#### **CCLRD**

#### **Camp and Center Lakes Rehabilitation District**

Doug Hughes, Chairman Stuart Schramm, Secretary Charles Walker, Treasurer Dennis Faber, Village of Salem Lakes Tom Strachan, Commissioner



October 31, 2019

Mr. Craig Helker DNR Water Resources Biologist Sturtevant Service Center 9531 Rayne Road, Suite 4 Sturtevant, WI 53177

Dear Mr. Helker,

The following is the information required as a condition for the Camp, Center Lake Rehabilitation District's Aquatic Harvesting Permit.

Of particular interest is the fact total harvester loads for all plant species for both lakes was up to 220 loads versus just 35 harvested in 2018. Of that number the invasive Eurasian Water Milfoil represented only 55 loads or just 25% of the total. Even though this is substantiality down from the 1,238 Eurasian Water Milfoil loads harvested in 2002 it is a substantial increase over the last couple of years.

It was also noticeable that the Milfoil was not found in large beds as is typical but in little patches in numerous areas thought the lakes. However, these patches were not in enough abundance in one location, to harvest a full load without including other species.

Another contributing factor to the increase for 2019 most likely, is the amount of runoff water thought the harvest season which caused both our lakes to be closed to high speed recreation, for weeks at a time. In the past, after major rain events nutrients that wash into the lakes have caused the vegetation to grow and it is likely this did occur numerous times in 2019.

1. Starting and ending harvesting dates:

Starting date: June 26, 2019 (due to high water) Ending date: October 8, 2019 (due to high water)

2. Map of harvesting areas:

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Maps of Camp and Center Lakes identifying the harvesting areas on each lake.

3. Harvester Load Summary

See Exhibit II:

4. Harvested Tonnage Summary

See Exhibit III:

Note:

Eurasian Milfoil, Widgeon Grass and "Other Species" were the species that were tabulated. The "Other Species" harvested were Common Water Weed, Coontail, Northern Water Milfoil, Sago Pondweed, Wild Celery, and a verity of other Pondweed species however; the quantity of those species was undeterminable because they were mixed in with all the species harvested and every effort is made to avoid and not harvest any of these native plants.

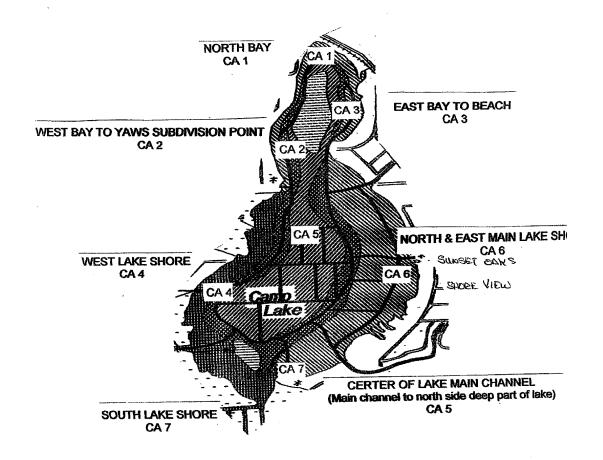
Best regards,

Dennis Faber

Harvesting Administrator

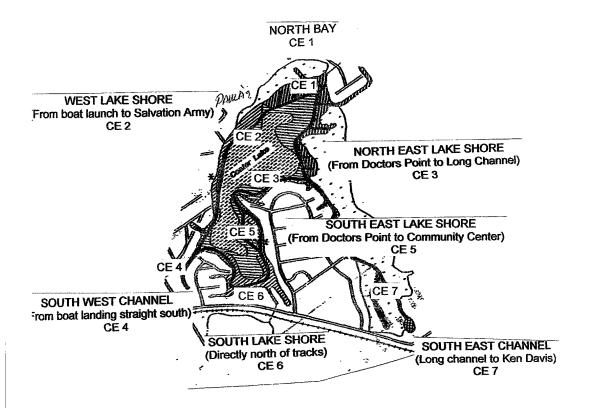
EXHIBIT I (Camp Lake)

## CAMP LAKE HARVESTING LOCATION MAP



### CENTER LAKE HARVESTING MAP

EXHIBIT I (Center Lake)



