

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

W239 N1812 ROCKWOOD DRIVE • PO BOX 1607 • WAUKESHA, WI 53187-1607•

TELEPHONE (262) 547-6721
FAX (262) 547-1103

Serving the Counties of:

KENOSHA
MILWAUKEE
OZAUKEE
RACINE
WALWORTH
WASHINGTON
WAUKESHA



Southeastern Wisconsin Regional Planning Commission Planning Efforts for Milwaukee County

July 2016

The following provides a brief summary of work recently completed or underway at the Southeastern Wisconsin Regional Planning Commission, including both regional planning efforts and efforts for Milwaukee County and Milwaukee County municipalities.

TRANSPORTATION PLANNING

- At the request of the Milwaukee County Department of Transportation (MCDOT), the Commission is assisting the Department in the development of a bus rapid transit (BRT) line in the east-west corridor. The study includes analyses of alternative BRT alignments and concepts for BRT facility design, including reserved lanes, stations, traffic signal treatment, and costs. The Cities of Milwaukee and Wauwatosa and the Wisconsin Department of Transportation are working with the MCDOT and the Commission on this effort, along with MCTS's planning consultant, AECOM.
- Prepared, at the request of the County Board Chairwoman, a report for Milwaukee County that analyzed the impact of the Milwaukee Streetcar Phase 1 and potential future extensions on the operations, funding, and revenues of MCTS.
- Prepared for the City of Wauwatosa a report on roadway design and streetscaping improvements to improve transit amenities and operations that could be considered as part of the 2016 reconstruction of W. State St. through the Wauwatosa Village area.
- Assisted Milwaukee County in avoiding significant reductions in transit service and increases in fares by encouraging use of Federal Highway Administration Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds (\$12.7 million in 2012-2014, \$17.2 million in 2015-2018, and \$4.8 million in 2019-2020) to convert local bus routes to express bus routes.
- Serve as the Region's Metropolitan Transportation Planning Organization (MPO) and prepare and maintain the up-to-date Federally-required regional transportation plan and transportation improvement program and ensure meeting all necessary Federal transportation planning and programming requirements to permit the continued use of U.S. Department of Transportation (USDOT) funds on Milwaukee County streets and highways and MCTS. Annual USDOT funding within Milwaukee County is approximately \$200 to \$400 million annually.

- Continued work on a major review, reevaluation, and update of the regional transportation system plan, being prepared in conjunction with an updated regional land use plan. That plan—called VISION 2050—is intended to provide a vision for, and guide to, the development of the Region’s land and multimodal transportation system for over 30 years into the future. The new plan—expected to be completed in mid-2016—will replace the existing year 2035 regional land use and transportation system plans, and will serve as a guide to land and transportation system development to the year 2050. The periodic (every 10 years) major reevaluation of the regional transportation plan, incorporating new U.S. Census population, employment, and travel survey data and maintaining a minimum 20-year future timeframe, is essential to State and local governments continuing to obtain highway and transit project funding from the USDOT.

To prepare VISION 2050, Commission staff initiated a visioning and scenario planning process in 2013, intended to identify a long-range future vision for land use and transportation for the Region. Substantial work was previously completed for the VISION 2050 process, including three sets of interactive public visioning workshops in each county of the Region in October and December of 2013 and September 2014 (in Milwaukee County, these workshops were held at the War Memorial Center). Concurrent workshops were also held by eight partner community organizations targeted at their constituents, with the purpose being to reach and engage minority populations, people with disabilities, and low-income individuals. Workshop activities were also made available on the VISION 2050 website (www.vision2050sewis.org). The Commission also contracted with the Department of Economics and the Center for Urban Initiatives and Research at UW-Milwaukee to conduct a telephone survey in the fall of 2013. The survey asked randomly selected residents in the Region about their land use and transportation preferences for the future, with a similar survey made available on the VISION 2050 website. Staff also prepared *Guiding the Vision*, released in June 2014, which presented the preliminary vision for land use and transportation that guided the VISION 2050 process. This initial vision was expressed through a series of Guiding Statements developed to reflect the key values and priorities provided through the initial visioning activities. Staff also developed and compared a series of five conceptual land use and transportation scenarios, intended to represent a range of possible conceptual futures, which were the focus of the third series of public workshops held in the fall of 2014.

