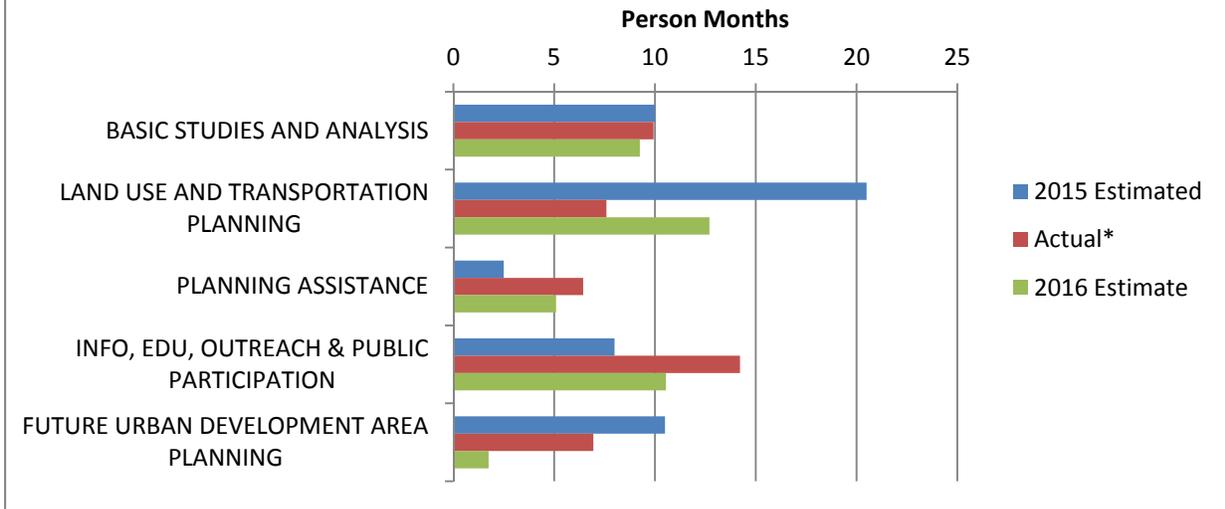
Environmental Resources Planning 2016 Staff Allocation



The chart above shows the 2016 allocation of staff work hours in the ERP Division by work elements. Staff spend the largest number of hours, about a third, on water quality planning. Other water quality management work, shown on the right half of the pie chart, comprises about half of all staff hours. The remaining 15% includes solid waste, air quality energy, and other environmental studies (most of which encompasses preparation of Environmental Conditions Reports).

Below are charts that compare 2015 estimated, 2015 actual, and 2016 estimated staff time by person hours. One person-hour is a full-time staff working for one month (170 hours). Overall, estimated and actual staff time is consistent across the years in terms of areas of emphasis. For the CRDP Division, most staff time focuses on land use and transportation planning, information and outreach, and basic studies. One change anticipated in 2016 is less time spent on FUDA planning in order to focus on the regional master plan update.

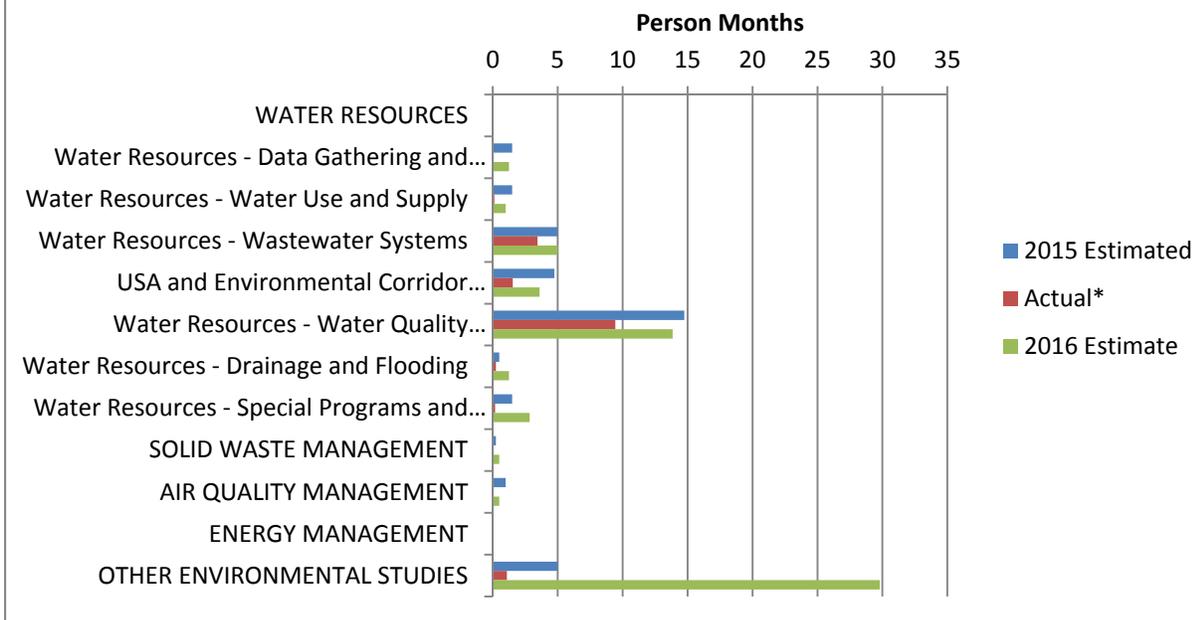
Community-Regional Development Planning Division



