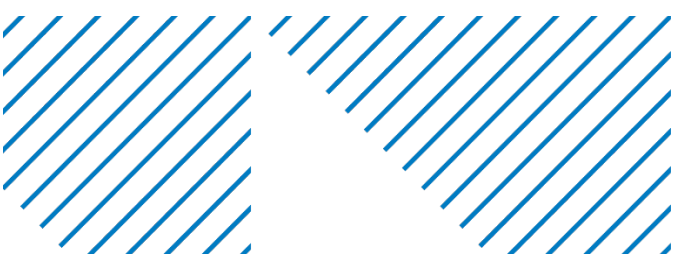




## **Exhibit B**

# **2025 EWM Monitoring Results Memo**



## Memorandum

**To:** Beaver Dam Lake Management District (Board of Commissioners)  
**From:** Barr Engineering, Co. (Meg Rattei, Senior Biologist)  
**Subject:** 2025 Eurasian Watermilfoil (EWM) Treatment and Monitoring Results  
**Date:** November 12, 2025  
**Project:** 49030011.25

The purpose of this memorandum is to present the results of the 2025 Eurasian watermilfoil (EWM) treatment and monitoring program. Memorandum contents include:

- Discussion of 2025 Herbicide Treatment of EWM
- Overview of Lake-Wide EWM
- Discussion of Individual Bays/Basins EWM.

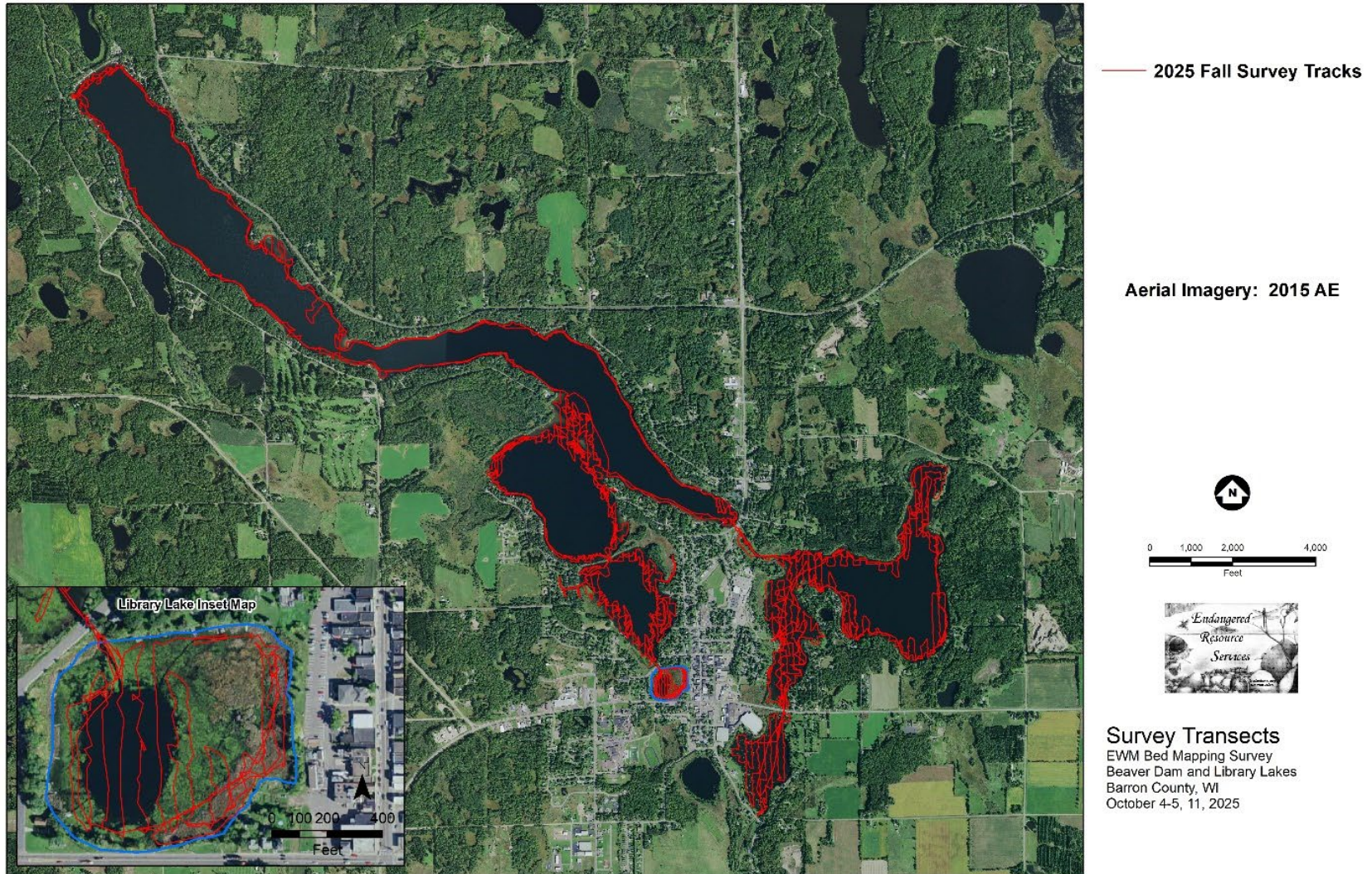
In this memorandum:

- “EWM frequency of occurrence in the littoral zone” is the percent of sample points up to the 25-foot depth that contained EWM.
- “EWM extent” is the acres of EWM.
- “Percent of littoral zone with EWM” is the acres of EWM divided by the total acres of the littoral zone, which is the area up to the 25-foot depth, and then multiplied by 100 to convert to percent.

Two whole lake point-intercept plant surveys and one bed-mapping survey were completed in 2025 to assess the results of EWM management efforts. A point intercept survey of all plants was completed July 8, 9, and 10. A point intercept survey of invasive species (EWM and curly-leaf pondweed) was completed October 4, 5, and 11. A bed-mapping survey of EWM was completed October 4, 5, and 11. Sample locations of point-intercept plant surveys are shown on maps found in Appendix E of the *Beaver Dam Lake Aquatic Plant Management Plan*.<sup>1</sup> Bed-mapping survey locations are shown in Figure 1. The 2025 EWM data, together with historical data, are summarized in Table 1, Table 2, and Table 3.

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<sup>1</sup> Barr Engineering Co. 2025. *Beaver Dam Lake Aquatic Plant Management Plan*, Prepared for Beaver Dam Lake Management District. <http://www.beaverdamlake.org/apmp>



**Figure 1** Beaver Dam Lake Eurasian Watermilfoil Bed-Mapping Survey Transects: October 4, 5, and 11, 2025

**Table 1 2006-2025 EWM Frequency of Occurrence in the Littoral Zone of Beaver Dam Lake**

Location	Percent of sample points up to 25-foot depth with Eurasian watermilfoil, including visuals																							
	Fall 2006	Fall 2007	Fall 2008	July 2009	Fall 2009	July 2010	Fall 2010	July 2011	Fall 2011	June 2012	July 2012	Fall 2012	May 2013	June 2013	July 2013	Fall 2013	July 2014	Fall 2014	July 2015	Fall 2015	July 2016	Fall 2016	July 2017	Fall 2017
Norwegian Bay	28.57	16.39	52.46	39.71	80.00	33.82	28.36	11.76	51.52	13.24	54.41	72.13	39.71	0.00	7.35	58.82	4.41	44.12	1.47	1.47	8.82	22.06	10.29	17.65
East Lake	5.13	0.00	13.38	14.00	27.86	22.70	27.54	28.78	33.79	N/A <sup>1</sup>	17.57	27.86	N/A <sup>1</sup>	N/A <sup>1</sup>	2.88	19.73	0.73	2.10	0.00	0.00	0.00	1.36	1.41	1.36
City Bay	59.12	7.74	72.84	32.78	62.13	21.67	55.93	54.40	70.39	8.89	48.07	58.90	46.93	0.00	21.67	46.11	1.67	9.44	0.00	7.78	0.00	1.67	2.22	5.56
Cemetery Bay	41.10	0.00	40.00	0.00	6.82	0.00	10.23	3.37	47.73	N/A <sup>1</sup>	0.00	18.39	N/A <sup>1</sup>	3.37	0.00	2.25	0.00	1.14	4.49	44.94	5.62	26.97	0.00	0.00
West Lake	18.77	11.07	21.19	14.84	13.33	10.59	13.61	7.35	10.18	N/A <sup>1</sup>	8.64	14.15	N/A <sup>1</sup>	N/A <sup>2</sup>	6.69	17.31	5.50	11.52	0.00	1.21	4.28	8.36	5.83	11.64
Williams Bay	13.33	28.05	23.81	16.98	11.01	3.85	12.15	9.80	10.19	N/A <sup>1</sup>	3.85	15.96	N/A <sup>1</sup>	N/A <sup>2</sup>	0.96	6.36	0.00	9.43	0.00	0.00	1.87	8.33	1.89	0.93
Rabbit Island Bay	39.39	28.72	30.10	18.49	20.54	12.82	26.79	10.17	17.86	0.00	1.67	11.43	N/A <sup>2</sup>	N/A <sup>2</sup>	0.85	3.33	1.68	5.00	0.00	1.67	4.20	10.00	0.00	3.33
Library Lake	73.33	61.97	47.30	5.04	2.60	0.72	7.41	0.00	0.00	N/A <sup>1</sup>	2.88	1.79	N/A <sup>1</sup>	N/A <sup>1</sup>	0.00	0.72	0.00	1.44	5.76	12.23	0.00	0.00	1.44	3.60
<b>East Lake Basins</b>	<b>12.74</b>	<b>24.17</b>	<b>26.45</b>	<b>13.84</b>	<b>12.90</b>	<b>7.93</b>	<b>14.26</b>	<b>7.02</b>	<b>10.71</b>	<b>N/A<sup>3</sup></b>	<b>5.53</b>	<b>12.54</b>	<b>N/A<sup>3</sup></b>	<b>N/A<sup>3</sup></b>	<b>3.48</b>	<b>10.95</b>	<b>2.88</b>	<b>8.06</b>	<b>1.17</b>	<b>3.31</b>	<b>2.30</b>	<b>9.09</b>	<b>2.71</b>	<b>4.96</b>
<b>West Lake Basins</b>	<b>16.79</b>	<b>5.52</b>	<b>44.89</b>	<b>21.97</b>	<b>43.72</b>	<b>19.67</b>	<b>34.89</b>	<b>31.38</b>	<b>54.31</b>	<b>N/A<sup>3</sup></b>	<b>30.86</b>	<b>43.24</b>	<b>N/A<sup>3</sup></b>	<b>N/A<sup>3</sup></b>	<b>10.08</b>	<b>33.12</b>	<b>1.46</b>	<b>10.65</b>	<b>1.05</b>	<b>11.46</b>	<b>3.03</b>	<b>6.98</b>	<b>3.33</b>	<b>6.98</b>
<b>Beaver Dam Lake— All Basins</b>	<b>14.42</b>	<b>15.77</b>	<b>34.46</b>	<b>17.17</b>	<b>25.96</b>	<b>12.77</b>	<b>22.64</b>	<b>17.43</b>	<b>29.51</b>	<b>N/A<sup>3</sup></b>	<b>16.03</b>	<b>26.16</b>	<b>N/A<sup>3</sup></b>	<b>N/A<sup>3</sup></b>	<b>6.17</b>	<b>20.29</b>	<b>2.30</b>	<b>9.11</b>	<b>1.12</b>	<b>6.64</b>	<b>2.73</b>	<b>7.84</b>	<b>3.08</b>	<b>6.16</b>