During the last year, staff considered input on the scenarios as they developed and evaluated three detailed alternative land use and transportation system plans. The alternative plans were the focus of the fourth round of public workshops in the fall of 2015. A 20-page booklet summarizing the detailed alternatives and their evaluation was used during the workshops and is available on the website. Staff considered input on the detailed alternatives as they prepared and evaluated the Preliminary Recommended Plan (“Draft Plan”) for VISION 2050. The Draft Plan was the focus of the fifth and final round of public workshops in the spring of 2016. Another 20-page booklet summarizing the Draft Plan and its evaluation was used during the workshops and is available on the website. Staff considered input on the Draft Plan and identified possible changes that could be made to the Draft Plan for consideration by the Commission’s Advisory Committees on Regional Land Use Planning and Regional Transportation System Planning, which have guided VISION 2050. The Committees approved these changes at their June 8, 2016, meeting, and approved VISION 2050 at their June 29 meeting. The Regional Planning Commission will consider adoption of VISION 2050 at its meeting scheduled for July 28. Should the Commission adopt VISION 2050, it would then be sent to each unit and agency of government within Southeastern Wisconsin to request their endorsement. Staff intends to publish the VISION 2050 plan report and an executive summary document in the fall of 2016, and work with the affected units and agencies of government to implement the plan’s recommendations.

- Completed in November 2014 the 2015-2018 Transportation Improvement Program (TIP), which lists transportation projects intended to be undertaken by State, County, and local governments in Southeastern Wisconsin. The preparation of a TIP every two years, and amendments as needed, are a prerequisite to State, County, and local governments obtaining project funding from the USDOT, Federal Highway and Transit Administrations. In order to obtain Federal approval of the TIP and Federal funding of State, County, and local transportation projects, the Commission must conduct and document an extensive analysis of the air pollutant emission forecasts attendant to the regional transportation plan and TIP and their conformity with respect to the State Air Quality Implementation Plan. Following its completion, Commission staff has processed 13 amendments to the 2015-2018 TIP for Milwaukee County and 23 amendments for Milwaukee County municipalities. At the beginning of 2016, the Commission staff began work on an update to the TIP that will cover the years 2017-2020.

Working with the Commission's Advisory Committee on Transportation System Planning and Programming for the Milwaukee Urbanized Area (Milwaukee TIP Committee) and local governments within the Milwaukee urbanized area, Commission staff in 2015 evaluated, prioritized, and recommended projects for about \$38 million in Federal Highway Administration (FHWA) Surface Transportation Program – Milwaukee Urbanized Area (STP-M) funding. About \$24 million in 2019-2020 STP-M funding was approved for projects in Milwaukee County including one project sponsored by Milwaukee County and four projects sponsored by Milwaukee County municipalities.

- In 2015, Commission staff initiated work with the Wisconsin Department of Transportation (WisDOT) and Wisconsin Department of Natural Resources (WDNR) on the evaluation of candidate projects for about \$15 million in years 2019-2020 Federal Highway Administration Congestion Mitigation and Air Quality Improvement Program (CMAQ) funding. The Commission, with guidance from its TIP Committees, WisDOT, and the WDNR, has developed a procedure to select projects for CMAQ funding. As part of the procedure, the staff of the Commission, WisDOT, and WDNR independently rated each candidate project seeking CMAQ funding. The three agencies along with the Chairs of the TIP Committees then considered the results of application of the three rating procedures to develop a listing of projects recommended for CMAQ funding. The listing of recommended projects was first presented to the WisDOT Secretary for his consideration and approval. The projects recommended for funding were then reviewed and approved by the TIP Committees (including the Milwaukee TIP Committee) at a meeting held on April 25, 2016. The projects recommended for CMAQ funding have been forwarded to the WisDOT Secretary for consideration of final agreement. About \$12 million in years 2019-2020 CMAQ funding was recommended for projects in Milwaukee County including two projects sponsored by Milwaukee County and four projects sponsored by Milwaukee County municipalities.
- In 2015, Commission staff completed work on the evaluation and selection of projects for \$1.5 million in years 2019-2020 Federal Highway Administration Transportation Alternative Program – Milwaukee Urbanized Area (TAP-MUA) funding. The TAP-MUA funding is a relatively new funding source established by the Moving Ahead for Progress in the 21st Century Act (MAP-21) Federal transportation legislation enacted in 2012 which combines the previous Federal Safe Routes to School and Transportation Enhancement funding programs. At an April 25, 2016, meeting, the Milwaukee TIP Committee considered an evaluation of the candidate TAP-MUA projects prepared by Commission staff. The project recommended for funding--a Milwaukee County project--was forwarded to WisDOT. In addition, the Milwaukee TIP Committee approved a prioritization of the remaining projects that would be considered by WisDOT in selecting projects for 2019-2020 statewide TAP funding.