* Actual hours may be affected by staff turnover, paid time off, and time spent on administration.

ERP Division staff will continue to focus on water quality planning, water/waste water systems, surface water and floodplain, nonpoint source pollution work, and other environmental studies. Actual time on water quality planning was less than estimated in 2015 due to fewer Urban Service Area Amendment requests, and because updates to technical appendices of the *Dane County Water Quality Plan* were delayed until updated population and land demand projections were available. Fewer staff hours also reflects turnover and temporary vacancies in the Division.

Environmental Resources Planning Division



* Actual hours may be affected by staff turnover, paid time off, and time spent on administration.

Summary Work Program Table

The table below presents 2015 estimated, actual 2015, and 2016 estimated person months for CARPC staff.

NAME	Person Months		
	2015	2015	2016
	Estimated	Actual	Estimated
COMMUNITY AND REGIONAL DEVELOPMENT PLANNING			
BASIC STUDIES AND ANALYSIS	10.0	9.9	9.6
LAND USE AND TRANSPORTATION PLANNING	20.5	7.6	12.9
PLANNING ASSISTANCE	2.5	6.4	5.1
INFO, EDU, OUTREACH & PUBLIC PARTICIPATION	8.0	14.2	10.6
FUTURE URBAN DEVELOPMENT AREA PLANNING	10.5	6.9	1.3
<i>TOTAL COMMUNITY/REGIONAL DEVELOPMENT PLANNING</i>	<i>51.5</i>	<i>45.1</i>	<i>39.3</i>
ENVIRONMENTAL RESOURCES PLANNING			
WATER RESOURCES MANAGEMENT PLANNING			
Water Resources - Data Gathering and Analysis	1.5	0.1	1.3
Water Resources - Water Use and Supply	1.5	0.1	1.0
Water Resources - Wastewater Systems	5.0	3.4	5.0
USA and Environmental Corridor Delineation	4.8	1.5	3.6
Water Resources - Water Quality Planning	14.8	9.4	13.9
Water Resources - Drainage and Flooding	0.5	0.2	1.3
Water Resources - Special Programs and Projects	1.5	0.2	2.9
SOLID WASTE MANAGEMENT	0.3	0.0	0.5
AIR QUALITY MANAGEMENT	1.0	0.0	0.5
ENERGY MANAGEMENT	0.0	0.0	0.0
<i>OTHER ENVIRONMENTAL STUDIES</i>	<i>30.8</i>	<i>15.1</i>	<i>29.8</i>
<i>TOTAL ENVIRONMENTAL RESOURCES PLANNING</i>	<i>61.5</i>	<i>30.2</i>	<i>59.6</i>

Notes:

- 2015 estimated hours assume that, with the exception of the Deputy Director, each staff will work 12.0 person months total. No accounting was made for time off and administration.
- 2015 actual hours do not include paid time off or administration. Timesheet report hours as of October 23, 2015 were annualized through 2015 to compute annual averages. 2015 actual hours also reflect position vacancies during turnover and recruitment periods, especially in the Environmental Resources Planning Division
- To strive for greater accuracy, 2016 estimated hours do not include time off or administration.
- Administration and time off person hours (PH) estimated for 2016 are 20.4. This includes 12.0 person hours for the Administrative Services Manager, 4.0 PH for the Deputy Director, 1.0 PH for all full-time staff, and lower, pro-rated PH for part-time staff.

CARPC WORK PROGRAM

The work program of CARPC is divided between two divisions: the Environmental Resources Planning Division and the Community and Regional Development Planning Division.

Community and Regional Development Planning Division

Community and Regional Development Planning work activities are dominated by the required elements of the State Smart Growth Law, the required elements of the regional master plan, required work associated with analyzing data from the Census and Land Use Inventory, and continuing work associated with the Future Urban Development Area planning. Additional work includes urban design, density, redevelopment, and infill studies; local and regional planning assistance services and projects; project notification and consistency review; and public information and involvement.

Basic Studies and Analysis

Land Use Inventories and Development Monitoring (Element 111). Work in 2015 included completing the analysis of data to derive regional growth and development trends. Ongoing work includes infill and redevelopment analysis in ongoing FUDA project areas. Work in 2016 includes the update of the inventory based on the 2014 aerial photography.