#### **EXHIBIT II**

## CAMP LAKE HARVESTER LOAD SUMMARY BY AQUATIC SPECIES

Locat	ion:	CA 1	CA 2	CA 3	CA 4	CA 5	CA 6	CA 7	TOTAL
MILF	OIL:								
Year:	2002	121.4	150.1	182.2	30.6	340.6	193.6	52.6	1,071.1
	2003	105	169	133	33.4	349.6	95	42.6	927.6
	2004	3	16.8	4	6.4	27.6	44	49.6	151.4
	2005	72.6	33	15.4	55.4	503.2	64	13.6	756.4
	2006	8	16	9.5	23.6	313.8	7.2	11.6	389.8
	2007	16.4	0	2.8	4.4	615.6	10.4	2	651.6
	2008	.6	1.6	2.4	7.2	289.4	4.2	22	327.5
	2009	28.1	12	17.4	17.8	39.6	90.6	12.6	218.1
	2010	4.1	12.4	12.1	34.5	19	57.7	42	181.8
	2011	.2	1.2	.4	1.2	40.9	15	2	60.9
	2012	0	12	0	.4	26	.6	0	39
	2013	4.8	2.8	6.4	2	65	3.6	1.4	86
	2014	0	0	2.7	2	273.5	0	.4	278.6
	2015	4	.8	7.5	28.6	377.2	2.1	14	434.2
	2016	0	.4	0	.2	11.0	8.2	.2	20.0
	2017	.8	0	0	0	0	1.6	.8	3.2
	2018	0	0	0	0	0	0	2	2
	2019	.6	.5	4.975	.7	22.25	6.45	2	37.
WIDG	EON GR	ASS:							
Year	2002	18.6	42.8	33.8	5.4	41.4	47.4	11.4	200.8
	2003	27.9	78	87.7	20.6	130.8	55	13.4	413.4
	2004	3	4.8	0	1.6	4.4	12.6	30.6	57
	2005	65	12	36.6	33.6	306.8	67.6	25.6	547.2
	2006	66.5	5	41.5	8.4	229.6	17.2	10	378.2

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	2007	18	0	.8	.5	221.8	9.6	2	253.2
	2008	5.4	.4	1.6	6.8	262.6	6.6	15	298.2
	2009	36.4	20	30	42.8	281.6	78.8	15	504.6
	2010	14.3	7.2	19.1	47.7	6.3	41.8	78.8	215.2
	2011	.4	2.4	4	10.8	433.1	73.6	14.4	538.7
	2012	3.2	15.2	30	59.8	254.8	43.5	17	423.5
	2013	4	2.4	5.6	3.2	81.4	4.4	.8	101.8
	2014	0	0	1.5	2	211.6	0	.2	215.3
	2015	4.4	9.4	6.5	20.6	344.8	.4	6	392.1
	2016	0	0	0	.2	44.5	7.2	0	51.9
	2017	3.2	0	0	4	0	1.8	2.4	11.4
	2018	0	0	0	1	0	0	1	2
	2019	5.3	.1	.8	1	14	2.15	1	24.
OTHE	ER SPECIES:								
Year	2010	11.2	1.5	37.4	44.4	6.7	78.5	102.2	281.9
	2011	1.4	4.4	3.6	2	174	67.4	15.6	268.4
	2012	4.8	16	24	6.8	156	16.9	0	224.5
	2013	17.2	12.8	24	6.8	75.6	16	3.8	156.2
	2014	0	0	4.8	0	27.7	0	.4	32.9
	2015	3.6	1.8	1	6.8	7	5.5	.0	25.7
	2016	0	4	6	3.6	35.5	36.4	4.6	90.1
	2017	4	2	4	3	3	18.2	6.8	41
	2018	2	1	2	1	1	5	2	14
	2019	1.1	.85	4.575	3.3	46.35	14.4	11	82
САМІ	P I AKE TOTA	I HARVES	TERIOADS	III FOIL WII	DGEON GRA	SS & OTHER	SPECIES		

#### CAMP LAKE TOTAL HARVESTER LOADS MILFOIL, WIDGEON GRASS & OTHER SPECIES:

Location:	CA 1	CA 2	CA 3	CA 4	CA 5	CA 6	CA 7	TOTAL
Year 2002	140	192.9	216	36	382	241	64	1,271.9
2003	132.9	247	220.7	54	480.4	150	56	1,341
2004	6	21.6	4	8	32	56.6	80.2	108.4
2005	137.4	45	52	88	810	131.6	39	1,303