- Worked with the transit operators in the Milwaukee urbanized area to distribute FTA Section 5307/5340 formula program funds in August 2015 and April 2016 among the four designated recipients in the Milwaukee urbanized area—Milwaukee, Ozaukee, Washington, and Waukesha Counties. A total of \$19,899,567 and \$20,103,578 in Section 5307/5340 funds were allocated to the area in 2015 and 2016, respectively. The funds were distributed among the designated recipients/transit operators based on revenue vehicle miles of transit service, revenue vehicle hours of transit service, revenue passengers, and passenger miles, which are reported by each transit operator to the FTA and WisDOT, with 25 percent of the urbanized area apportionment distributed using each criterion.

In addition, Commission staff worked with the transit operators in the Milwaukee urbanized area to distribute FTA Section 5310, FTA Section 5337, and FTA Section 5339 formula program funds among the four designated recipients. FTA Section 5310 funding, of which the urbanized area received \$1,160,743 in 2015 and \$1,174,967 in 2016, will be distributed using a competitive selection process managed by the Commission staff. This program is intended to support transit services that are specifically targeted at seniors and people with disabilities, and go above and beyond the requirements of the Americans with Disabilities Act of 1990. FTA Section 5337 funding for capital projects, of which the urbanized area received \$421,030 in 2015 and \$465,172 in 2016, was distributed to Waukesha County because the funds were allocated to the urbanized area due to the exclusive bus lanes located on W. Bluemound Rd. in Waukesha County. FTA Section 5339 funding for bus and bus facility capital projects, of which the urbanized area received \$2,707,708 in 2015 and \$2,724,394 in 2016, was distributed among the designated recipients/transit operators based on revenue vehicle miles of transit service, revenue vehicle hours of transit service, revenue passengers, and passenger miles, which are reported by each transit operator to the FTA and WisDOT, with 25 percent of the urbanized area apportionment distributed using each criterion.

- Assisted Milwaukee County Department of Transportation staff with administering the distribution of FTA Section 5310 funds among non-profits and units of government providing services to seniors and people with disabilities in the Milwaukee urbanized area.
- In support of preliminary engineering for highway and transit projects, the Commission provides long-range traffic forecasts to municipalities, counties, and the State of Wisconsin. Recent work has included forecasts for the Milwaukee County Bus Rapid Transit Line between the Milwaukee Regional Medical Center and Downtown Milwaukee, W. College Avenue (CTH ZZ) in the Cities of Franklin, Greendale, and Greenfield, S. 76th Street (CTH U) in the City of Franklin, S. 27th Street (STH 241) in the Cities of Franklin and Oak Creek, the IH 94 N-S reconstruction, the Zoo Interchange reconstruction, the IH 43 N-S corridor study, the IH 94 E-W corridor study, and the long-planned extension of 124th Street in the Cities of West Allis, Wauwatosa, and Brookfield, and Village of Elm Grove.
- Continued to be involved in the efforts of the Milwaukee Gateway Aerotropolis Corporation (MGAC), a non-profit organization that promotes the use of Milwaukee's General Mitchell International Airport (GMIA) as an economic driver for the Region, attempting to efficiently link air, rail, road, and shipping transportation capabilities in the communities in the vicinity of GMIA. Through MGAC, Commission staff is assisting these communities in developing and implementing a vision for future development and redevelopment of the land adjacent to GMIA.

