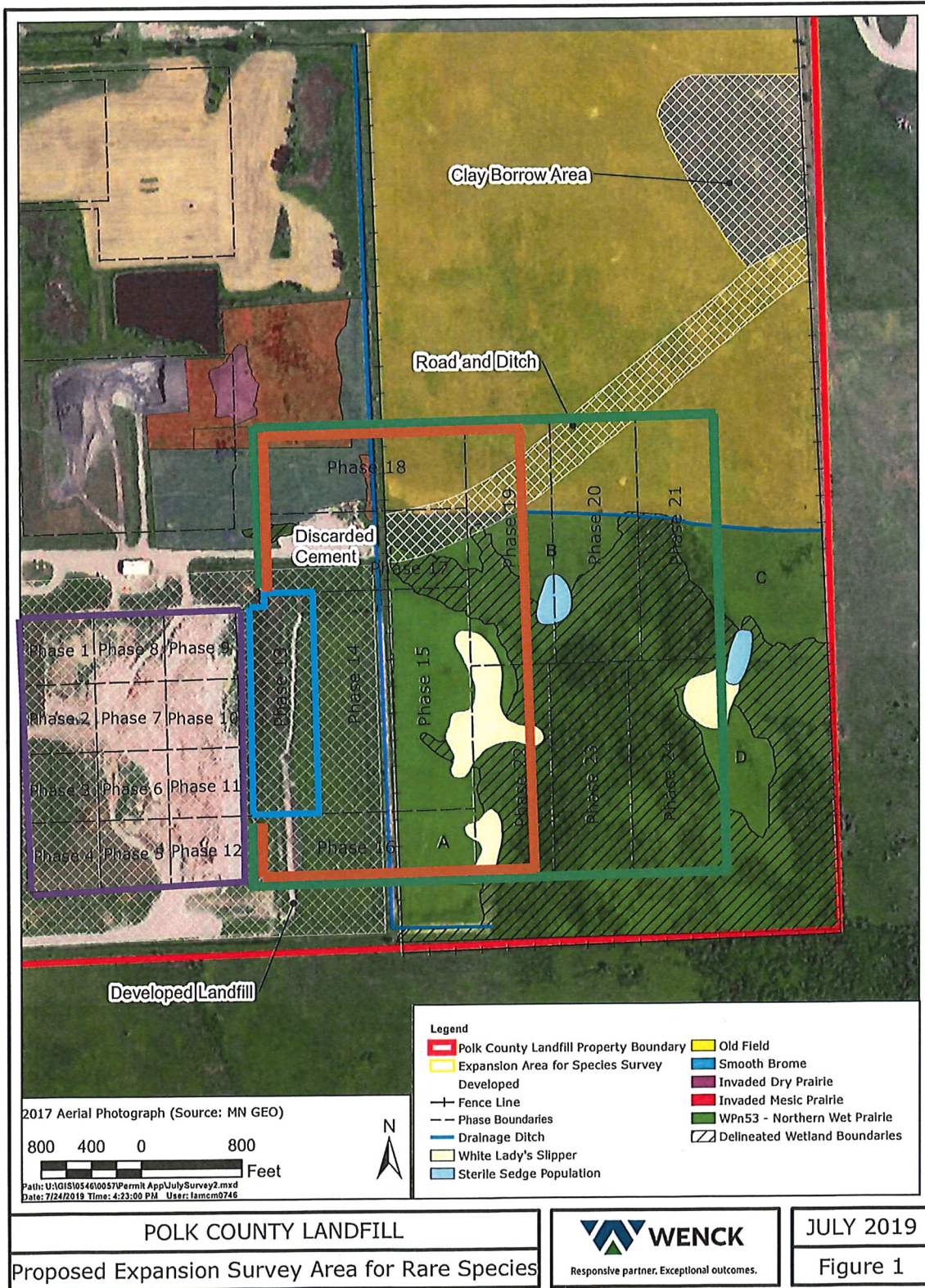


FUTURE LANDFILL EXPANSION AREA

Proposed **Currently** vs. **Alternate** Option

(Phase Drawing Footprint)