<sup>1</sup>N/A Frequency of occurrence not available because the area was not surveyed

<sup>2</sup> N/A Frequency of occurrence not available because limited areas were surveyed - not the whole lake/bay area. Rabbit Island Bay channels surveyed and a small area near the Eagle Point boat launch.

<sup>3</sup>N/A Frequency of occurrence not available because some areas were not surveyed and/or only limited areas were surveyed in West Lake (area near Eagle Point boat landing) and Rabbit Island Bay (only the channels)

**Table 1 (Continued) 2006-2025 EWM Frequency of Occurrence in the Littoral Zone of Beaver Dam Lake**

Location	Percent of sample points up to 25-foot depth with Eurasian watermilfoil, including visuals															
	July 2018	Fall 2018	July 2019	Fall 2019	July 2020	Fall 2020	July 2021	Fall 2021	July 2022	Fall 2022	July 2023	Fall 2023	July 2024	Fall 2024	July 2025A	Fall 2025
Norwegian Bay	1.47	2.94	0.00	4.41	0.00	0.00	0.00	0.00	1.47	4.41	0.00	0.00	0.00	0.00	<sup>9</sup> 1.47	0.00
East Lake	0.00	0.00	0.00	0.00	0.00	0.71 <sup>6</sup>	0.00	0.00	0.00	5.52	0.00	0.00	0.00	0.00	<sup>9</sup> 1.38	1.38
City Bay	0.00	1.67	0.00	2.22	0.00	3.89	0.56	0.56	2.22	14.44	0.00	0.00	0.00	3.33	1.67	5.00
Cemetery Bay	0.00	0.00	5.62	14.61	3.37	2.25	1.12	7.87	14.61	33.71	1.12	6.74	4.49	13.48	0.00	2.25
West Lake	2.76	6.83	0.31	0.31 <sup>4</sup>	1.85	13.54	0.00	1.21	2.42	3.33	0.30	0.00	2.42	8.18	<sup>9</sup> 1.52	1.52
Williams Bay	0.94	1.90	0.94	0.94 <sup>4</sup>	12.15	27.10	0.00	1.83	0.00	1.83	0.92	0.00	0.00	0.00	<sup>9</sup> 2.75	5.50
Rabbit Island Bay	0.84	4.17	0.00	3.36 <sup>5</sup>	5.88	16.81	0.00	0.00	10.08	23.53	0.00	1.68 <sup>7</sup>	6.78	7.56	0.00	0.00
Library Lake	5.76	10.07	0.00	0.72 <sup>4</sup>	2.16	5.04	0.00	0.00	0.72	5.04	0.00	0.00	0.72 <sup>8</sup>	0.00	<sup>9</sup> 0.72	21.58
<b>East Lake Basins</b>	<b>0.21</b>	<b>1.05</b>	<b>1.04</b>	<b>4.18</b>	<b>0.63</b>	<b>2.09</b>	<b>0.41</b>	<b>1.66</b>	<b>3.73</b>	<b>13.90</b>	<b>0.21</b>	<b>1.24</b>	<b>0.83</b>	<b>3.73</b>	<b>1.24</b>	<b>2.70</b>
<b>West Lake Basins</b>	<b>2.75</b>	<b>6.27</b>	<b>0.29</b>	<b>1.01</b>	<b>4.20</b>	<b>14.49</b>	<b>0.00</b>	<b>0.86</b>	<b>3.01</b>	<b>6.89</b>	<b>0.29</b>	<b>0.86</b>	<b>2.44</b>	<b>5.16</b>	<b>1.29</b>	<b>5.88</b>
<b>Beaver Dam Lake— All Basins</b>	<b>1.71</b>	<b>4.12</b>	<b>0.60</b>	<b>2.31</b>	<b>2.74</b>	<b>9.42</b>	<b>0.17</b>	<b>1.19</b>	<b>3.31</b>	<b>9.75</b>	<b>0.25</b>	<b>1.02</b>	<b>1.78</b>	<b>4.58</b>	<b>1.27</b>	<b>4.58</b>