2006	74.8	21	51	32	543.4	24.2	21.2	768
2007	34.4	0	3.6	5.4	837.4	40	4	904.8
2008	6	2	4	13.8	552	11	37	625.8
2009	64.4	32	47.4	60.6	321.3	169.4	27.6	722.7
2010	29.6	34.6	68.6	126.6	32	178	223	692.4
2011	2	8	8	14	648	156	32	868
2112	8	43.2	54	67	436.8	61	17	687
2013	26	18	36	12	222	24	6	344
2014	0	0	9	4	512.8	0	1	526.8
2015	12	12	15	56	729	8	20	852
2016	0	4.4	6	4	91	51.8	4.8	162
2017	8	2	4	7	3	21.6	10	55.6
2018	2	1	2	2	1	5	5	18
2019	7	1	10.5	5	82.6	23	14	143

# CENTER LAKE HARVESTER LOAD SUMMARY BY AQUATIC SPECIES

Location:	CE 1	CE 2	CE 3	CE 4	CE 5	CE 6	CE 7	TOTAL
MILFOIL:								
Year: 2002	47.5	22.6	11.75	3.6	18.9	47.8	14.4	166.55
2003	52.9	26	26.8	21.5	16.4	46.2	10.8	200.6
2004	61.6	16.6	18.2	29.8	8.4	109.4	79.8	323.8
2005	129.8	14	8.6	10.6	26.6	39	40	268.6
2006	46.8	26	3	1.5	9.8	5.8	5.6	98.5
2007	6.5	0	0	0	3	6.4	7	22.9
2008	60.6	.8	3.6	7.5	3	7	2.8	85.2
2009	11.2	0	0	0	1.6	15.2	4.6	32.6
2010	19.9	4.8	0	1.4	0	1.2	0	27.3

	2011 2012 2013 2014 2015 2016 2017 2018 2019	5.2 33.2 7.8 0 .4 0 0 3 6.3	0 0 1.3 1.2 0 0 0 0 2.15	.6 0 2.4 0 0 0 3.3 0 4.7	0 0 0 0 0 0 0 0	0 0 1.7 0 0 0 0 0	0 0 .7 0 0 0 0 0 2.8	0 0 1.3 0 0 0 0 0	5.8 33.2 15.2 1.2 .4 0 3.3 3
WIDG	EON GRAS	SS:							
	2002	7	2.4	1.25	.4	2.1	8.2	1.6	22.45
	2003	11.1	4	4.2	4.5	2.6	24.8	3.2	54.4
	2004	14.4	9.4	3.8	6.2	1.6	44.6	26.2	106.2
	2005	10.2	4	4.6	.4	5.4	14.10	0	38.8
	2006	.2	0	0	.50	1.2	4.2	2.6	8.7
	2007	7.5	0	0	0	0	10	5	22.5
	2008	14.4	2.4	.4	.6	3	6	.4	27.2
	2009	3	0	0	0	2.4	13.6	3.4	22.4
	2010	2.9	.8	0	0	0	0	0	3.7
	2011	.3	0	3.1	0	0	0	0	3.4
	2012	0	0	0	0	0	0	0	0
	2013	0 _	0	0	0	0	.4	0	.4
	2014	.5	.8	.6	0	.6	1.6	0	4.1
	2015	1	0	0	0	.8	17.6	0	19.4
	2016	0	0	0	0	0	0	0	0
	2017	.8	0	.2	0	0	0	0	1
	2018	0	0	0	0	0	1	0	1
	2019	5.4	.15	.10	0	.20	.9	.30	7.
ОТНЕ	R SPECIES	<b>3</b> :							
	2010	9.9	2.4	0	.6	0	.8	0	13.7
	2011	5.5	0	10.9	0	0	0	0	16.4
	2012	22.8	0	0	0	0	0	14	36.8

2013	44.2	3.7	5.6	0	7.3	9.9	13.7	84.4
2014	10.5	4	5.4	0	2.4	5	5	32.3
2015	18.6	0	0	0	3.2	.4	12	34.2
2016	52	0	0	0	0	14	13	79
2017	20.2	0	8.5	0	0	0	4	32.7
2018	10	0	2	0	0	0	1	13
2019	20.3	6.7	2.2	3.6	2.15	5.3	11.25	52