Previously Filled Phases – **PURPLE**
Proposed Expansion Area – **GREEN**

Active/Current Filling Phase – **BLUE**
Alternative Expansion Area - **ORANGE**

TABLE 1
MSW Bypass Landfill Phase Design Volumes

Polk County Sanitary Landfill
Polk County, Minnesota
June 2015

Phase	Cell Area (acres)	Total Volume ⁽¹⁾ (cy)	Base Granular ⁽²⁾ (cy)	Final Cover Area (acres)	Final Cover ⁽³⁾ (cy)	Volume Utilized as of Oct. '14 (cy) ⁽⁵⁾	Remaining Operational Volume (cy)	Operating Life ⁽⁴⁾ (yrs)	Open Date	Close Date
Existing Phases 1-12	11.63	622,400	3,230	10.04	40,490	331,283	247,397	3.9	-	2018
Phase 13	3.29	260,900	5,305	1.52	6,140	0	249,455	3.9	2018	2022
Phase 14	3.41	247,900	5,495	1.25	5,040	0	237,365	3.7	2022	2026
Phase 15	3.41	266,400	5,495	0.18	720	0	260,185	4.1	2026	2030
Phase 16	3.15	458,600	5,090	9.19	37,080	0	416,430	6.5	2030	2036
Phase 17	3.26	243,700	5,265	1.82	7,350	0	231,085	3.6	2036	2040
Phase 18	3.47	256,900	5,605	4.19	16,915	0	234,380	3.7	2040	2044
Phase 19	4.05	349,500	6,530	2.32	9,355	0	333,615	5.2	2044	2049
Phase 20	4.05	341,700	6,530	2.30	9,285	0	325,885	5.1	2049	2054
Phase 21	3.72	318,500	6,005	4.95	19,975	0	292,520	4.6	2054	2059
Phase 22	3.25	423,300	5,240	3.05	12,310	0	405,750	6.4	2059	2065
Phase 23	3.25	436,100	5,240	4.35	17,525	0	413,335	6.5	2065	2071
Phase 24	3.81	417,700	6,150	11.19	45,135	0	366,415	5.8	2071	2077
Total	53.74	4,643,600	71,180	56.36	227,320	331,283	4,013,817	63.1		

⁽¹⁾Based on a 5h:1v working slope from top of clay liner permitted grades.

⁽²⁾Based on a 1-foot sand drainage layer (approximately 1,600 cy/acre). It is important to note that Phases 1 - 10 are constructed.

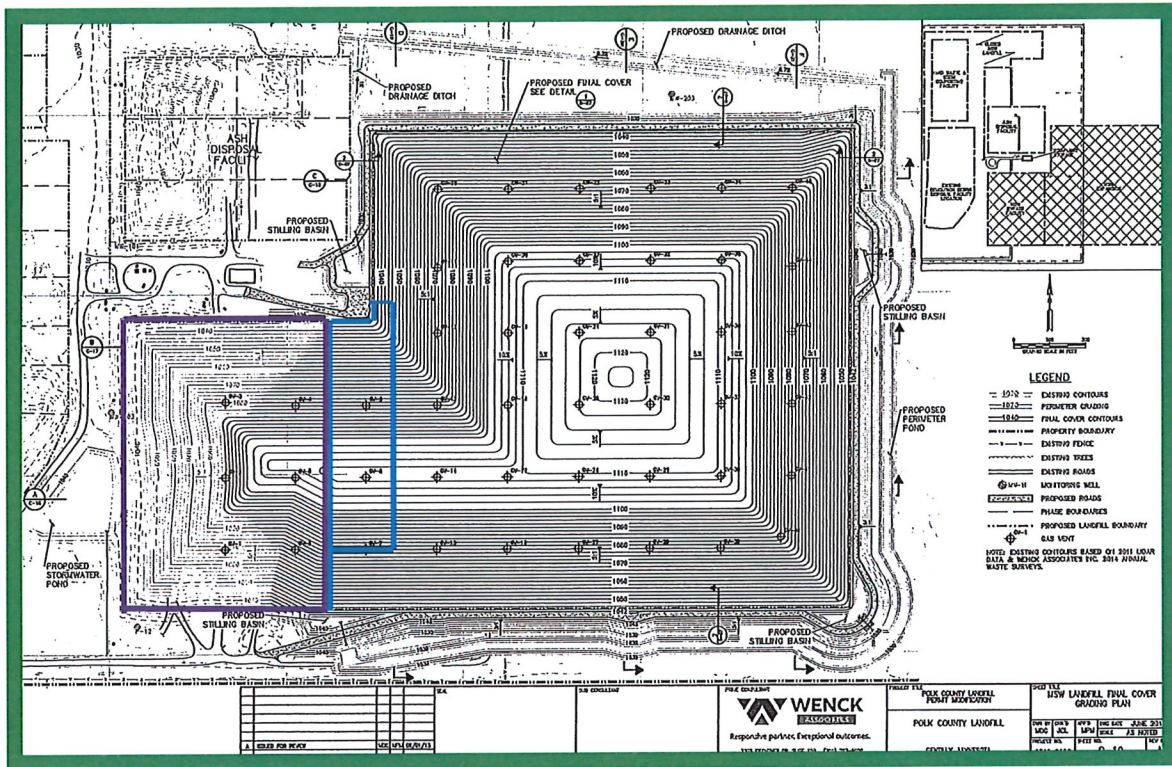
⁽³⁾Based on a 2.5-foot final cover system with buffer layer (approximately 4,033 cy/acre). (Portions of Phases 1 - 4 are final covered).

