

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 2017

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. In 2016, the study selected a locally preferred alignment which, along with several sub-alternatives, was taken out for public comment in the second quarter of 2017. Work in the third quarter of 2017 will continue on the preparation of the requisite analyses and development of the application for Federal Transit Administration Small Starts funding. The Commission will continue to assist MCDOT and the Milwaukee County Transit System (MCTS) on this initiative. 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.
- 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.
- Serves as the Region's Metropolitan Transportation Planning Organization (MPO) and prepares and maintains 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.
- Completed VISION 2050, a long-range land use and transportation plan for Southeastern Wisconsin, which was adopted by the Commission on July 28, 2016. VISION 2050 is the sixth-generation regional land use and transportation system plan for Southeastern Wisconsin, updating and extending the design year of the previous year 2035 land use and transportation plans. The periodic (approximately 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.

VISION 2050 makes recommendations to local and State government to shape and guide land use development and transportation improvement. As adopted, the plan contains a land use component, including specific recommendations and a detailed land use development pattern, and a transportation component, including recommendations and a detailed transportation system. The transportation component is comprised of the following elements: public transit, bicycle and pedestrian, transportation systems management, travel demand management, arterial streets and highways, and freight transportation. In developing the transportation component, staff analyzed the costs and revenues associated with the year 2050 transportation system and identified a funding gap for the public transit element. This gap necessitated identifying a fiscally constrained version of the recommended transportation system that meets Federal metropolitan transportation planning requirements. This Fiscally Constrained Transportation Plan includes a reduction in transit service in the Region rather than the significant improvement recommended under VISION 2050. The plan identifies possible ways to address the transit funding gap so that VISION 2050 can be fully implemented.

The five-year planning process was guided by the Commission's Advisory Committees on Regional Land Use Planning and Regional Transportation Planning, with input also provided by the Commission's Environmental Justice Task Force, Jurisdictional Highway Planning Committees for each county, and VISION 2050 Task Forces on key areas of interest. The process involved considering existing and historical land use and transportation system development and performance, preparing forecasts of future regional growth, and analyzing and evaluating a wide range of potential land use and transportation options. Broad public input from thousands of residents was also incorporated during a three-year visioning and scenario planning process, intended to identify a long-range future vision for land use and transportation for the Region. Five rounds of public workshops were held during the process, with one in each county of the Region during each round (in Milwaukee County, these workshops were held at the War Memorial Center or Global Water Center). The Commission also partnered with eight community organizations to hold individual workshops for their constituents concurrent with the public workshops. These partnerships were designed to reach and engage minority populations, people with disabilities, and low-income individuals. Workshop activities were also made available on the VISION 2050 website.

During the last year, staff prepared an approximately 70-page *VISION 2050 Summary* report providing an overview of the plan and its recommendations and conclusions. The summary was completed in December 2016 and has been widely distributed across the Region. Staff has worked to prepare the complete three-volume plan report for publication. The plan was published in July 2017, and was sent to each affected unit and agency of government requesting their consideration and endorsement.

Additional work during the last year has primarily involved developing and executing an effective strategy for communicating the plan and its recommendations across the Region. Extensive work done as part of this strategy included: launching a new VISION 2050 website (www.vision2050sewis.org), which presents the final plan recommendations and includes interactive map applications for several main elements, including land use, public transit, the bicycle network, arterial streets and highways, and freight transportation; launching a Facebook page for SEWRPC and the plan; maintaining an active Twitter account (@VISION2050SEWis) and transitioning it to a SEWRPC account (@SEW_RPC); meeting with numerous interested groups and organizations to brief them on VISION 2050; attending various events across the Region to increase awareness of the

plan; meeting with the editorial board of the Milwaukee Journal Sentinel; developing and beginning distribution of a two-page fact sheet; distributing a news release to media outlets across the Region, resulting in several news articles being published; conducting three informational sessions for the Region's State legislators; and having an op-ed published in the Journal Sentinel and Ozaukee News Graphic.