LAND USE PLANNING

- At the request of the Milwaukee County Department of Parks, Recreation, and Culture, the Commission has assisted the Department in the development of a 10-year master plan for Milwaukee County and an update and extension to the year 2050 of the County Park and Open Space Plan. Milwaukee County has contracted with a private consultant to prepare the 10-year master plan. The 10-year master plan is expected to address park system and facility use and preferences, composite park facility level of service provided across Milwaukee County, and estimated costs of capital maintenance of Milwaukee County parks and park facilities and would propose a 10-year Capital Improvement Plan (identifying those projects to be completed over the next 5 years and 10 years) which will address system maintenance, renovation, and improvements/expansion. The 10-year master plan will be documented in a separate report, and its key findings and recommendations will be incorporated into the Milwaukee County 2050 Park and Open Space Plan. The 2050 plan will include: a description of existing population, households, employment, land use, natural resources, and park and open space sites; pertinent information from the 10-year master plan; a needs analysis for park sites and facilities; a park and open space plan for the year 2050; and the actions needed to implement the plan. Work is nearly completed on the two chapters of the 2050 park and open space plan that describes existing population, employment, land use, natural resources, and park and open space sites in the County. The Commission has, and will, participate in all public engagement efforts.
- In a companion effort related to the review and update of the regional transportation plan, the Commission continued work on a major review and reevaluation of the long-range regional land use plan. Major inventory updates required in support of the new regional plan—including the regional land use, environmental corridor, and public utility inventories—have been completed. More information on the plan – called VISION 2050 – is included in the transportation section of this report.
- In May 2013, the Commission staff completed work on the preparation of a new set of projections of population and employment for the Region and its seven counties. The Commission reconsiders and extends its long-range population and employment projections every ten years, following the receipt of new population data from the decennial census along with the most current information on employment levels. The new projections are for the period from 2010 to 2050. The new population and employment projections will serve as a basis for updating and extending the currently adopted regional land use and transportation plans, along with other elements of the comprehensive plan for the Region, through the year 2050. The new projections are also available for use in county and local planning efforts.
- The Commission staff has initiated work on the updating of the regional land use inventory. The update will be based upon the new orthophotographs for the year 2015, online resources, and field checks as needed.
- The Commission staff is nearing completion on work with the MMSD in developing existing and planned data related to households, population, and land use for the MMSD planning area for use in the MMSD 2050 facility planning work currently underway.

ECONOMIC DEVELOPMENT PLANNING

- Worked cooperatively with the Milwaukee 7 (M7) and Regional Economic Partnership (REP) to prepare a comprehensive economic development strategy (CEDS) for Southeastern Wisconsin. A draft CEDS was completed and transmitted to each county in the Region for review and comment in March 2015. Presentations to the Milwaukee County Economic and Community Development Committee were made on April 13, July 28, and September 14 to review the CEDS and changes were made to address comments received from the Committee and other commenters. The CEDS was

adopted by all seven County Boards in the Region and by the Regional Planning Commission in late 2015, and was submitted to the U.S. Department of Commerce – Economic Development Administration (EDA) in January 2016.

The CEDS is intended to provide a basis for a more widespread understanding of the ongoing economic development work program in the Region and draws heavily from the “Framework for Economic Growth” report prepared in 2013 by the M7. The CEDS is also intended to meet the requirements of the EDA for regional economic development strategic planning. The County is eligible to apply for certain EDA grants intended to benefit economically distressed areas based on County Board approval of the CEDS. EDA identifies economically distressed census tracts based on unemployment rates of one percent or more above the national average, or per capita incomes 80 percent or less than the national average. About 58 percent (173 of 296) of the census tracts in Milwaukee County meet these criteria.

- In late 2014, the Commission initiated work on an inventory of existing and proposed business parks in the Region for use in Commission land use, comprehensive, and economic development planning. The information compiled by Commission staff was provided to planning or engineering staff in each city and village in the county for review in coordination with staff meetings on the MMSD facilities planning work described in the following Environmental Planning section. All but two local governments have provided review comments on the draft inventory. The final inventory will be posted on the Commission website once comments are received from all communities.
- The Commission, in cooperation with WEDC, has made Economic Modeling Specialist International (EMSI) Developer software available to County and local governments and economic development organizations. EMSI Developer is a web-based economic development tool that includes extensive industry, occupation, and workforce data, and is used in business and industry analysis and attraction. County and local economic development organizations and units of government can request SEWRPC staff to apply the software to conduct analyses. During the last 12 months, EMSI data was provided by SEWRPC to the Milwaukee Department of City Development for the Granville and South 27th Street areas and the Milwaukee Metropolitan Statistical Area (MSA).
- Provided assistance to the Village of Shorewood in managing the Village’s business incentive loan fund program.