#### CENTER LAKE TOTAL HARVESTER LOADS MILFOIL, WIDGEON GRASS & OTHER SPECIES:

Year: 2002	54	25	13	4	21	56	16	189
2003	64	30	31	26	19	71	14	255
2004	76	26	22	36	10	154	106	430
2005	140	18	13.2	12	32	53.2	40	308.4
2006	47	26	3	2	11	10	8.2	107.2
2007	14	0	0	0	3	16.4	12	45.4
2008	75	3	4	8	6	13	3.2	112.2
2009	14.2	0	0	0	4	28.8	8	55
2010	32.7	8	0	2	0	2	0	44.7
2011	11	0	14.6	0	0	0	0	25.6
2012	56	0	0	0	0	0	14	70
2013	52	5	8	0	9	11	15	100
2014	11	6	6	0	3	6.6	5	37.6
2015	20	0	0	0	4	18	12	54
2016	52	0	0	0	0	14	13	79
2017	21	0	12	0	0	0	4	37
2018	13	0	2	0	0	1	1	17
2019	34	9	7	4	.65	9	12	76

# TOTAL CAMP, CENTER LAKE HARVESTER LOAD SUMMARY BY AQUATIC SPECIES

+1000% more than 2018 or 50 more loads than 2018

		BY AQUATIC SPECIES
MILFOIL:		
Year: 2002	1,237.65	
2003	1,128.2	<ul> <li>9% less than 2002 or 54.7 less loads than 2002</li> </ul>
2004	475.2	- 58% less than 2003 or 326.5 less loads than 2003
2005	1,025	+116% more than 2004 or 274.5 more loads than 2004
2006	488.2	<ul> <li>52% less than 2005 or 268.4 less loads than 2005</li> </ul>
2007	674.5	+ 38% more than 2006 or 93.2 more loads than 2006
2008	412.6	<ul> <li>39% less than 2007 or 131 less loads than 2007</li> </ul>
2009	250.8	- 39% less than 2008 or 80 less loads than 2008
2010	209	<ul> <li>17% less than 2009 or 41.8 less loads than 2009</li> </ul>
2011	66.7	<ul> <li>69% less than 2010 or 142.3 less loads than 2010</li> </ul>
2012	72.2	+ 8% more than 2011 or 5.5 more loads than 2011
2013	101.2	+ 40% more than 2012 or 29 more loads than 2012
2014	279.8	+176% more than 2013 or 178.6 more loads than 2013
2015	434.6	+ 55% more than 2014 or 154.8 more loads than 2014
2016	20	<ul> <li>95% less than 2015 or 415 less loads than 2015</li> </ul>
2017	6.5	- 68% less than 2016 or 13.5 less loads than 2016
2018	5	<ul> <li>27% less than 2017 or 1.5 less loads than 2017</li> </ul>

#### **WIDGEON GRASS:**

2019

55

Year: 2002	223.25	
2003	467.8	+110% more than 2002 or 122 more loads than 2002
2004	163.2	- 65% less than 2003 or 152.3 less loads than 2003
2005	586	+258% more than 2004 or 211 more loads than 2004
2006	386.8	<ul> <li>34% less than 2005 or 99.6 less loads than 2005</li> </ul>
2007	275.7	<ul> <li>29% less than 2006 or 55.6 less loads than 2006</li> </ul>
2008	325.4	+ 18% more than 2007 or 24.9 more loads than 2007
2009	527	+ 62% more than 2008 or 100.8 more loads than 2008
2010	218.9	- 58% less than 2009 or 308.1 less loads than 2009

2011	542.1	+149% more than 2010 or 323.2 more loads than 2010
2012	423.5	<ul> <li>22% less than 2011 or 118.6 less loads than 2011</li> </ul>
2013	102.2	<ul> <li>76% less than 2012 or 321.3 less loads than 2012</li> </ul>
2014	219.4	+115% more than 2013 or 117.2 more loads than 2013
2015	411.5	+ 88% more than 2014 or 192.1 more loads than 2014
2016	51	<ul> <li>88% less than 2015 or 361 less loads than 2015</li> </ul>
2017	12.4	<ul> <li>76% less than 2016 or 38.6 less loads than 2016</li> </ul>
2018	3	<ul> <li>75% less than 2017 or 9.4 less loads than 2017</li> </ul>
2019	32	+967% more than 2018 or 29 loads more than 2018