<sup>4</sup>All EWM was rake removed during the 2019 fall plant survey.  
<sup>5</sup>The majority of the EWM was in the west canal and all EWM in Rabbit Island Bay were rake removed during the 2019 fall plant survey.  
<sup>6</sup>All EWM was rake removed during the 2020 fall plant survey.  
<sup>7</sup>All EWM was rake removed during the 2023 fall plant survey.  
<sup>8</sup>All EWM was rake removed during the 2024 July plant survey.  
<sup>9</sup>All EWM was rake removed during the 2025 July plant survey.

**Table 2 2006-2025 EWM Extent in Beaver Dam Lake**

Location	Acreage of EWM (based on plant surveys)																							
	Fall 2006	Fall 2007	Fall 2008	July 2009	Fall 2009	July 2010	Fall 2010	July 2011	Fall 2011	June 2012	July 2012	Fall 2012	May 2013	June 2013	July 2013	Fall 2013	July 2014	Fall 2014	July 2015	Fall 2015	July 2016	Fall 2016	July 2017	Fall 2017
Norwegian Bay	3.64	4.75	18.12	8.65	28.23	12.09	9.61	1.99	19.67	3.36	21.21	26.91	15.16	0.00	2.19	23.37	1.10	17.89	0.45	0.81	2.48	6.94	4.66	6.19
East Lake	0.00	0.00	9.34	8.14	19.37	14.13	17.48	17.18	23.93	N/A <sup>1</sup>	11.33	19.98	N/A <sup>1</sup>	N/A <sup>1</sup>	1.18	15.72	0.33	0.90	0.00	0.00	0.00	1.97	0.63	0.48
City Bay	60.25	3.94	68.06	27.89	61.62	20.11	54.01	47.97	73.66	7.65	48.76	55.75	50.85	0.00	20.70	49.01	0.79	7.26	0.00	6.87	0.00	1.50	2.37	5.13
Cemetery Bay	10.90	0.00	17.80	0.00	1.81	0.00	3.97	0.86	21.32	N/A <sup>1</sup>	0.00	7.17	N/A <sup>1</sup>	0.75	0.00	0.51	0.00	0.26	1.54	31.56	1.70	13.76	0.00	0.00
West Lake	25.27	11.36	33.19	24.59	19.67	15.80	25.15	8.65	14.78	N/A <sup>1</sup>	15.31	23.11	N/A <sup>1</sup>	3.15 <sup>2</sup>	10.05	29.13	7.23	29.94	0.00	1.72	6.83	20.64	9.46	21.05
Williams Bay	3.63	10.23	12.64	9.48	4.80	1.15	6.68	4.57	4.65	N/A <sup>1</sup>	1.68	6.92	N/A <sup>1</sup>	0.26 <sup>2</sup>	0.33	2.46	0.00	7.45	0.00	0.00	0.92	5.78	1.89	0.26
Rabbit Island Bay	5.80	12.36	13.21	10.57	8.51	6.26	11.47	4.22	8.01	0.00	0.51	5.64	0.00 <sup>2</sup>	N/A <sup>2</sup>	0.38	1.45	0.61	3.11	0.00	1.37	1.41	9.51	0.00	0.83
Library Lake	0.66	0.59	3.62	0.40	0.09	0.04	0.72	0.00	0.00	N/A <sup>1</sup>	0.20	0.04	N/A <sup>1</sup>	N/A <sup>1</sup>	0.00	0.06	0.00	0.14	0.70	1.90	0.02	0.00	0.20	0.43
<b>East Lake Basins</b>	<b>74.79</b>	<b>8.69</b>	<b>113.32</b>	<b>44.68</b>	<b>111.03</b>	<b>46.33</b>	<b>85.07</b>	<b>67.99</b>	<b>138.58</b>	<b>N/A<sup>3</sup></b>	<b>81.30</b>	<b>109.81</b>	<b>N/A<sup>3</sup></b>	<b>N/A<sup>3</sup></b>	<b>24.07</b>	<b>88.60</b>	<b>2.22</b>	<b>26.31</b>	<b>1.99</b>	<b>39.24</b>	<b>4.18</b>	<b>24.16</b>	<b>7.66</b>	<b>11.80</b>
<b>West Lake Basins</b>	<b>35.36</b>	<b>34.54</b>	<b>62.66</b>	<b>45.04</b>	<b>33.07</b>	<b>23.25</b>	<b>44.02</b>	<b>17.44</b>	<b>27.44</b>	<b>N/A<sup>3</sup></b>	<b>17.70</b>	<b>35.70</b>	<b>N/A<sup>3</sup></b>	<b>N/A<sup>3</sup></b>	<b>10.76</b>	<b>33.10</b>	<b>7.84</b>	<b>40.64</b>	<b>0.70</b>	<b>4.99</b>	<b>9.18</b>	<b>35.93</b>	<b>11.55</b>	<b>22.57</b>
<b>Beaver Dam Lake— All Basins</b>	<b>110.15</b>	<b>43.23</b>	<b>175.98</b>	<b>89.72</b>	<b>144.10</b>	<b>69.58</b>	<b>129.09</b>	<b>85.43</b>	<b>166.02</b>	<b>N/A<sup>3</sup></b>	<b>99.00</b>	<b>145.51</b>	<b>N/A<sup>3</sup></b>	<b>N/A<sup>3</sup></b>	<b>35.88</b>	<b>121.70</b>	<b>10.06</b>	<b>66.96</b>	<b>2.68</b>	<b>44.23</b>	<b>13.36</b>	<b>60.10</b>	<b>19.21</b>	<b>34.37</b>