ENVIRONMENTAL PLANNING

- Continued to support the Milwaukee County staff in preparation of an environmental assessment of the Estabrook dam on the Milwaukee River. This assessment is part of the evaluation of whether to restore or remove the dam. The SEWRPC staff updated the hydraulic model of the Milwaukee River and used that updated model to evaluate dam and fish passage alternatives developed by the Estabrook Dam Environmental Assessment Advisory Committee convened by Milwaukee County. Existing and potential alternate fish passage infrastructure design concepts were discussed with several interested parties.
- The following work was performed under the floodplain mapping program for the Milwaukee County Automated Mapping and Land Information System (MCAMLIS) Steering Committee and the Metropolitan Milwaukee Sewerage District (MMSD):
 - Continued work on developing the hydrologic and hydraulic models for the Root River watershed. The project involves mapping the ten-, four-, two-, one-, and 0.2 percent annual-probability (10-, 25-, 50-, 100-, and 500-year recurrence interval) floodplains along 28 streams in

the watershed, including the main stem of the Root River. This project involves lands in Milwaukee County parks, the Cities of Franklin, Greenfield, Milwaukee, Oak Creek, West Allis; and the Villages of Greendale and Hales Corners.

Work on the hydrologic model includes updating meteorological data, preparing land use data by sub-basin for planned year 2035 conditions, and developing flow routing information for all 28 streams, including the entire Root River main stem.

- Prepared hydraulic models of the Root River and its tributaries using the U.S. Army Corps of Engineers HEC-GeoRAS model. HEC-GeoRAS enables use of a digital elevation model, developed from the 2010 Milwaukee County LiDAR data to automate the process of developing stream channel and overbank cross section geometries and mapping floodplain limits. Draft models were developed using HEC-GeoRAS for Whitnall Park Creek and the Northwest and West Branches of Whitnall Park Creek in the Village of Hales Corners, Ryan Creek in the City of Franklin, Tess Corners Creek in the City of Franklin and the Village of Greendale, 104th Street Branch in the City of Greenfield, Unnamed Tributaries 3, 4, and 5, Dale Creek and Scout Lake Creek in the Village of Greendale, Hale Creek in the City of West Allis, and Wildcat Creek in the City of Greenfield. Continued developing the HEC-GeoRAS model of the Root River main stem, which flows through the Milwaukee County Root River Parkway in the Cities of Franklin, Greenfield, and West Allis and the Village of Greendale.
- With WDNR approval of the hydrologic model for the watershed, Commission staff updated the hydraulic model and floodplain mapping for Lyons Park Creek and Villa Mann Creek in the Cities of Milwaukee and Greenfield, Wilson Park Creek and the Kinnickinnic River in the City of Milwaukee. The hydraulic models and floodplain mapping have been submitted to WDNR for review and approval.
- Completed hydraulic modeling and floodplain mapping for the Little Menomonee River in the City of Milwaukee.
- Continued hydraulic modeling and floodplain mapping for Grantosa Creek in the Cities of Wauwatosa and Milwaukee, and Dretzka Park Creek in the City of Milwaukee.
- Contacted all the Milwaukee County municipalities to offer assistance for adoption of the completed restoration plan for the Root River watershed. The plan was completed in partnership with the municipalities and counties of the watershed (including Milwaukee County), MMSD, WDNR, the Root-Pike Watershed Initiative Network, and the Southeastern Wisconsin Watersheds Trust, Inc. The plan was developed within the framework of the 2007 SEWRPC regional water quality management plan update for the greater Milwaukee watersheds, and it focuses on water quality, habitat, recreation, and flooding issues. The plan is documented in SEWRPC Community Assistance Planning Report No. 316, *A Restoration Plan for the Root River Watershed*, Part 1: Chapters 1 - 7 and Part 2: Appendices, July 2014. To date, the City of Greenfield, Milwaukee County, and the Milwaukee Metropolitan Sewerage District have adopted the plan.
- Received the conditional letter of map revision (CLOMR) approval from the Federal Emergency Management Agency (FEMA) for the floodplain along the main stem of the Menomonee River in the approximately 8.4-mile-long reach extending from the confluence with Underwood Creek near W. North Avenue, downstream to the River's mouth at its confluence with the Milwaukee River in the Milwaukee Harbor estuary. The Commission staff created a hydraulic model of the River that incorporated numerous flood mitigation projects implemented over the last decade by MMSD and/or the Cities of Milwaukee and Wauwatosa along with projects committed to be implemented in the near future. The incorporation of those projects, representing over a decade of progress in flood mitigation,

in a single hydraulic model is a major achievement that will greatly assist the cities in administering floodplain zoning and MMSD in completing additional flood mitigation projects.