Results: Land use inventory data will be analyzed. The inventory will be updated with 2014 aerial photography. Additional analysis of Census data and growth and development trends are included to track the impact of various policies and planning activities.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	2.5	1.5	2.95	2	2	2	2
Intern Person-months	1	1	1	1	1	1	1

Person Months: To increase ease of understanding, the CARPC work plan presents staff time in “person months.” A person month represents one staff person working full time for one month or 170 hours. Twelve person months equals one full-time staff person.

Demographic, Economic and Physical Features Studies (Element 112). Staff will continue to review, evaluate and disseminate data from the Census and other sources. Physical features mapping and analysis will be provided as needed for local assistance, FUDA planning and other special projects. Staff perform economic analysis using EMSI software as part of a statewide contract between Wisconsin Economic Development Authority and the Association of Wisconsin Regional Planning Commissions. Work will include analysis to support the regional visioning and planning conducted for the update of the regional development framework.

Results: Information analysis and dissemination, physical features information, and economic analyses using EMSI Developer software.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	5	5.5	4.0	4	4	4	4

Intern Person-months	1	1	1	1	1	1	1
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Geographic Information System Maintenance (Element 113). This work includes the ongoing update of GIS layers on natural resources, land use, service area boundaries, and environmental corridors for the region. Graphic and web services will be required for this work element.

Results: Arc/Info compatible digital natural resource layers and environmental corridor delineations, land use, and service area boundaries, on the 2014 Dane County orthophotograph base for the Dane County region.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	3	3	2.5	2.5	2.5	2.5	2.5
Intern Person-months	1	1	2	2	2	2	2

Regional Master Plan

State regional planning statutes (§66.0309) state that “The regional planning commission shall have the function and duty of making and adopting a master plan for the physical development of the region.” The Dane County Land Use and Transportation Plan, or Vision 2020, is a core component of the master plan for the Greater Madison region. Vision 2020 was adopted in 1997 with minor updates in 2008, and is overdue for a major update.

Land Use and Transportation Plan (Element 121). Work activities in 2016 will continue to focus on refining and implementing Vision 2020 in the region, while also beginning the update of the regional master plan. To launch the master plan update, CARPC initiated a values study in 2015. Scheduled to be completed in 2016, the values study will identify core regional values which will guide the three-year master plan update. Update work in 2016 will include community engagement around regional visions for growth, and preparation of a scenario planning model. All Division staff will work on the framework update.

Update of the master plan will also include integration of land use and transportation planning at the regional level in collaboration with the Madison Area Transportation Planning Board (MATPB) (see Element 122 below).

Results: Values study; community engagement and expressions of regional visions; scenario modeling tools; and Steering Committee (see Element 143 below) engagement.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	2	5	5.6	12	12	12	12
Intern Person-months	1	1	1	1	1	1	1

Land Use and Transportation Plan Integration (Element 122). The regional master plan update will require coordination and integration of CARPC land use and environmental planning and MATPB transportation planning activities. This coordination and integration will not duplicate the work of the MATPB. CARPC staff will also continue to attend statewide joint conferences of Regional Planning Commissions, Metropolitan Planning Organizations and Wisconsin Department of Transportation (WDOT) and other WDOT meetings that help inform the staff about relevant transportation planning issues.

Results: A coordinated and comprehensive overall master plan for the region, to be adopted by CARPC.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0.5	1	3.75	6	6	6	6

Intergovernmental Coordination (Elements 123 and 142). This work activity is focused on the intergovernmental coordination aspects of planning as encouraged by the Smart Growth Law, and highlights the Commission’s role as an intergovernmental planning organization. Many activities under this work element would normally be undertaken primarily by the Executive Director, and would include implementation of the *Dane County Land Use and Transportation Plan*, and intergovernmental mediation work, including that needed for FUDA planning. In the absence of an Executive Director, the Deputy Director and community planning staff have been performing some of these duties. Some work also involves reviewing and commenting on proposed intergovernmental agreements, when requested.

Results: CARPC continues to provide a forum for intergovernmental communication and coordination.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0.5	1	1	2	2	2	2

Housing Element and Planning (Element 125). This work element seeks to include policies in regional plans to facilitate meeting housing needs such as affordability and preserving existing housing with emphasis on the needs of low- or moderate-income persons, plus those with special housing needs. The work element also focuses on addressing the Housing Element of the State Smart Growth Law as part of the regional master plan. Recent past work included a regional housing market and economics study through a contract with the University of Wisconsin, a market study of demand for transit-supportive housing, and a Fair Housing and Equity Assessment.