<sup>1</sup>N/A EWM extent not available because the area was not surveyed

<sup>2</sup>EWM extent is based on survey of limited areas—not the whole lake/bay area. Rabbit Island Bay channels surveyed and a small area near the Eagle Point boat launch which included portions of West Lake and Williams Bay.

**Table 2 (Continued) 2006-2025 EWM Extent in Beaver Dam Lake**

Location	Acreage of EWM (based on plant surveys)															
	July 2018	Fall 2018	July 2019	Fall 2019	July 2020	Fall 2020	July 2021	Fall 2021	July 2022	Fall 2022	July 2023	Fall 2023	July 2024	Fall 2024	July 2025	Fall 2025
Norwegian Bay	0.30	0.65	0.00	0.70	0.00	0.00	0.00	0.00	0.23	0.89	0.00	0.00	0.00	0.00	0.27 <sup>8</sup>	0.00
East Lake	0.00	0.00	0.00	0.00	0.00	0.24 <sup>5</sup>	0.00	0.00	0.00	2.54	0.00	0.00	0.00	0.00	0.48 <sup>8</sup>	1.96
City Bay	0.00	1.56	0.00	0.97	0.00	3.75	0.14	0.27	1.03	11.95	0.00	0.00	0.00	1.84	0.64	2.45
Cemetery Bay	0.00	0.00	1.22	4.10	1.41	0.74	0.27	3.75	7.43	18.69	0.70	3.12	1.65	4.88	0.00	0.39
West Lake	5.46	12.35	1.55	0.36 <sup>3</sup>	4.41	27.89	0.00	2.64	3.99	4.73	0.30	0.00	3.54	11.71	1.55 <sup>8</sup>	2.32
Williams Bay	0.72	0.54	0.27	0.25 <sup>3</sup>	8.76	17.29	0.00	0.71	0.11	0.43	0.38	0.00	0.00	0.00	0.84 <sup>8</sup>	5.10
Rabbit Island Bay	0.27	1.32	0.00	0.62 <sup>4</sup>	3.96	11.26	0.00	0.00	4.59	15.06	0.00	0.73 <sup>6</sup>	3.22	3.21	0.00	0.16
Library Lake	0.76	1.85	0.00	0.04 <sup>3</sup>	0.24	0.51	0.00	0.00	0.04	0.61	0.00	0.00	0.05 <sup>7</sup>	0.00	0.04 <sup>8</sup>	3.55
<b>East Lake Basins</b>	<b>0.30</b>	<b>2.21</b>	<b>1.22</b>	<b>5.77</b>	<b>1.41</b>	<b>4.73</b>	<b>0.41</b>	<b>4.02</b>	<b>8.69</b>	<b>34.07</b>	<b>0.70</b>	<b>3.12</b>	<b>1.65</b>	<b>6.72</b>	<b>1.39</b>	<b>4.80</b>
<b>West Lake Basins</b>	<b>7.21</b>	<b>16.06</b>	<b>1.82</b>	<b>1.27</b>	<b>17.37</b>	<b>56.95</b>	<b>0.00</b>	<b>3.35</b>	<b>8.73</b>	<b>20.83</b>	<b>0.68</b>	<b>0.73</b>	<b>6.81</b>	<b>14.92</b>	<b>2.43</b>	<b>11.14</b>
<b>Beaver Dam Lake— All Basins</b>	<b>7.52</b>	<b>18.27</b>	<b>3.04</b>	<b>7.05</b>	<b>18.78</b>	<b>61.68</b>	<b>0.41</b>	<b>7.37</b>	<b>17.42</b>	<b>54.90</b>	<b>1.38</b>	<b>3.85</b>	<b>8.46</b>	<b>21.64</b>	<b>3.82</b>	<b>15.94</b>