- Continued work on a Honey Creek watercourse system plan for MMSD. The plan will address flooding mitigation and stream rehabilitation in the Cities of Greenfield, Milwaukee, Wauwatosa, and West Allis. Alternatives include naturalization of the channel, structure elevation, and structure removal.
- Continued work on a Schoonmaker Creek watercourse system plan for MMSD. The plan will include conveyance, storage and open channel alternatives to address flood mitigation in the Cities of Wauwatosa and Milwaukee.
- Continued work to support the 2050 Facilities Plan for MMSD. This work includes updating floodplains and flood damages for targeted streams for 2035 land use and updated gauge and rainfall data. Streams completed to date include the Milwaukee River (Milwaukee County), Beaver Creek, Brown Deer Park Creek and Fish Creek. Work continues on the Little Menomonee River.
- Performed a scour analysis of the S. 1st Street bridge over the Kinnickinnic River for the City of Milwaukee.
- Continued participating in meetings of the Kinnickinnic Watershed Advisory Committee (WAC) to review flood control management alternatives being proposed by MMSD.
- Previously completed work on development of a watershed-based stormwater permit framework for the Menomonee River watershed communities in Milwaukee, Ozaukee, and Waukesha Counties. The project was funded by the U.S. Environmental Protection Agency (USEPA) and was conducted in collaboration with the municipalities in the watershed, USEPA, the Wisconsin Department of Natural Resources (WDNR), and MMSD. Milwaukee County; the Cities of Greenfield, Milwaukee, Wauwatosa, and West Allis; and the Village of West Milwaukee are parties to the permit. In 2014 and 2015, the Commission staff continued to participate in the meetings of the Menomonee River watershed communities as they coordinated on permit implementation.
- Continued to provide technical assistance to MMSD and its consultant in the conduct of a third-party total maximum daily load (TMDL) study for the Kinnickinnic, Menomonee, and Milwaukee River watersheds and the Milwaukee Harbor estuary.
- Provided hydrologic and hydraulic data to consultants and communities for Honey Creek in the Cities of Greenfield, Milwaukee, Wauwatosa, and West Allis; the Little Menomonee River and the Kinnickinnic River in the City of Milwaukee; the Menomonee River in the Cities of Milwaukee and Wauwatosa; Beaver Creek in the City of Milwaukee and Village of Brown Deer; and Brown Deer Park Creek in the Village of River Hills.
- Began work on the Oak Creek Watershed Restoration Plan in the Cities of Oak Creek, South Milwaukee, Franklin, Milwaukee, Cudahy, and Greenfield. The plan will focus on water quality, recreational access and use, habitat conditions, targeted stormwater and flooding issues.
- As the areawide water quality management planning agency, the Commission staff reviewed and recommended approval of 11 public sewer service extension projects, all of which were determined to be consistent with the regional water quality management plan. Those projects were located in the Cities of Milwaukee (3), Franklin (1), Greenfield (2), Glendale (1), Oak Creek (2), and Wauwatosa (2). The Commission staff also reviewed 25 private sanitary sewer extensions. Those projects were

located in the Cities of Glendale (2), Greenfield (3), Milwaukee (1), Oak Creek (6), St. Francis (1), Wauwatosa (5), and West Allis (1) and the Villages of Greendale (1), Hales Corners (2), Shorewood (1), and West Milwaukee (2).