Attention to housing affordability is increasing due to growing number of people living in unaffordable housing situations (paying more than 30% of their income for housing). Work in 2016 is anticipated to respond to needs for data and analysis related to housing.

Results: Housing data and studies

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	4	1.25	0	1	1	1	1
Intern Person-months	1	1	0	0	0	0	0

Planning Assistance (Elements 131, 132, and 133)

Division staff assist local units of government with planning activities, and supply data and information on request, with special emphasis on Comprehensive Planning required by the state Smart Growth Law. In some cases a contract may be required. Work can involve preparing an entire plan or assisting in parts of a planning effort.

Work historically has also involved the review of amendments to the *Dane County Farmland Preservation Plan*, as needed. Recent work involved developing a regional farmland loss mitigation analysis.

Results: Ongoing planning assistance.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0	0.35	0.1	1	1	1	1

Plan4Health—Active Living Places (Element 134). CARPC received a Plan4Health grant from the American Planning Association (as part of a Center for Disease Control program) to promote active living (walking and bicycling) as a strategy to improve health and reduce rates of obesity. CARPC leads an inter-agency and non-profit coalition which is conducting activities in three pilot communities in the region. This work will continue through the grant period that ends in May 2016. Additional funding is being sought for continued Plan4Health work.

Results: Active Living activities that increase local capacity to improve conditions for walking and biking in pilot communities.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0	6	5	5	5	5	5
Intern Person-months	0	1	1	1	1	1	1

Information, Education, Outreach, and Public Participation

The objectives of this work are: to promote understanding, participation, and implementation of plans, policies, and programs of CARPC, through dissemination of information to public officials, government staff, stakeholder groups, and citizens, and by involving them at all stages of the planning process to obtain public response and commitment; and to create broad regional consensus and support.

Economic Analysis (Element 141) Work activities focus on collecting and providing economic data necessary for the county and communities to prepare the economic development element of the Smart Growth Law, to perform economic impact analyses using the EMSI Developer software, and to provide data necessary to evaluate regional economic trends and to assess the interrelationship between regional development policies and economic development (economic impact analysis is a required element of water quality planning). This work will be performed by a Community Planner and GIS Specialist.

Results: Research, data collection and analysis, working papers, economic trends data.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	1	2.75	2.1	2	2	2	2
Intern Person-months	0	1	1	1	1	1	1

Public Participation, Education, Information Dissemination and Outreach (Element 143). This work element includes preparation of the *CARPC Newsletter* and *CARPC Annual Report* (statutory requirement); arranging and conducting public information and outreach meetings; annual conferences; planning forums; preparation and dissemination of informational and educational brochures; maintaining and updating the CARPC websites; maintaining and expanding interaction through the use of information technology; advertising and holding public hearings; and soliciting input from stakeholders and citizens in the region. Graphic and web services will be contracted out for this work element in 2016. This work supports the public participation and outreach efforts of the FUDA process.

Work in 2015 also included outreach and engagement to prepare for the update of the regional master plan. This involved organizing events, educational materials, meetings, and formation of a Steering Committee. Work in 2016 will continue outreach for the regional master plan update.

Results: A CARPC Public Participation Program report; Annual Report (web-based); reports of regional trends; CARPC and Sustainable Communities Regional Planning Grant websites; public hearing advertisements and meetings; the annual conference; planning forums and webinars; outreach and information meetings on planning and policy issues, including FUDA planning meetings; and reports and papers related to FUDA planning.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	7.5	11.5	8.4	15	15	15	15
Intern Person-months	2	2	1	2	2	2	2

Future Urban Development Area Planning (Element 150)

FUDA is a collaborative, locally-driven effort among neighboring jurisdictions and the Capital Area Regional Planning Commission. The purpose is to protect vital natural resources, promote efficient development, and preserve farmland through cooperative planning for long-term growth. FUDA provides additional resources that local communities may use to update their comprehensive plans.

Work in 2016 will complete the Southeast Madison area FUDA process. This involves completion of the Environmental Condition Report that assesses existing conditions for the City of Madison’s growth area to some of its eastern borders. Additional FUDA projects are not anticipated in 2016 in order to focus on the update of the regional master plan.

Results: Completion of the Southeast Madison Environmental Condition Report.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	11	7	1.25	1.5	1.5	1.5	1.5
Intern Person-months	3	2	0	1	1	1	1

Environmental Resources Planning Division

The primary functions of the ERP Division are to work with communities within the region to develop and implement plans to protect the natural resources of the region and improve the quality of natural systems where they have been degraded by human activities or could become degraded based on current trends. The bulk of Division work focuses on water quality management planning. The remaining work is divided among solid waste, air quality, energy, and other environmental studies.

Water resources planning activities are driven, in large part, by the requirements of the federal Clean Water Act and Wisconsin Administrative Codes that implement the Act.