- Completed in November 2016 the 2017-2020 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 two amendments to the 2017-2020 TIP for Milwaukee County and four amendments for Milwaukee County municipalities.

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 years 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 2017, Commission staff initiated work to evaluate and recommend projects for years 2021-2022 STP-M funding. Milwaukee County submitted STP-M applications for seven projects and Milwaukee County municipalities submitted STP-M applications for 24 projects.

- In 2016, Commission staff completed 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. 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 2017, Commission staff initiated work with WisDOT and WDNR on the evaluation of candidate projects for years 2021-2022 CMAQ funding. Milwaukee County submitted CMAQ applications for six projects and Milwaukee County municipalities submitted CMAQ applications for thirteen projects.
- In 2016, 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, with two projects sponsored by Milwaukee County municipalities being selected for such funding.

- Worked with the transit operators in the Milwaukee urbanized area to distribute FTA Section 5307/5340 formula program funds in August 2015, April 2016, and July 2016 among the four designated recipients in the Milwaukee urbanized area—Milwaukee, Ozaukee, Washington, and Waukesha Counties. A total of \$19,899,567, \$20,103,578, and \$20,786,115 in Section 5307/5340 funds were allocated to the area in 2015, 2016, and 2017, 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, \$1,174,967 in 2016, and \$1,200,247 in 2017 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, \$465,172 in 2016, and \$467,717 in 2017, 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, \$2,724,394 in 2016, and \$2,091,480 in 2017, 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 public-private partnership of business leaders and local representatives from Milwaukee County and nine communities in the County focused on promoting economic growth around General Mitchell International Airport. In February 2017, the Commission staff completed a development plan for Aerotropolis Milwaukee. The plan, prepared with The Gateway to Milwaukee and MGAC, establishes a shared vision and coordinated effort to capitalize on the Airport to stimulate economic investment, promote job growth, and enhance the quality of life in the nine Aerotropolis Milwaukee communities. It is designed to be used as a reference tool for local governments and agencies to aid in decision making relative to future land use changes and strategic investments. Since the plan was completed, the Commission and Gateway staffs have been working with each of the nine communities to obtain their endorsement of the plan and to incorporate the plan's recommendations into their respective comprehensive plans, as appropriate. Six of the nine communities have endorsed the plan as of July 2017.
- Initiated work in 2016 on a traffic engineering study requested by the City of Franklin to address vehicle delay and queue length issues at the intersection of S. 51st Street and W. Drexel Avenue. Work on this project included collecting an inventory of existing conditions, evaluating the current operation of the intersection, developing and evaluating alternative operational and geometric intersections improvements to alleviate the delay and queuing of vehicles. A draft report summarizing the study effort was also prepared and provided to the City and a presentation on the study effort was given at a City of Franklin Common Council meeting in March 2017. In addition, a public information meeting was held in May 2017. A final report will be completed in August 2017.
- Assisted the City of Franklin in the review of a traffic impact analysis prepared for a proposed City of Muskego middle school with a connection to North Cape Road (CTH J).

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. In addition, work is nearly completed on a chapter that describes additional important factors that should be considered in the development of the County plan, including relevant County, local, State, and regional plans, and public input activities. 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 completed 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 served 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 continued 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 has completed 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.

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 U.S. Department of Commerce – Economic Development Administration (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 57 percent (170 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. The final inventory has been posted on the Commission website.

- 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 Riverworks Development Corporation for Milwaukee County, the Milwaukee Metropolitan Statistical Area (MSA), and the State of Wisconsin.
- Provided assistance to the Village of Shorewood in managing the Village's business incentive loan fund program.