- Continued to serve on the Burnham Canal Technical Stakeholder Committee as part of the MMSD and U.S. Army Corps of Engineers project.
- Continued to provide technical assistance for the concrete channel removal and reconstruction to improve fish passage on the Menomonee River. This Menomonee River Fish Passage project is a joint effort with MMSD, USFWS, WDNR, Milwaukee Riverkeeper, and Trout Unlimited. This project will re-establish the biological continuity between the Menomonee River, Milwaukee River Estuary, and Lake Michigan to improve fish and wildlife as well as recreational opportunities.
- Provided technical assistance and advice to Schlitz Audubon Nature Center and the Village of Bayside regarding stormwater management design concepts in the Indian Creek watershed.
- Provided technical assistance and advice to Schlitz Audubon Nature Center to assist them with a Fund for Lake Michigan grant that targets degradation of Lake Michigan direct tributary ravine streams. The wider goal is to provide a demonstration project and educational tool for other local communities. SEWRPC staff have been providing innovative design elements that enhance ecological value and reviewing construction plans.
- Presented at the Upper Midwest Stream Restoration Symposium regarding the unique ecological value of ravine streams, which are common in Milwaukee County. This annual event is sponsored by the Partnership for River Restoration in the Upper Midwest, and the location changes year to year. The 2016 event location was Milwaukee, making the topic of particular local relevance.
- Actively participated in several technical review teleconferences with the Army Corps of Engineers, MMSD, and MMSD's consultants regarding channel naturalization work on Underwood Creek just upstream of its confluence with the Menomonee River.
- Reviewed plans for the lower Kinnickinnic River channel naturalization project. Participated in several teleconferences and face-to-face meetings.
- Assisted Kelly Lake Association and City of Hales Corners with evaluation of invasive species concerns and boat launch management.
- Continued to serve on the Menomonee River Watershed Action Team Technical Advisory Committee to help identify and prioritize restoration projects and help obtain funding to address them.
- Continued to serve on the Milwaukee Estuary Area of Concern (AOC) Fish and Wildlife Technical Advisory Committee.

Environmental Field Work

Environmental Inventory/Analysis – 1 Project

Proposed Milwaukee River East Shoreline and Bluff Restoration, Recreational Trail Rehabilitation and Extensions, and Canoe Launch located between the Hubbard Park and Capitol Drive (Village of

Shorewood) – Wetland Delineation, Vegetation Survey, and Inspection for Any Endangered, Threatened, or Special Concern Species

Transportation – 3 Projects

- N. 91st Street Reconstruction between Mill Road and Good Hope Road (City of Milwaukee) – Wetland Delineation
- N. 51st Boulevard Bridge Replacement Over Lincoln Creek (City of Milwaukee) – Wetland Delineation
- S. 35th Street Bridge Replacement Over the Kinnickinnic River (City of Milwaukee) – Wetland Delineation

Park Sites – 16 Projects

- Proposed Recreational Trail Improvements at Franklin Woods Nature Center (City of Franklin) – Wetland Delineation
- Proposed Recreational Trail Extension in a Public Easement between River Park Court and South River Lane, including a crossing of the East Branch of the Root River (City of Franklin) – Wetland, Woodland, and Secondary Environmental Corridor Delineation
- Proposed Oak Leaf Trail Extension between the Root River Parkway and S. 68th Street, Including a Root River Crossing, Passing Through the Rock Sports Complex, and along Old Loomis Road (Cities of Franklin and Greendale) – Wetland Delineation
- The following vegetation surveys associated with the Oak Creek Watershed Restoration Plan:
 - Vegetation survey of the Oak Creek Parkway Bike Trail Woods (City of Oak Creek)
 - Vegetation survey of the Oak Creek Bike Trail Woods (City of South Milwaukee)
 - Vegetation survey of the Rawson Park Woods (City of South Milwaukee)
 - Vegetation survey of the Oak Creek Parkway Woods (City of South Milwaukee)
 - Vegetation survey of the Camelot Park Woods (City of Oak Creek)
 - Vegetation survey of Esch Woods (City of Oak Creek)
 - Vegetation survey of Wood Creek Woods (City of Oak Creek)
 - Vegetation survey of Falk Park Woods (City of Oak Creek)
 - Vegetation survey of Cudahy Woods (City of Oak Creek)
 - Vegetation survey of Grant Park (City of South Milwaukee)
 - Vegetation survey of Ryan Road Woods (City of Oak Creek)

- Vegetation survey of Ryan Road Woods – East (City of Oak Creek)
- Vegetation survey of Fitzsimmons Road Woods (City of Franklin)