Water quality planning activities are driven by the requirements of the federal Clean Water Act (CWA) and Wisconsin Administrative Code Chapters NR 121, NR 108, SPS 382, and Ch. 200, State statutes. Collectively, these rules outline the duties and responsibilities of area-wide water quality management planning agencies in areas of the state designated by the Governor as having “substantial water quality control problems” (per CWA).

The objective of water resources planning is to develop policies and carry out programs which address and alleviate the region’s water resources problems and identify future needs.

Water resources planning follows the two-pronged approach of resource protection and cost-effective pollution control. Resource protection recognizes that land and natural resources perform critical environmental and life-support functions for wildlife, and important economic, social, and recreation benefits to residents and visitors. Resource protection work elements focus on increasing our understanding of natural water (hydrologic) systems through monitoring, research, analysis, reporting, and commenting. This knowledge is critical to crafting plans and strategies to protect resources. Pollution prevention elements focus on minimizing human impacts on natural systems in order to maintain and increase the physical, chemical, and biologic health of water resources.

Monitoring, Data Gathering and Analysis

Monitoring Program (Element 312). CARPC is a water monitoring partnership coordinating agency for the U.S. Geological Survey. In this role, in cooperation with various local, state and federal agencies, CARPC sponsors and coordinates a countywide water resource monitoring program. Partner agencies collect information, such as stream chemistry and habitat, and insect and fish populations, as well as public and private well water monitoring results. The information characterizes water quality conditions, trends, and problems in water bodies throughout Dane County. These characterizations are the basis for much of the water quality planning and management in the county. CARPC staff develop program descriptions, and contracts and agreements among partners. This ongoing work is performed by the Senior Environmental Planner.

Results: Cataloged and filed water quality data. Summary report of recent water quality data is posted on the CARPC website.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0.5	0.5	0.25	0.25	0.25	0.25	0.25

Data Analysis (Element 313). Work activities include cataloging, filing, and analyzing water quality and flow data obtained through the cooperative monitoring program. A summary report of available data and information is published and distributed to cooperators, and updated water quality data are incorporated in the *Dane County Water Quality Plan*. This work is performed by the Senior Environmental Planner with intern assistance.

Results: Cataloged and filed water quality data. A summary report of recent water quality data is posted on the CARPC website.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	1	1	1	1	1	1	1

Intern Person-months

1

0

Regional Hydrologic Modeling and Management Program (Element 327). The Model has been an important tool for groundwater planning and management for over a decade. In 2015 the Model was updated to provide new information and management tools to better address the more difficult questions being asked today regarding groundwater sustainability and interaction between ground and surface water. Ongoing work activities include using computer models to conduct management proposals and hydrologic impact evaluations requested by participating agencies. Work in 2016 will include modeling to support update of the regional master plan.

Results: Provide assistance including groundwater modeling and mapping services.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	1	0.5	0.85	1	1	1	1

Surface Water and Floodplain Studies, Assistance and Education

Stream and Lake Water Quality Evaluation and Management (Element 321). This work involves preparing studies and publishing reports on surface water quality conditions in the region. The information is presented in *Appendix B: Surface Water Quality Conditions* of the *Dane County Water Quality Plan*, last updated in 2012.

Ongoing work includes assisting Wisconsin Department of Natural Resources (DNR), Dane County departments, and the Lakes and Watershed Commission in lake and stream studies and evaluations; assisting Dane County with the *Lakes and Watershed Implementation Plan*, in stream and lake management planning and implementation projects, and developing and submitting applications for lake management and river protection grants.

Staff also engage in public information and education efforts related to the Yahara Lakes and other streams and lakes, including presentations to groups and organizations, distribution of brochures and summaries, and posting of materials on the CARPC website. Staff provide assistance to private and citizen groups in evaluating stream and lake water quality and use problems, and in promoting solutions and approaches to those problems. Work in 2016 will include data analysis as part of the process to update the regional master plan.

Future work includes integration of water quality considerations in the *Parks and Open Space Plan*.

Results: Complete water quality and aquatic habitat survey reports, and provide assistance to various units of government and groups. Generate information and education materials and presentations.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	1	1	1	2.5	2.5	2.5	2.5
Intern Person-months	0	0	0	1	1	1	1

Wetland and Floodplain Protection (Element 322). Wetland protection and restoration is an important component of water quality planning. This work involves providing assistance to local units of government in identifying priority wetlands and floodplains for protection; assisting in drafting and revising wetland and floodplain protection ordinances; reviewing and commenting on Corps of

Engineers 404 permit applications for wetland filling; and reviewing County zoning and Board of Adjustments cases for wetland and floodplain impacts.