<sup>3</sup>All EWM was rake removed during the 2019 fall plant survey.  
<sup>4</sup>The majority of the EWM in the west canal and all EWM in Rabbit Island Bay were rake removed during the 2019 fall plant survey.  
<sup>5</sup>All EWM was rake removed during the 2020 fall plant survey.  
<sup>6</sup>All EWM was rake removed during the 2023 fall plant survey.  
<sup>7</sup>All EWM was rake removed during the 2024 July plant survey.  
<sup>8</sup>All EWM was rake removed during the 2025 July plant survey.

**Table 3 2006-2025 Percent of Littoral Zone with EWM in Beaver Dam Lake**

Location	Percent of Littoral Zone with EWM (based on plant surveys)																				
	Fall 2006	Fall 2007	Fall 2008	July 2009	Fall 2009	July 2010	Fall 2010	July 2011	Fall 2011	July 2012	Fall 2012	July 2013	Fall 2013	July 2014	Fall 2014	July 2015	Fall 2015	July 2016	Fall 2016	July 2017	Fall 2017
Norwegian Bay	9.52	12.42	47.38	22.62	73.82	31.62	25.13	0.05	51.44	55.47	70.38	5.72	61.11	2.88	46.79	1.18	2.12	6.49	18.15	12.18	16.19
East Lake	0.00	0.00	14.83	12.92	30.75	22.43	27.75	27.27	37.98	17.98	31.71	1.87	24.95	0.53	1.43	0.00	0.00	0.00	3.13	0.93	0.71
City Bay	59.45	3.89	67.15	27.52	60.80	31.92	53.29	47.33	72.68	48.11	55.01	20.42	48.36	0.78	7.17	0.00	6.78	0.00	1.48	2.34	5.06
Cemetery Bay	20.21	0.00	33.00	0.00	3.36	0.00	7.36	1.59	39.53	0.00	13.29	0.00	0.94	0.00	0.48	2.86	58.51	3.15	25.51	0.00	0.00
West Lake	17.60	7.91	23.12	17.13	13.70	11.01	17.52	6.03	10.30	10.67	16.10	7.00	20.29	5.04	20.86	0.00	1.20	4.76	14.86	6.43	14.30
Williams Bay	7.95	22.41	27.70	20.77	10.52	2.52	0.15	10.01	10.19	3.68	15.15	0.72	5.39	0.00	12.29	0.00	0.00	2.02	11.74	3.93	0.54
Rabbit Island Bay	9.56	20.38	21.78	17.43	14.03	10.32	18.91	6.96	13.21	0.84	9.30	0.63	2.39	1.01	5.13	0.00	2.26	2.33	15.72	0.00	1.36
Library Lake	4.81	4.30	26.40	2.92	0.66	0.29	5.25	0.00	0.00	1.46	0.27	0.00	0.45	0.00	0.99	5.11	13.86	0.15	0.00	1.44	3.14
<b>East Lake Basins</b>	<b>29.15</b>	<b>3.39</b>	<b>44.17</b>	<b>17.42</b>	<b>43.28</b>	<b>18.06</b>	<b>33.16</b>	<b>26.51</b>	<b>54.02</b>	<b>31.69</b>	<b>42.81</b>	<b>9.38</b>	<b>34.54</b>	<b>0.87</b>	<b>10.26</b>	<b>1.99</b>	<b>15.30</b>	<b>1.63</b>	<b>9.42</b>	<b>2.93</b>	<b>4.52</b>
<b>West Lake Basins</b>	<b>13.42</b>	<b>13.11</b>	<b>23.78</b>	<b>17.09</b>	<b>12.55</b>	<b>8.82</b>	<b>16.70</b>	<b>6.62</b>	<b>10.41</b>	<b>6.72</b>	<b>13.55</b>	<b>4.08</b>	<b>12.56</b>	<b>2.98</b>	<b>15.42</b>	<b>0.70</b>	<b>1.89</b>	<b>3.48</b>	<b>13.69</b>	<b>4.27</b>	<b>8.35</b>
<b>Beaver Dam Lake— All Basins</b>	<b>21.18</b>	<b>8.31</b>	<b>33.84</b>	<b>17.25</b>	<b>27.71</b>	<b>13.38</b>	<b>24.82</b>	<b>16.43</b>	<b>31.92</b>	<b>19.04</b>	<b>27.98</b>	<b>6.90</b>	<b>23.40</b>	<b>1.93</b>	<b>12.87</b>	<b>2.68</b>	<b>8.50</b>	<b>2.57</b>	<b>11.58</b>	<b>3.62</b>	<b>6.47</b>