ENVIRONMENTAL PLANNING

- Continued to support the City of Glendale, MMSD, and Milwaukee County staff in response to comments for the hydraulic evaluation of the Estabrook dam on the Milwaukee River. The SEWRPC staff updated the hydraulic model of the Milwaukee River in the area of the Estabrook dam to reflect the U.S. Environmental Protection Agency Phase 2 dredging project and a 2017 channel survey completed by MMSD. This update was prepared in response to a request from the City of Glendale Common Council regarding characterization of flooding conditions.
- The following work was performed under the floodplain mapping program for the Milwaukee County Land Information Office (MCLIO), 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 Tess Corners Creek in the City of Franklin and the Village of Greendale, Crayfish Creek and Caledonia Branch in the City of Oak Creek, Oakwood Park Tributary in the City of Franklin, 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 were conditionally approved by WDNR.

- Completed hydraulic modeling and floodplain mapping for the Menomonee River from North Avenue to the Milwaukee County line at IH 41/45 in the Cities of Wauwatosa and Milwaukee.
- Completed hydraulic modeling and floodplain mapping for Grantosa Creek in the Cities of Wauwatosa and Milwaukee.
- Continued hydraulic modeling and floodplain mapping for 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.
- 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, upper Menomonee River, Little Menomonee River, Oak Creek, North Branch of Oak Creek, Mitchell Field Drainage Ditch, and Fish Creek. Work continues on the report documenting the floodplain analysis.
- Provided support to Milwaukee County regarding the hydraulic analysis for a proposed pedestrian trail bridge over the Root River in the Village of Greendale.
- Completed a Letter of Map Revision (LOMR) submittal for Beaver Creek in the Cities of Milwaukee and Brown Deer. The LOMR was approved by the Federal Emergency Management Agency.
- Continued participating in meetings of the Kinnickinnic Watershed Advisory Committee (WAC) to review flood control management alternatives being proposed by MMSD.
- Continued to provide technical assistance to MMSD and its consultant for the implementation plan for the 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; Grantosa Creek in the Cities of Milwaukee and Wauwatosa; Ryan Creek in the City of Franklin; and Indian Creek in the Villages of River Hills, Fox Point, and Bayside.

- Began field work for the Oak Creek Watershed Restoration Plan in the Cities of Oak Creek, South Milwaukee, Franklin, Milwaukee, Cudahy, and Greenfield. The plan focuses 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 four 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 Cudahy (1), Oak Creek (2), and Wauwatosa (1). The Commission staff also reviewed 17 private sanitary sewer extensions. Those projects were located in the Cities of Greenfield (3), Franklin (1), Milwaukee (1), Oak Creek (6), St. Francis (1), Wauwatosa (2), and West Allis (1) and the Village of West Milwaukee (2).
- Supported MMSD initiatives that aim to improve aquatic habitat and ecological connectivity within the Milwaukee River between Capitol Drive and Bender Road. Attended two meetings and one field trip.
- 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.
- Continued to provide technical assistance and advice to Schlitz Audubon Nature Center and the Village of Bayside regarding stormwater management design concepts in the Indian Creek watershed and Lake Michigan direct tributary area. SEWRPC staff provided innovative design elements that enhance ecological value and reviewing construction plans.
- 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 and naturalization of the western portion of the Burnham Canal.
- Continued to serve on the Milwaukee Estuary Area of Concern (AOC) Fish and Wildlife Technical Advisory Committee.
- Participated in a Lake Michigan Monitoring Coordination Council meeting, a Great Lakes State of Stopover Symposium, and a Wisconsin Coastal Management meeting.

Environmental Field Work

Environmental Inventory/Analysis – 4 Projects

- Proposed Wauwatosa Life Sciences District at Milwaukee County Grounds (City of Wauwatosa) – Wetland, Environmental Corridor, Critical Species Habitat, and Mature Woodland Delineation

- Proposed Wetland Restoration and Stormwater Planning Projects at Schlitz Audubon Nature Center Properties (Villages of Bayside and River Hills) – Wetland Delineation
- Identification of a Population of Lesser Celandine, a Prohibited Invasive Species (City of Franklin) – Report Submittal
- Oak Creek Parkway Adjacent to Caterpillar Global Mining Facility Property (City of South Milwaukee) - Primary Environmental Corridor Evaluation

