Research on Shipping Crude Oil by Rail

Commission staff recently prepared a brief paper summarizing changes in the production and transportation of crude oil in the U.S. and Canada during the past decade, the safety concerns associated with transporting crude oil by rail, and key railroad industry and government actions taken to make shipping crude oil by rail safer. Each year railroads safely transport a wide range of non-hazardous and hazardous materials through Southeastern Wisconsin, including crude oil. According to the railroad industry, the risk of an incident involving a crude oil train derailment is quite low. However, during the past decade, increasing shipments of crude oil by rail across North America—resulting primarily from increasing U.S. and Canadian crude oil production and constrained pipeline capacity—and a corresponding increase in the number of crude oil train derailments in the U.S. and Canada, raised public safety concerns.

In response to safety concerns, crude oil producers, railroads, and government agencies have taken a number of steps to increase the safety of crude oil trains, including:

- Implementing positive train control (PTC) systems
- Defining high-hazard flammable trains (HHFTs) and regulating their operation
- Implementing more robust inspections of track and train equipment
- Reducing the volatility of Bakken crude oil produced in North Dakota
- Requiring use of stronger tank cars
- Requiring assessments of the safety and security risks of existing and potential alternative routes used by HHFTs
- Improving grade crossing safety
- Ensuring first responders are prepared to respond to accidents involving crude oil trains

Learn more about our research on shipping crude oil by rail through the Region at sewrpc.org/oilbyrail.
Regional Chloride Impact Study Fieldwork Update

Winter has arrived in full force, with an array of snow, sleet, and freezing rain beginning in late January 2019. In response to these weather patterns, the communities of Southeastern Wisconsin are regularly sending out their fleets of salt and brine trucks to combat unsafe travel conditions on our roads and walkways. The full onset of winter has allowed the Regional Chloride Impact Study to gather valuable data related to winter water quality in the study streams.

Throughout the summer of 2018, staff installed monitoring stations at 37 river and stream sites. These sites were chosen according to their maximum depth, proximity to chloride sources, differences in upstream land use (e.g., urban, agricultural, or residential land), and other factors. The installed Conductivity, Temperature, and Depth (CTD) sensors have fared better than expected under the 2018-2019 winter conditions. Even when the sensors are under several inches of ice, they continue to collect continuous monitoring data. Most of the issues SEWRPC staff have experienced to date with the field monitoring equipment have occurred at stations located in agricultural areas where sediment clogs the sensors and impacts performance.

The CTD sensors are attached to telemetry units that send the data to the SEWRPC office. This allows staff to view the monitoring data from the office in near real-time, which has allowed staff to spot changing water and conductivity levels due to rainfall or snowmelt. Staff can collect water samples during or following these events. This is referred to as “event sampling”, where specific sites are chosen for sampling during high-conductance flow conditions. These collected samples are then analyzed for chloride and other major ions. Event sampling is important because it can help determine how high chloride concentrations can get at a monitoring site.

Chloride is a fairly heavy ion, which means that water containing chloride will settle to the deepest part of a lake. This can lead to chemical stratification. If the water contains too much chloride, chemical stratification could interfere with the lake’s ability to “turn over” and mix in the fall and spring. Chemical stratification can delay the mixing of oxygen into the benthic zone at the bottom of the lake, reducing the lake’s ability to support aquatic life.

As part of the Regional Chloride Impact Study, SEWRPC staff have been collecting data from six different lakes quarterly. Sampling lakes during winter has its pros and cons. It is easier to take samples when standing on solid ice instead of in a boat, which can be easily blown around by the wind. But working in very cold air temperatures can be difficult due to equipment freezing. In addition, sampling through the ice requires staff to carry all the equipment over the ice to the sampling location. Winter 2019 has also been challenging because sufficient lake ice has not been consistently present to allow staff to complete work safely. To date SEWRPC staff have completed summer, fall, and winter lake sampling for all six lakes.

Funding sources for the Regional Chloride Impact Study include the Federal Highway Administration, the Wisconsin Department of Natural Resources, the Fund for Lake Michigan, the Milwaukee Metropolitan Sewerage District, and SEWRPC.