## OTHER SPECIES:

2010	295.	
2011	285	<ul> <li>3% less than 2010 or 10 less loads than 2010</li> </ul>
2012	261.3	<ul> <li>8% less than 2011 or 23.7 less loads than 2011</li> </ul>
2013	240.6	<ul> <li>8% less than 2012 or 20.7 less loads than 2012</li> </ul>
2014	65.2	- 73% less than 2013 or 175.4 less loads than 2013
2015	59.9	<ul> <li>8% less than 2014 or 5.3 less loads than 2014</li> </ul>
2016	169.1	+182% more than 2015 or 109 loads more than 2015
2017	73.7	<ul> <li>56% less than 2016 or 95.4 loads less than 2016</li> </ul>
2018	27	<ul> <li>63% less than 2017 or 46.7 loads less than 2017</li> </ul>
2019	133	+393% more than 2018 or 106 loads more than 2018

#### TOTAL HARVESTER LOADS MILFOIL, WIDGEON GRASS & OTHER SPECIES:

Year: 2002	1,460.9	
2003	1,596	+ 9% more than 2002 or 67.6 more loads than 2002
2004	638.4	<ul> <li>60% less than 2003 or 479 less loads than 2003</li> </ul>
2005	1,611	+152% more than 2004 or 485.6 more loads than 2004
2006	875.2	<ul> <li>46% less than 2005 or 367.9 less loads than 2005</li> </ul>
2007	950.2	+ 9% more than 2006 or 37.5 more loads than 2006
2008	738	<ul> <li>22% less than 2007 or 106 less loads than 2007</li> </ul>
2009	777.8	+ 5% more than 2008 or 19.9 more loads than 2008
2010	728.9	<ul> <li>6% less than 2009 or 54.8 less loads than 2009</li> </ul>

2011	893.5	+ 23% more than 2010 or 170.5 more loads than 2010
2012	757.0	<ul> <li>15% less than 2011 or 136.5 less loads than 2011</li> </ul>
2013	444	<ul> <li>41% less than 2012 or 313 less loads than 2012</li> </ul>
2014	564.4	+ 27% more than 2013 or 120.4 more loads than 2013
2015	906	+ 61% more than 2014 or 341.6 more loads than 2014
2016	240	<ul> <li>74% less than 2015 or 666 less loads than 2015</li> </ul>
2017	92.6	<ul> <li>62% less than 2016 or 147 less loads than 2016</li> </ul>
2018	35	<ul> <li>62% less than 2017 or 57.6 less loads than 2017</li> </ul>
2019	220	+529% more than 2018 or 185 more loads than 2018 (138% over 2017)

#### **EXHIBIT III**

# TOTAL CAMP, CENTER LAKE TONNAGE SUMMARY:

#### TOTAL TONNAGE MILFOIL, WIDGEON GRASS & OTHER SPECIES:

Year: 2002	2,921.8		
2003	•	+	9% or 270.2 tons more than 2002
2004	1,276.8	-	60% or 1,915.2 tons less than 2003
2005	3,219.3	+ ′	152% or 1,942.5 tons more than 2004
2006	1,750.4	-	46% or 1,468.9 tons less than 2005
2007	1,900.4	+	9% or 150 tons more than 2006
2008	3 1,476.2	-	22% or 424.2 tons less than 2007
2009	1,555.6	+	5% or 79.4 tons more than 2008
2010	1,446.8	-	7% or 108.8 tons less than 2009
2011	1,787	+	24% or 340 tons more than 2010
2012	2 1,514	-	15% or 273 tons less than 2011
2013	888	-	41% or 626 tons less than 2012
2014	1,128.8	+	27% or 240.8 tons more than 2013

2015	1,812	+ 61% or 683.2 tons more than 2014
2016	480	<ul> <li>74% or 1,332 tons less than 2015</li> </ul>
2017	185.2	- 62% or 294.8 tons less than 2016
2018	70	- 62% or 115.2 tons less than 2017
2019	440	+529% or 370 tons more than 2018