Transportation – 1 Project

- S. 60th Street Reconstruction at the Kinnickinnic River Parkway (City of Milwaukee) – Wetland Delineation

Park Sites – 2 Projects

- Proposed Snowmobile Bridge Replacement Over Ryan Creek at Franklin Park (City of Franklin) – Wetland Delineation
- Proposed Storm Sewer Replacement at Zablocki Park (City of Greenfield) – Wetland Delineation

Public Facility – 1 Project

- Proposed Estabrook Dam Removal (Cities of Glendale and Milwaukee) – Wetland Delineation

Residential/Commercial Development Parcels – 2 Projects

- Proposed Residential Development at Gerald G. Mahr Estate Property (City of Franklin) – Wetland Delineation
- Proposed Residential Development at 2205 West Dean Road (Village of River Hills) – 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. The Commission provided the technical specifications for the creation of the foundational elements – 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 latest 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 final LiDAR elevation data products were delivered to Milwaukee County on July 7, 2016.

NEW SURVEY DATUM

The Commission has, since 1964, recommended to the governmental agencies operating within the Region the creation and use of a unique system of survey control as basis for the conduct of land and engineering surveys; and, as basis for the development of automated, parcel-based land information and public works management systems within the Region. The U.S. Public Land Survey System corners within Milwaukee County have been monumented and the coordinate positions and elevations of the corners determined to a high level of survey accuracy and referenced to a unique datum.

The coordinate positions and elevations of all of the survey stations comprising the horizontal and vertical survey control network created within the Region and the attendant topographic and cadastral maps that form the foundational elements of the automated, parcel-based land information and public works management systems are based upon the North American Datum of 1927 (NAD27) and the National Geodetic Vertical Datum of 1929 (NGVD29). In the 1980s, the Federal government established new national horizontal and vertical datums. The former is known as the North American Datum of 1983 (NAD83) and the latter as the North American Vertical Datum of 1988 (NAVD88).

These actions by the Federal government caused the county land information system managers responsible for the creation and maintenance of the county land information systems within the Region, to consider the conversion of the regional survey control network to the new Federal datums. In response to requests from the county land information system managers, the Commission, in 2012 developed procedures for the conversion of the survey control system within the Region from the legacy datums to the new Federal datums. The procedures and the attendant costs were set forth in SEWRPC Memorandum Report No. 206, "Estimate of the Costs of Converting the Foundational Elements of the Land Information and Public Works Management Systems in Southeastern Wisconsin from Legacy to New Datums," October 2012. Given the high costs of the conversions and the lack of any significant attendant benefits, the Commission continued to recommend the use of the legacy datums within the Region.

Due to recent changes in survey technology, county land information system managers within the Region jointly requested the Commission to seek less costly procedures for the desired datum conversion. In response, the Commission in 2015 prepared an addendum to SEWRPC Memorandum Report No. 206 entitled, "Revised Estimate of the Costs of Converting the Legacy Datums within the Region to New National Datums," August 2015. The unique alternative procedure developed by the Commission staff was not only significantly less costly than the procedure set forth in SEWRPC Memorandum Report No. 206, but had the additional advantage of maintaining the legacy lengths of the U.S. Public Land Survey System one-quarter section lines, and the interior angles of the one-quarter sections comprising the legacy survey control network within the Region.

Accordingly, the Commission changed its long standing recommendation that the legacy datums continue to be used within the Region, recommending that the decision to convert datums be made on a county-by-county basis by the county land information system managers and the county land information councils.

On January 19 of 2017, Milwaukee County entered into an agreement with the Commission to proceed with the conversion of the legacy horizontal datum to the new Federal datum. It is expected that the horizontal conversion will be completed by the end of August of 2017.

Lastly, the Commission has also been working with the Milwaukee Land Information Office assisting them with the conversion procedures and techniques that would allow transformation of the existing base mapping data layers to the new Federal datums.

* * *