⁽⁴⁾Based on annual waste and daily cover capacity utilized of 63,600 cy/year; 35,000 tons/year at 1,100 lbs/cy in-place compaction

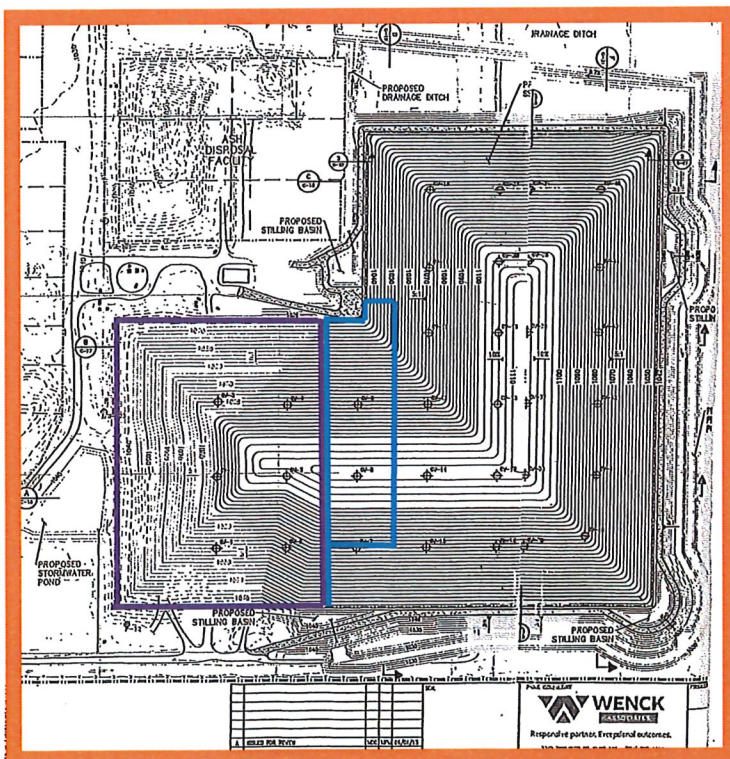
⁽⁵⁾In Place Volume as of October 2014 is 342,100 cy; 2014 Annual Report

FUTURE LANDFILL EXPANSION AREA

Proposed Currently vs. **Alternative** Option



(Pictured Above) MSW Landfill Phases 1– 24 topo drawing. Phase 14-24 shown. Approximately 38 acre footprint and lifespan of 63.5 years at present waste fill rates. Impacts 19.14 acres of wetland which requires 2:1 replacement. Requires 38.28 acres of wetland credits. Impacts MN threatened ‘Sterile Sedge’ plant which will require ‘takings’ permit and likely 2:1 replacement or equivalent.



(Pictured Above) MSW Landfill Phases 1–18 + half of 19 and 22 topo drawing. Phases 14-18 + half of 19 and 22 shown. Approximately 20 acre footprint and lifespan of 20-25 years at present fill rates. Impacts to wetlands reduced from 19.14 acres to 2.86 acres. Requires 5.72 acres of wetland credits. No impact on MN threatened ‘Sterile Sedge’ species – so no ‘takings’ permit required.