**Table 3 (Continued) 2006-2025 Percent of Littoral Zone with EWM in Beaver Dam Lake**

Location	Percent of Littoral Zone with EWM (based on plant surveys)															
	July 2018	Fall 2018	July 2019	Fall 2019	July 2020	Fall 2020	July 2021	Fall 2021	July 2022	Fall 2022	July 2023	Fall 2023	July 2024	Fall 2024	July 2025	Fall 2025
Norwegian Bay	0.78	1.70	0.00	1.83	0.00	0.00	0.00	0.00	0.61	2.32	0.00	0.00	0.00	0.00	0.71 <sup>6</sup>	0.00
East Lake	0.00	0.00	0.00	0.00	0.00	0.36 <sup>3</sup>	0.00	0.00	0.00	3.80	0.00	0.00	0.00	0.00	0.72 <sup>6</sup>	2.94
City Bay	0.00	1.54	0.00	0.96	0.00	3.70	0.14	0.26	1.01	11.79	0.00	0.00	0.00	1.81	0.63	2.42
Cemetery Bay	0.00	0.00	2.26	7.60	2.62	1.37	0.49	6.96	13.78	34.65	1.30	5.78	3.07	9.04	0.00	0.73
West Lake	3.70	8.37	1.05	0.24 <sup>1</sup>	2.99	18.90	0.00	1.79	2.70	3.20	0.20	0.00	2.40	7.93	1.05 <sup>6</sup>	1.57
Williams Bay	1.51	1.13	0.57	0.52 <sup>1</sup>	18.40	36.30	0.00	1.49	0.22	0.90	0.80	0.00	0.00	0.00	1.77 <sup>6</sup>	10.71
Rabbit Island Bay	0.44	2.16	0.00	1.01 <sup>2</sup>	6.47	18.40	0.00	0.00	7.50	24.62	0.00	1.19 <sup>4</sup>	5.26	5.25	0.00	0.76
Library Lake	5.54	13.49	0.00	0.29 <sup>1</sup>	1.76	3.69	0.00	0.00	0.32	4.46	0.00	0.00	0.36 <sup>5</sup>	0.00	0.14 <sup>6</sup>	25.92
<b>East Lake Basins</b>	<b>0.12</b>	<b>0.85</b>	<b>0.47</b>	<b>2.22</b>	<b>0.54</b>	<b>1.82</b>	<b>0.16</b>	<b>1.54</b>	<b>3.34</b>	<b>13.09</b>	<b>0.27</b>	<b>1.20</b>	<b>0.64</b>	<b>2.58</b>	<b>0.53</b>	<b>1.85</b>
<b>West Lake Basins</b>	<b>2.67</b>	<b>5.95</b>	<b>0.67</b>	<b>0.47</b>	<b>6.43</b>	<b>21.08</b>	<b>0.00</b>	<b>1.24</b>	<b>3.23</b>	<b>7.71</b>	<b>0.25</b>	<b>0.27</b>	<b>2.52</b>	<b>5.52</b>	<b>0.90</b>	<b>4.12</b>
<b>Beaver Dam Lake— All Basins</b>	<b>1.42</b>	<b>3.45</b>	<b>0.57</b>	<b>1.33</b>	<b>3.54</b>	<b>11.63</b>	<b>0.08</b>	<b>1.39</b>	<b>3.28</b>	<b>10.35</b>	<b>0.26</b>	<b>0.73</b>	<b>1.60</b>	<b>4.08</b>	<b>0.72</b>	<b>3.01</b>

<sup>1</sup>All EWM was rake removed during the 2019 fall plant survey.  
<sup>2</sup>The majority of the EWM in the west canal and all EWM in Rabbit Island Bay were rake removed during the 2019 fall plant survey.  
<sup>3</sup>All EWM was rake removed during the 2020 fall plant survey.  
<sup>4</sup>All EWM was rake removed during the 2023 fall plant survey.  
<sup>5</sup>All EWM was rake removed during the 2024 July plant survey.  
<sup>6</sup>All EWM was rake removed during the 2025 July plant survey.

