

Attachment 2

SUMMARY OF IMPACTS ASSUMING THE PRELIMINARY RECOMMENDED REGIONAL WATER SUPPLY PLAN IS NOT IMPLEMENTED AND SELECTED UTILITIES DO NOT USE A LAKE MICHIGAN SUPPLY

The scenario being considered assumes that the Brookfield East, Germantown, Muskego, Elm Grove, and Waukesha water supply service areas would not be converted to a Lake Michigan supply. Under this scenario, the following conclusions would apply:

- Deep Aquifer Condition

The deep aquifer water table would remain constant or have a limited drawup in the areas with large historic drawdowns. This compares to a significant drawup (76 feet average and 200 feet maximum in Waukesha County) under the initially recommended plan. Minor drawdowns are expected in Kenosha and Walworth Counties in either case.

- Surface Water Baseflow

In selected areas, the reduction in baseflow to streams would be greater than the reduction under the preliminary recommended plan. In most cases, this is a change from augmentation to reduction. In some areas the amounts are significant (Muskego, Norway, Waukesha). In other cases, the changes are small and considered insignificant (Germantown, northeastern Waukesha County, and northwestern Milwaukee County). The estimated net reduction in surface water baseflow in the Region would be about 15 mgd, or 4.2 percent, versus about 12 mgd, or 3.4 percent, under the recommended plan. Also, 19 of 100 groundwater-sensitive surface water sites are estimated to have baseflow reduced by 10 percent or more, compared to 14 sites under the recommended plan.

- Surface Water Quality

Chloride loadings of about eight million pounds per year would continue to be discharged to the surface water. This load would be eliminated under the preliminary recommended plan.

- Costs to the Communities Involved:

- The capital costs would be reduced from \$104.3 million to \$14.6 million.
- The annual O&M costs would be reduced from \$12.5 million to \$0.6 million.
- There would be a continued annual cost of \$12.5 million for individual residential water treatment (largely water softening).

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**SUMMARY OF THE BENEFITS OF CONVERTING SELECTED
WATER UTILITIES FROM A GROUNDWATER SOURCE OF SUPPLY
TO A LAKE MICHIGAN SOURCE AS ENVISIONED IN THE PRELIMINARY
RECOMMENDED REGIONAL WATER SUPPLY PLAN**