Residential/Commercial Development Parcels – 6 Projects

- Nowak Family Trust Property at 4761 S. 35th Street (City of Greenfield) – Wetland Delineation
- Apple-Hales Corners, LLC, Property at 11940 W. Edgerton Avenue (City of Greenfield and Village of Hales Corners) – Wetland Delineation
- Wagner Family Trust Property at 3585 E. Elm Road (City of Oak Creek) – Wetland Delineation
- Jared Greanya Property at 9005 S. 11th Avenue (City of Oak Creek) – Wetland Delineation
- Brian Schoenleber Properties at 7980 and 8020 Cecily Drive (City of Oak Creek) – Wetland Delineation
- Harvest Community Church Property at 6610 and 6612 S. Howell Avenue (City of Oak Creek) – Wetland Delineation

SURVEYING AND MAPPING ASSISTANCE

The Commission has, since its inception, provided surveying and mapping services to Milwaukee County. As a part of such services, the Commission has since 1984 provided a County Surveyor for Milwaukee County. Pursuant to State Legislation, the County Surveyor is responsible for perpetuating corners of the U.S. Public Land Survey System which may be subject to disturbance, removal, or burial through construction or other activities, and for maintaining a record of the surveys required for such perpetuation. The U.S. Public Land Survey corners, as monumented by the County Surveyor, provide the basis for the conduct of all land and engineering surveys within the County. The Commission remonuments from 50 to 60 such corners annually. The surveys and remonumentation required, if performed through private contract, may be expected to cost over \$100,000 per year. Importantly, the Commission not only remonuments disturbed corners as necessary, but establishes the State Plane Coordinates and Mean Sea Level elevations for those corners through the conduct of high order geodetic surveys. This makes the resulting control survey network invaluable for public works engineering as well as for land surveying purposes.

Also pursuant to State Legislation, a copy of each land survey plat prepared by a land surveyor must be filed with the County Surveyor, and through that office made available to other surveyors, engineers, realtors, assessors, and the public in general. Approximately 900 to 1,000 such plats are filed annually with the County Surveyor.

In addition to meeting the statutory responsibilities of the County Surveyor, the Commission provides related technical assistance in survey and mapping in response to County requests. At the County's request, the Commission in 1989 prepared a detailed design plan for the creation of an Automated Mapping and Land Information System for Milwaukee County. In accordance with that design, the Milwaukee County Board created the Milwaukee County Automated Mapping and Land Information System (MCAMLIS). The exclusive work necessary to create the system was initially funded with matching grants totaling \$2.1 million from the Wisconsin Electric Power Company, Wisconsin Bell, the Wisconsin Gas Company, and the Milwaukee Metropolitan Sewerage District. The County Surveyor for

many years served as chairman of, and still serves as a member of, the MCAMLIS Steering Committee. The Commission provided the technical specifications for the creation of the foundational elements of the MCAMLIS – consisting of a horizontal and vertical control survey network, covering the entire County and the large-scale topographic and matching property boundary line maps – and administered the creation of those elements through contracts with consulting engineering firms. That administration included the conduct of the field surveys necessary for quality control of the finished control survey system and the attendant base maps. The Commission has also completed the technical analyses required to facilitate the bidirectional transformation of control survey data between the various survey datums in use by various public and private sector organizations operating within the County; and has, in response to a specific request from Milwaukee County, undertaken a technical evaluation of ability of alternative orthophotography programs to meet National Map Accuracy Standards. The Commission has, also at County request, provided special surveys such as those necessary to map hazards to air navigation that exist in the approach zones to Milwaukee County General Mitchell International Airport, and special surveys to delineate environmental corridor and flood hazard areas.

Since 1995, the Commission has assisted Milwaukee County in the acquisition of new digital orthophotography as part of the Regional Orthophotography Program with the acquisition occurring in the spring of 2015. The Commission also assists the County by providing Federal planning funds for a portion of the orthophotography and by reviewing the delivered orthophotography to ensure that it is consistent with the specifications of the regional project. The final orthophotography and oblique imagery was delivered to Milwaukee County on September 17, 2015.

In conjunction with the orthophotography project, Milwaukee County obtained digital elevation products collected in spring of 2015 to complement the imagery. The Commission coordinated and administered a regional elevation mapping project acquiring LIDAR (light detection and ranging) data, digital elevation model files, and one-foot interval contour files for Milwaukee County and four additional counties in the Region. The LiDAR scheduled due date of November 15, 2015, was significantly impacted due to contractor quality issues. The final LiDAR elevation data products were delivered to Milwaukee County on July 7, 2016.

* * *

KRY/EAL/dd

2016 Milwaukee County Annual Report (00232426.DOC)