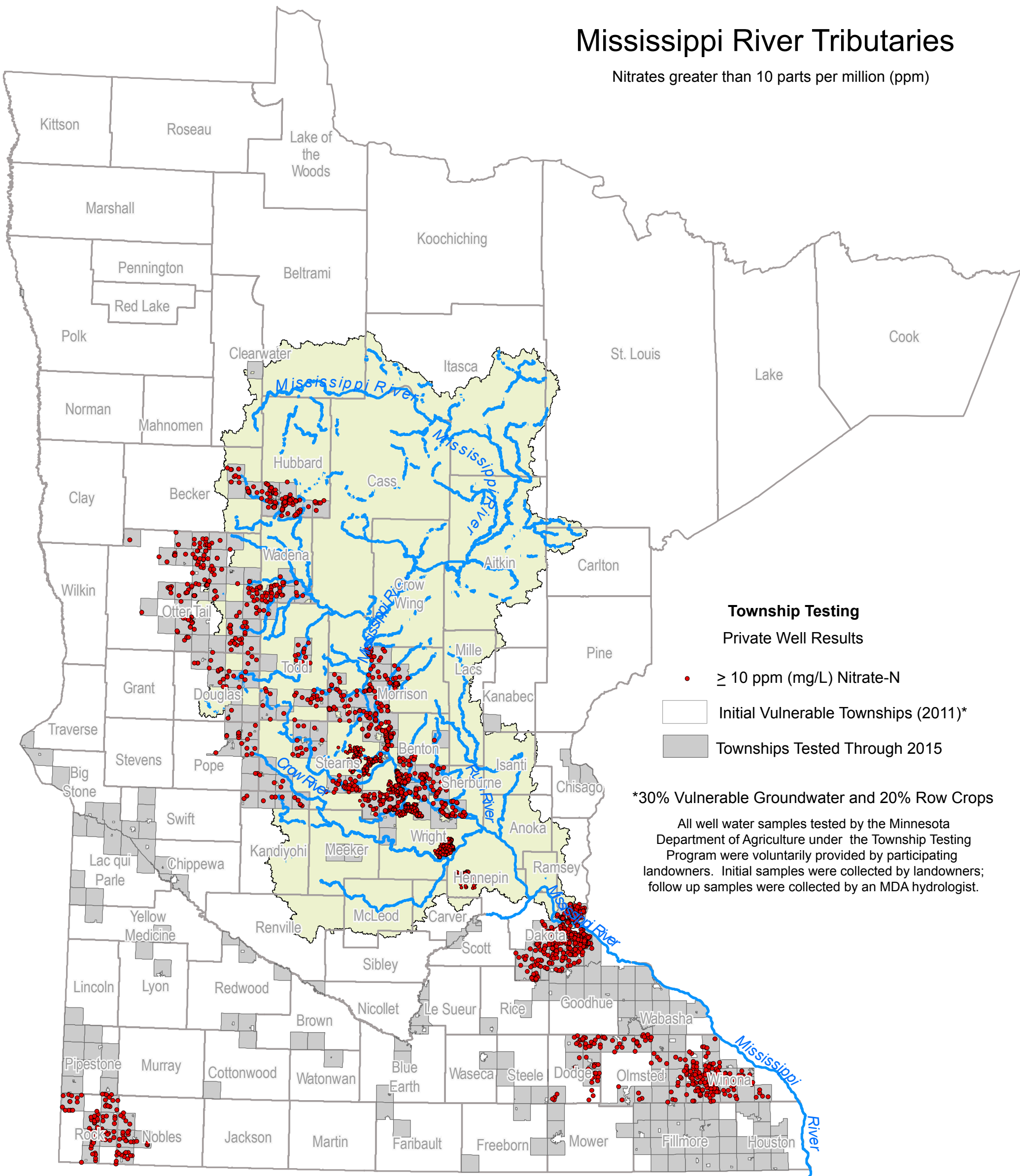


Mississippi River Tributaries

Nitrates greater than 10 parts per million (ppm)



Township Testing

Private Well Results

• ≥ 10 ppm (mg/L) Nitrate-N

□ Initial Vulnerable Townships (2011)*

■ Townships Tested Through 2015

*30% Vulnerable Groundwater and 20% Row Crops

All well water samples tested by the Minnesota Department of Agriculture under the Township Testing Program were voluntarily provided by participating landowners. Initial samples were collected by landowners; follow up samples were collected by an MDA hydrologist.

Counties	Number Townships in County	Number of Townships Tested	Number of Estimated wells	Number of Wells Tested	Number of Wells ≥ 3 mg/L Nitrate-N	Number of wells ≥ 10 mg/L Nitrate-N	Year(s) tested
Benton	12	4	2,105	720	194	60	2013-2016
Becker	37	3	579	200	50	25	2016
Dakota*	15	15	5,162	1,380	651	364	2013-2014
Dodge	12	7	2,120	654	121	46	2016
Douglas	20	9	3,413	1,864	104	31	2016
Hubbard	28	6	2,040	1,106	239	116	2016
Kandiyohi	24	4	788	313	33	11	2016
Morrison	30	11	3,680	1,208	373	178	2013-2015
Nobles	20	4	286	45	39	35	2016
Olmsted	18	11	3,310	1,057	255	50	2014
Ottertail	62	32	12,285	4,536	443	186	2015
Pope	20	6	937	303	35	19	2015
Rock	12	7	327	171	129	87	2016
Sherburne	10	6	7,670	2,070	417	199	2014-2015
Stearns	34	14	6,505	1,883	395	137	2014
Todd	28	9	1,978	797	91	40	2016
Wadena	15	4	890	269	64	32	2013-2014
Washington *	7	2	1,347	526	256	116	2014
Winona	19	13	2,569	940	432	180	2016
Grand Total	423	167	57,991	20,042	4,321	1,912	2013-2016

* Dakota includes two cities, Washington includes one city

Townships Tested 2013-2016	<3	3<10	≥ 10	≥ 10
Total Wells	Nitrate-Nitrogen mg/L (ppm)			Percent
20,042	15,721	2,409	1,912	10%