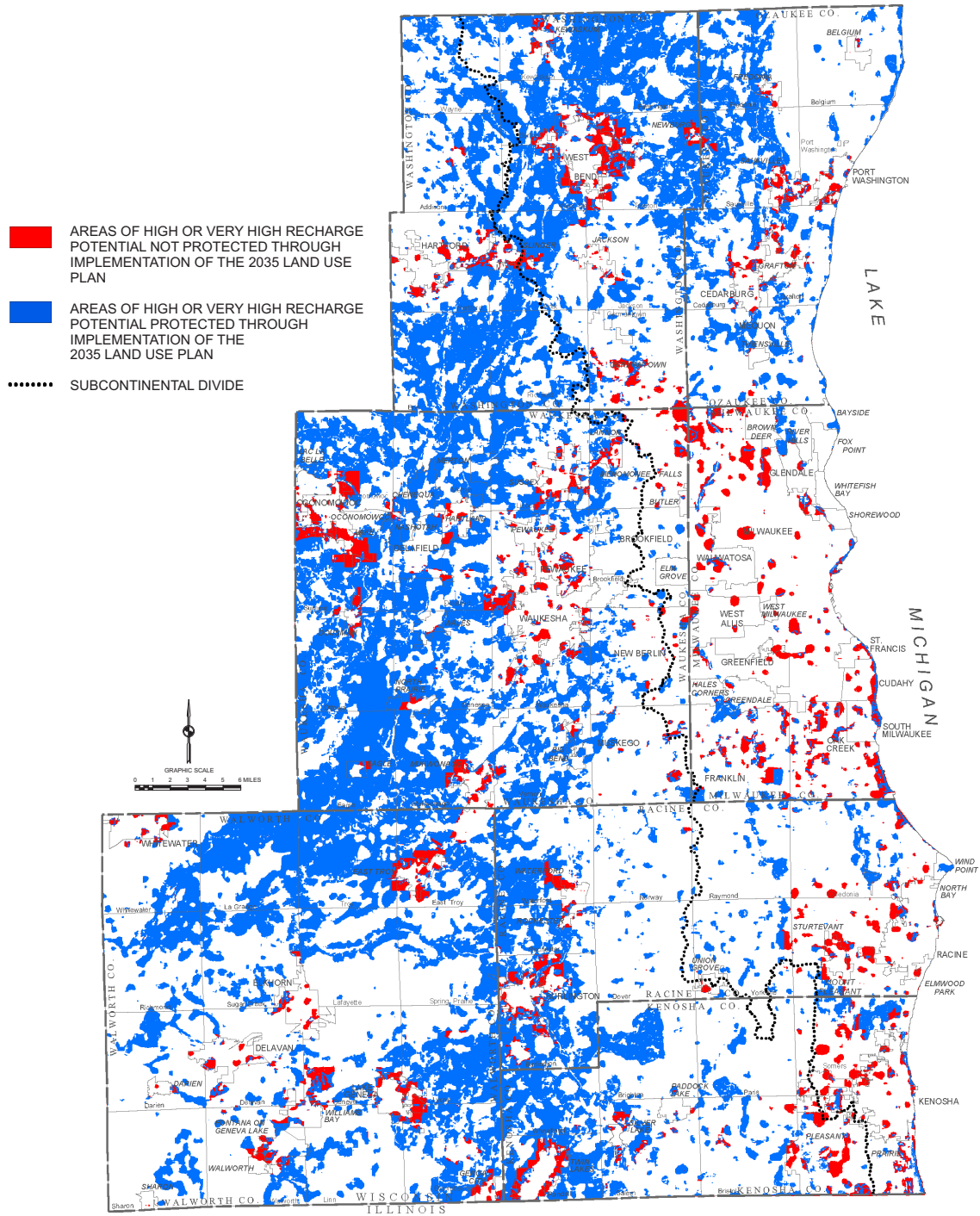
The initially recommended regional water supply plan envisions the conversion to Lake Michigan as a source of supply for nine utility service areas which currently have return flow to Lake Michigan and are located east of, or straddle, the subcontinental divide, as well as one utility (Waukesha) which is located west of the divide and will require a return flow component. This recommendation was made after careful evaluation of the costs, impacts, and other characteristics of alternative plans, as those plans related to the objectives and standards developed for the water supply plan.

The primary benefits of the preliminary recommended plan compared to a plan whereby the utilities in the Milwaukee area and Waukesha would remain on groundwater supplies are as follows:

1. There would be a substantial recovery of the water table in the deep aquifer which has been drawn down by as much as 500 feet due to historic pumping in Milwaukee County and historic and current pumping in Waukesha County, southeastern Wisconsin, and surrounding areas. The average and maximum draw-up would be about 76 feet and 200 feet, respectively, in Waukesha County, with significant draw-ups in most of the Region. This compares to maintaining the existing conditions in the deep aquifer if the conversion to Lake Michigan supply does not occur.
2. Because of the deep aquifer draw-up noted in Item 1 above, there would be a reduction in pumping related energy use for utilities remaining on the deep aquifer as a source of supply.
3. Due to the reduction in water softening which will be attendant to the preliminary recommended plan, about eight million pounds of chloride per year would be removed from discharges to the surface waters of the Region.
4. There will be either augmentation to the baseflows or the maintenance of current baseflows in the surface waters in the vicinity of the utilities being converted to a Lake Michigan supply. This baseflow change is expected to occur in northeastern Waukesha County, Germantown, northwestern Milwaukee County, Muskego-Norway, and the areas within and near the City of Waukesha. This compares to a reduction in baseflows in those areas under the alternative where the utilities continue to utilize groundwater supplies.

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GROUNDWATER RECHARGE PROTECTION COMPONENT OF THE PRELIMINARY RECOMMENDED WATER SUPPLY PLAN



Source: SEWRPC.

Delineation of groundwater recharge areas indicate that a high degree of protection of the best groundwater recharge areas in the Region would be achieved through implementation of the adopted 2035 regional land use plan, specifically, about 74 percent of the highly rated groundwater recharge areas and very highly rated recharge areas may be expected to be maintained by inclusion in the environmental corridors, isolated natural areas, and prime and other agricultural areas identified for preservation in the adopted land use plan and in rural residential areas. Careful design of new residential development, for example by using cluster and conservation subdivision design, and the use of selected stormwater management practices would be expected to increase this amount.