Work in 2016 includes continuing work on the development of a wetland protection and restoration plan as a technical appendix of the *Dane County Water Quality Plan*. The purpose of the plan will be to identify and recommend policy and management practices for the protection and restoration of wetlands. This can also help reduce the impacts of development and agriculture on water quality and quantity, as well as reverse the historic losses and degradation of wetlands. The wetland protection framework will be undertaken in 2017 after the DNR has completed its publication of available data on wetlands. Work in 2016 will also involve data analysis as part of the process to update the regional master plan.

Results: Wetland impact evaluation and comment, wetland protection assistance to units of government and groups, and policy and program research and recommendation.

	2014	2015	2016	2017	2018	2019
Estimated Staff Person-months	2	2.25	2	4	4	4

Groundwater Studies and Assistance

Groundwater Protection (Element 323). This work involves providing assistance to Dane County and other management agencies in implementing the *Appendix G: Groundwater Protection Plan* of the *Dane County Water Quality Plan*, updated in 2015 and scheduled to be adopted in 2016. This assistance includes evaluating land use, siting and zoning decisions with regard to groundwater impacts.

CARPC participates with other agencies in conducting local groundwater quality studies and evaluations for particular critical areas, and for specific major siting or development proposals in Dane County. CARPC staff will use the improved recharge component of the current groundwater model, completed in 2008 by the Wisconsin Geological and Natural History Survey, to evaluate groundwater quantity susceptibilities and improved recharge opportunities, and develop policies and programs based on the new recharge data. Work in 2016 will also involve data analysis in support of the regional visioning process and associated scenarios. This work will be done by the Senior Environmental Planner.

Results: Provide assistance, including groundwater modeling and mapping services. Analyze the groundwater recharge data developed in 2008, and include results in groundwater policies and programs. Adoption of the updated regional *Groundwater Protection Plan*.

	2014	2015	2016	2017	2018	2019
Estimated Staff Person-months	3.25	2	1.25	2.25	2.25	2.25

Water Supply and Wastewater Systems

Water Supply Systems (Elements 314 and 315). The Senior Environmental Planner and Environmental Engineer provide planning and technical assistance related to water supply systems to local units of government and others, based on the *Regional Hydrologic Study* and ongoing Regional Hydrologic Modeling and Management Program. Additional future planning assistance may be needed for the Great Lakes-St. Lawrence River Basin Water Resources Compact pertaining to public water service area planning.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0.5	0.5	1.0	3	3	3	3

Wastewater Systems (Elements 316, 317, and 319). The Environmental Engineer and the ERP Director assist with planning and technical analysis for public and on-site wastewater systems.

Public Systems:

Staff provide population and flow forecasts to Madison Metropolitan Sewerage District (MMSD) and other agencies involved in wastewater facilities planning or studies. Staff review wastewater treatment facilities plans and studies; participate in interagency meetings and advisory committees; review, analyze and comment on [Compliance Maintenance Annual Reports \(CMAR\)](#) reports, Wisconsin Pollutant Discharge Elimination System (WPDES) permits, and MMSD annexations; and conduct public meetings and hearings on point source *Dane County Water Quality Plan* revisions. The *Point Source Inventory and Analysis* update (App. C of the *WQP*) is scheduled for adoption in 2016.

Staff review all public and private sewer extensions (estimate 120 per year) for consistency with plans, service areas, and conditions of approval; participate in public meetings, hearings and committees related to point source issues; and review point source related legislation and administrative rule changes.

2017 activities include an update of the MMSD Collection System evaluation to plan for future wastewater collection system capacity needs, based on the official 2040 population forecasts and employment growth, as well as estimated population projections for 2070. Work in 2016 will also include analyses as part of the process to update the regional master plan.

On-Site Systems:

Staff assist in developing facilities plans or proposals for specific priority problem areas of development served by on-site systems, or for areas with failing on-site systems. The *On-Site Wastewater Systems Management Report* (Appendix I of the *Water Quality Plan*) was updated in 2013.

Results: Data and review comments on facilities plans, WPDES permits, MMSD annexations, analyses and archiving of CMAR Reports; update of Appendix C; and special point source studies. Sewer extension reviews (120 expected in 2016), review comments and hearing testimony related to point source issues.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	5.75	5.0	5.0	7	5	5	5
Intern Person-months	2	0	0.5	2	1	1	1

Nonpoint Pollution Management

Activities address pollution impacting water bodies from disperse urban and agricultural sources.

Urban Nonpoint Source Management (Element 320). 2016 work activities include reviewing stormwater management plans for new development for consistency with the conditions required by the *Dane County Water Quality Plan*. Additional activities include assisting urban units of government in developing and implementing detailed watershed plans and projects; assisting communities in implementing urban nonpoint source recommendations of the *Dane County Water Quality Plan*; and incorporating urban nonpoint source recommendations into community land use and comprehensive

plans, including FUDA planning activities. Provide technical assistance to communities in reviewing site development stormwater plans for water quality impacts, and implementing WDNR and U.S. EPA stormwater permit requirements. Work on this element is projected to increase due to work on the update of the regional development framework in 2016 and beyond, and the as part of the process to update the regional master plan.