For more information on the Regional Chloride Study, see sewrpc.org/chloridestudy.
Comprehensive Economic Development Strategy

SEWRPC is continuing a regional partnership to update the Comprehensive Economic Development Strategy (CEDS) for the Region. During 2014 and 2015, SEWRPC worked in partnership with the Milwaukee 7 (M7), Regional Economic Partnership (REP), and Wisconsin Economic Development Corporation (WEDC) to develop the Region’s first CEDS. The CEDS is designed to bring together the public and private sectors to develop a strategic plan to diversify and strengthen the Region’s economy. The CEDS also provides for a more widespread understanding of the ongoing economic development work program in the Region, which draws heavily from the work of M7.

In addition, adoption of a CEDS by a county board makes the county and local governments in the county with economically distressed areas eligible to apply for grants under the Public Works and Economic Adjustment programs administered by the U.S. Economic Development Administration (EDA). The economically distressed areas of the Region have either low incomes, high unemployment rates, or both.

The EDA programs provide funding for infrastructure projects, revolving loan funds, and business assistance programs. In addition, Federal agencies look favorably on joint/regional planning efforts when reviewing other grants for proposed projects. The current CEDS was adopted by each of the County Boards in the Region and the Commission in 2015. The new CEDS will need to be adopted by December 2020 for county and local governments to remain eligible to apply for funding under the EDA programs. More information about the CEDS can be found on the Economic Development page of the SEWRPC website at sewrpc.org/econdev.

Washington County Multi-Jurisdictional Comprehensive Plan

SEWRPC has been working with the Washington County Planning and Parks Department and 13 partnering communities since the fall of 2016 on a major update to the Washington County Multi-Jurisdictional Comprehensive Plan. The County plan is being updated from a design year of 2035 to a design year of 2050 to meet the 10-year update requirement of the State comprehensive planning law. The effort includes a full update of the comprehensive planning data and maps from all nine elements of the year 2035 plan. In addition, the comprehensive plan goals, objectives, policies, and programs have been renewed to align with the County vision, mission, and five strategic goals for providing its core services.

The planning process has been guided by the Washington County Multi-Jurisdictional Comprehensive Plan Advisory Committee, which consists of members representing each of the 13 partnering communities and other natural resource and development interests, and the Land Use and Planning Committee of the County Board. A public hearing was held on the plan update in February and the County Board is expected to consider the plan update for adoption in April.

SEWRPC also provided partnering communities with four options to assist with undertaking their 10-year plan updates. Option 1 was to reaffirm the existing plan without change. Option 2 was a minor plan update with a focus on updating the land use plan map. Option 3 was a plan update with a focus on updating the land use plan map and some key planning data. Option 4 was a full update of the comprehensive plan. A number of communities chose Option 2 for their plan update. The updated land use plan maps for those communities are being incorporated into the County land use plan map.
City of Brookfield Park and Open Space Plan

SEWRPC is currently assisting the City of Brookfield with updating its park and open space plan. The plan update will promote environmental stewardship, assess current and future park and recreation needs of the City’s residents, and meet Federal and State requirements for securing grants to acquire and preserve park and open space land and develop recreational facilities. The City of Brookfield Parks and Recreation Commission and staff from the Parks, Recreation, and Forestry Department are helping to guide the planning process. The plan updates the City’s existing park and open space plan adopted by the Common Council in 2011, and includes short-term recommendations through the year 2025 and long-term recommendations through the year 2035. There will be a public hearing on the plan update in April, and it is ultimately expected to be adopted as an amendment to the City’s comprehensive plan by the Common Council.

Economic Profiles

SEWRPC is continuing to work with the Waukesha County Center for Growth to prepare economic profiles for Waukesha County communities. Profiles have been prepared for 12 participating communities, and now the Villages of Butler and Eagle are joining the group. The profiles highlight community assets that help to attract, retain, and grow businesses within the communities and throughout Waukesha County. Each profile includes a history of the community as well as information on demographics, housing, educational opportunities, healthcare facilities, transportation, business/industrial parks, labor force, major employment sectors, and contact information for local governments and utilities. More information about the economic profiles can be found at sewrpc.org/econdev.