Results: Analyze data and review comments on watershed plans, projects, ordinances, and site development plans for water quality impacts.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	2	2.5	2.5	2.5	2.5	2.5	2.5
Intern Person-months	2	0	0	1	1	1	1

Agricultural Nonpoint Source Management (Element 311). Work activities for 2015 include continuing agricultural nonpoint source assistance activities to the Dane County Land Conservation Committee and state and federal agencies in implementing the agricultural nonpoint source recommendations of the *Dane County Water Quality Plan*, the *Dane County Land and Water Resource Management Plan*, and the State Nonpoint Source Pollution Control Program, participation in and review of plans and studies relative to agricultural nonpoint source control; and participation in discussions concerning agricultural nonpoint source control issues in Dane County.

Future initiatives include integrating FUDA plans into watershed plans as an update of the Agricultural Nonpoint Source Analysis (App. E of the *WQP*). This multi-year effort will be in collaboration with the Dane County Land and Water Resources Department.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0.25	0.25	1	1	1	1	1

Water Quality Planning

CARPC conducts planning activities designed to prevent pollution of water resources. Work includes updating the *Dane County Water Quality Plan*, and implementing the plan through Sewer Service Area and Environmental Corridor delineations, lake and watershed management planning, and addressing drainage and flooding.

Water Quality Plan Update (Element 324). The *Dane County Water Quality Plan* is the official area-wide water quality management plan for Dane County, Wisconsin. The purpose of the plan is to provide a policy framework and guidance for federal, state, and local water quality protection programs in Dane County. The last update was 2004. The 2016 update is scheduled to incorporate information from the 2010 census and updates to the technical appendices of the *WQP*. A number of appendix updates are described in other work elements.

Results: In 2016 all ERP Division staff will work to complete a draft *Water Quality Plan* update.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	1.5	1	6.1	2	2	2	2
Intern Person-months	0	0	2	0	0	0	0

Urban Service Area and Environmental Corridor Delineation (Element 318). 2016 work activities include review of guidelines, and revising and updating urban service area and environmental corridor delineations to reflect revised and updated population forecasts for all urban service areas, new or revised resource information, approved site plans and plats, public open space purchases, and revised official maps and plans; preparing analysis reports, including the evaluation of impacts and mitigation measures, and conducting public hearings on all service area plan amendments and major changes to environmental corridors (estimate 10-12); and providing support data to DNR for service area and environmental corridor revisions and environmental assessments and the policies and processes related to amendments to the *Dane County Water Quality Plan*.

The adoption of the update of the Environmental Corridors Report is scheduled for 2016. The update includes the results of FUDA planning and the habitat inventory work conducted by the Restoration Ecologist. Work in 2016 includes the public comment period and adoption of the Report, which provides the guidelines and policies associated with the delineation and designation of environmentally sensitive areas in the region, consistent with NR121. Work effort is primarily by Environmental Engineer and ERP Director. Graphic and web services, provided by a consultant, will be required for this work element.

Results: Revised urban service area boundary and environmental corridor delineations, support data for environmental assessments and plan revisions, and adoption of the Environmental Corridors Report.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	4	4.75	3.6	2	2	2	2
Intern Person-months	0	0	0	1	1	1	1

Lake and Watershed Management Planning (Element 328). Work includes technical assistance to DNR or Dane County to develop detailed watershed implementation and stream or lake management plans for specific priority water quality and water resources problems and projects or planning activities. Contracts may be necessary for some activities.

Results: Technical assistance on detailed implementation plans and proposals.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	1	1	2	2	2	2	2

Drainage and Flood Management Planning and Service (Elements 325 and 326). 2016 work activities include providing limited assistance to communities in addressing storm runoff and drainage issues associated with intergovernmental drainage and runoff problems, erosion control and local planning assistance work by the Environmental Engineer. Work on the update of the regional development framework in 2016 and beyond is expected to increase staff work in this category.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0.5	0.5	1.25	1.25	1.25	1.25	1.25

Other Environmental Resources

CARPC staff also provide, to varying degrees, planning and services related to solid waste, air quality, energy, and environmental condition reports for FUDA planning. Some of the work elements in this category formerly represented a larger part of CARPC's work plan. While some now comprise less staff

time, they are included in the work plan in order to present the full spectrum of environmental resources planning needs in the region.

Environmental Conditions Reports for FUDA Planning (Element 353).

Division staff collection of environmental resources and community data and materials for the preparation of Environmental Condition Reports. Work includes screening and collecting natural resources information (presence and condition) in study areas surrounding existing urban service areas in Dane County. Each Environmental Conditions Report includes an analysis and presentation of available environmental, natural resource, infrastructure and cultural resource data for each study area. The CARPC Environmental Resources Technical Advisory Committee may be involved in the development of the technical details or metrics associated with each item (e.g., surface and groundwater resources, wildlife habitat, etc.). The reports will also include the identification of mitigation measures, applicability, effectiveness, and limitations. Work in 2016 will also include analyses supporting the regional visioning process and associated scenarios. Work effort involves primarily the Senior Environmental Planner and the Division Director.

Results: Facilitate and promote deliberations by CARPC Environmental Technical Advisory Committee and communicate proposed policies and criteria to the full Commission for consideration and approval. Complete Environmental Condition Reports for existing USAs. Coordinate with work conducted under element 150 of the Community and Regional Development Planning Division.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	2.5	4.5	3	3.5	3.5	3.5	3.5
Intern Person-months	1.5	1	0.5	1	1	1	1

Solid Waste Management Planning and Service (Elements 329 and 330). This work serves to develop and establish a long-range solid waste management and recycling system for the region that will serve the needs of urban and rural residents and will be economically and environmentally sound, as an element of the *Water Quality Plan*. In the past, this work included development and adoption of a *Dane County Solid Waste Plan*, a *Dane County Recycling Plan*, and provision of technical assistance to Dane County and local governments in solid waste management, recycling and disposal activities.

Currently staff provide technical assistance to these planning efforts, which are led by other agencies. The ERP Division Director and the Environmental Engineer help with recycling initiatives, landfill siting issues, and disposal of septage and other residual wastes. 2016 work involves providing technical assistance and review to the WDNR through reviews of WPDES permits and CMAR reports regarding land application of biosolids from wastewater treatment plants and septage haulers in the region.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0.25	0.25	0.5	0.5	0.5	0.5	0.5

Air Quality Management Planning and Services (Elements 331 and 332). The objective of this work is to incorporate air quality management considerations into the environmental and comprehensive planning programs of the Commission, and to consider the impact of increased concentrations of greenhouse gases on natural resources and potential approaches to addressing these impacts.

This work, conducted by the ERP Director, includes incorporating consideration of air quality concerns into project and environmental impact reviews and comprehensive regional and community plans,

reviewing proposed WDNR air pollution permits, and providing air quality information to interested governments and parties as requested.

Should resources be available, future planning initiatives include the evaluation of the inter-relationship between regional plans and climate change and potential approaches to local reductions in discharge of greenhouse gases. This climate change analysis would be a technical appendix of the WQP. Work conducted to implement the goals of the Sustainable Communities Regional Planning Grant, conducted by Dane County, is generating data and considerations for this work.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0	0	0.5	0.5	0.5	0.5	0.5

Energy Management Planning and Services (Elements 341 and 342). The objective of this work is to encourage comprehensive programs for sound management of the region’s energy resources and to encourage conservation through low-cost, practical measures, with special emphasis on the impact of energy production on natural resources and potential approaches to addressing these impacts. Previous work included development of energy conservation manuals for local governments, and developing energy audits and recommendations for governmental facilities. Some work is anticipated beginning in 2017 to address energy issues related to the process to update the regional master plan.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0	0	0	0.25	0.25	0.25	0.25

Environmental Impact Studies (Element 351). Staff review and evaluate environmental assessments and impact statements for consistency with regional plans; and attend meetings and prepare and present comments and testimony as needed. Assist Dane County and local communities in obtaining and evaluating environmental impact information for projects or proposals in their jurisdiction.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0.5	0.5	0.5	0.5	0.5	0.5	0.5

Other Special Studies (Element 352). Provide limited service and support in special studies or reviews not elsewhere categorized (such as electric utility plans, transmission line siting, dog-track siting, etc.); attend meetings and prepare and present testimony and supporting materials as necessary. Review and monitor proposed legislation and participate in committees and discussions related to general environmental issues. No work is planned in this area for 2016.

	2014	2015	2016	2017	2018	2019	2020
Estimated Staff Person-months	0	0	0	0	0	0	0

Additional Environmental Resources Initiatives

The following are important initiatives that should be pursued as staff time and funding become available in future years.

- Regional sustainability vision/mission/plan as a technical appendix of the *Water Quality Plan* and the Land Use and Transportation Plan. Part of this work was undertaken as part of the HUD

Sustainable Communities Regional Planning Grant and work on developing the Capital Region Sustainable Communities Consortium.

- Update of *Legal and Institutional Analysis* (Appendix J of the WQP), recommended by the Policies & Criteria Advisory Group (PCAG). This update would clarify legal authority of various levels of government regarding planning, management, and implementation of various aspects of water resources protection.
- Development of climate change white papers on problem definition, and regional adaptation and mitigation strategies and measures