## 1 2025 Herbicide Treatment of EWM

Based upon the results of a fall 2024 aquatic plant survey, the Beaver Dam Lake Management District applied for a 2025 WDNR permit to treat 69.65 acres of EWM (13 percent of the lake's 530-acre littoral area) with herbicide (Appendix J of the *Beaver Dam Lake Aquatic Plant Management Plan*).<sup>1</sup> The proposed 2025 herbicide treatment included:

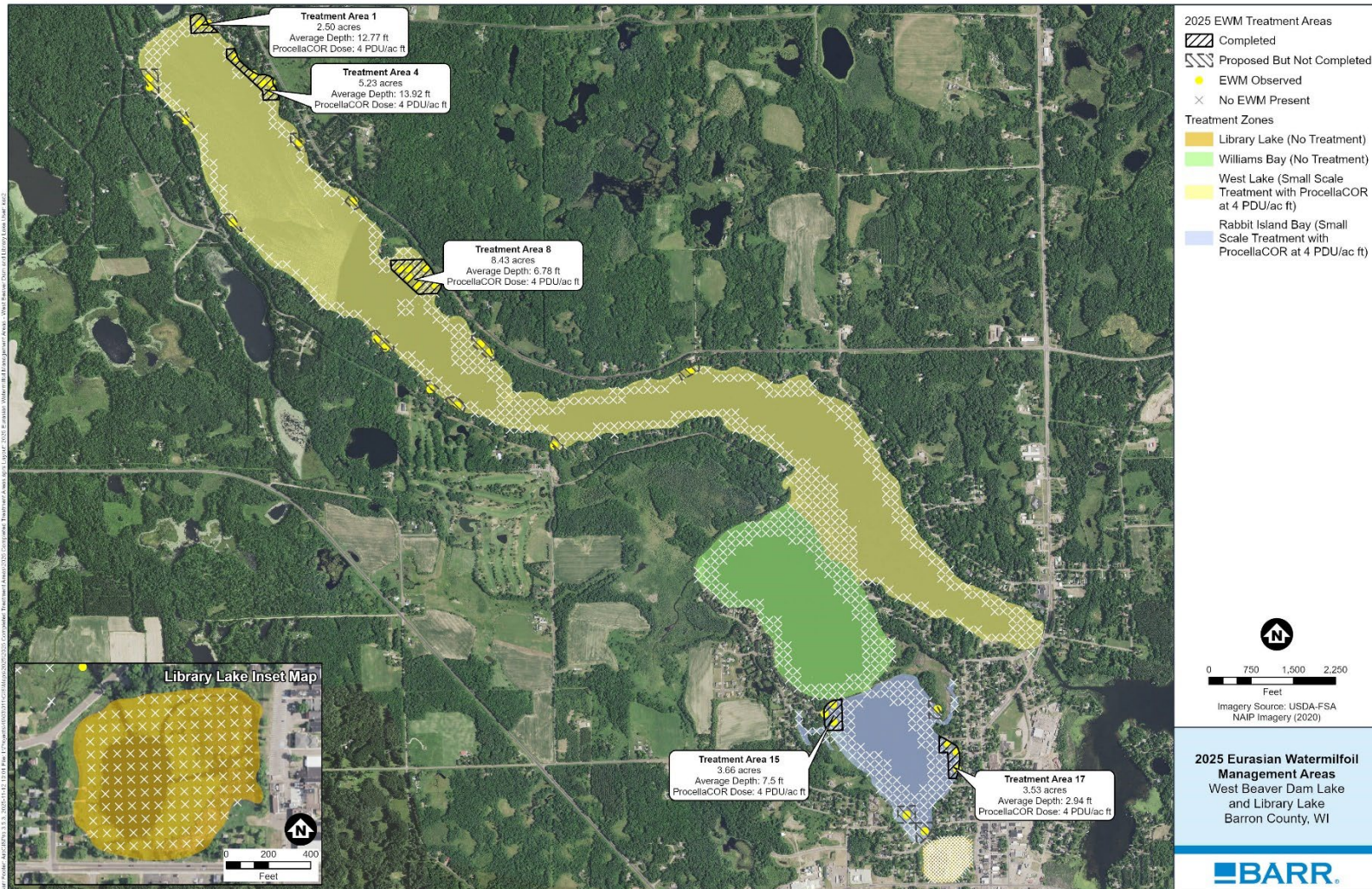
- ProcellaCOR treatment of:
  - Areas in City Bay totaling 10.48 acres,
  - Areas in Rabbit Island Bay totaling 12.40 acres, and
  - Areas in West Lake totaling 29.63 acres.
- 2,4-D treatment of areas in Cemetery Bay totaling 17.14 acres.

On April 23, the WDNR approved herbicide treatment for 8.43 acres of EWM but excluded 61.22 acres proposed for 2025. After a permit review was requested by the Beaver Dam Lake Management District on May 22, a compromise led to a revised permit on June 5, allowing treatment of 42.26 acres (Figure 2 and Figure 3). The WDNR permitted treatment included:

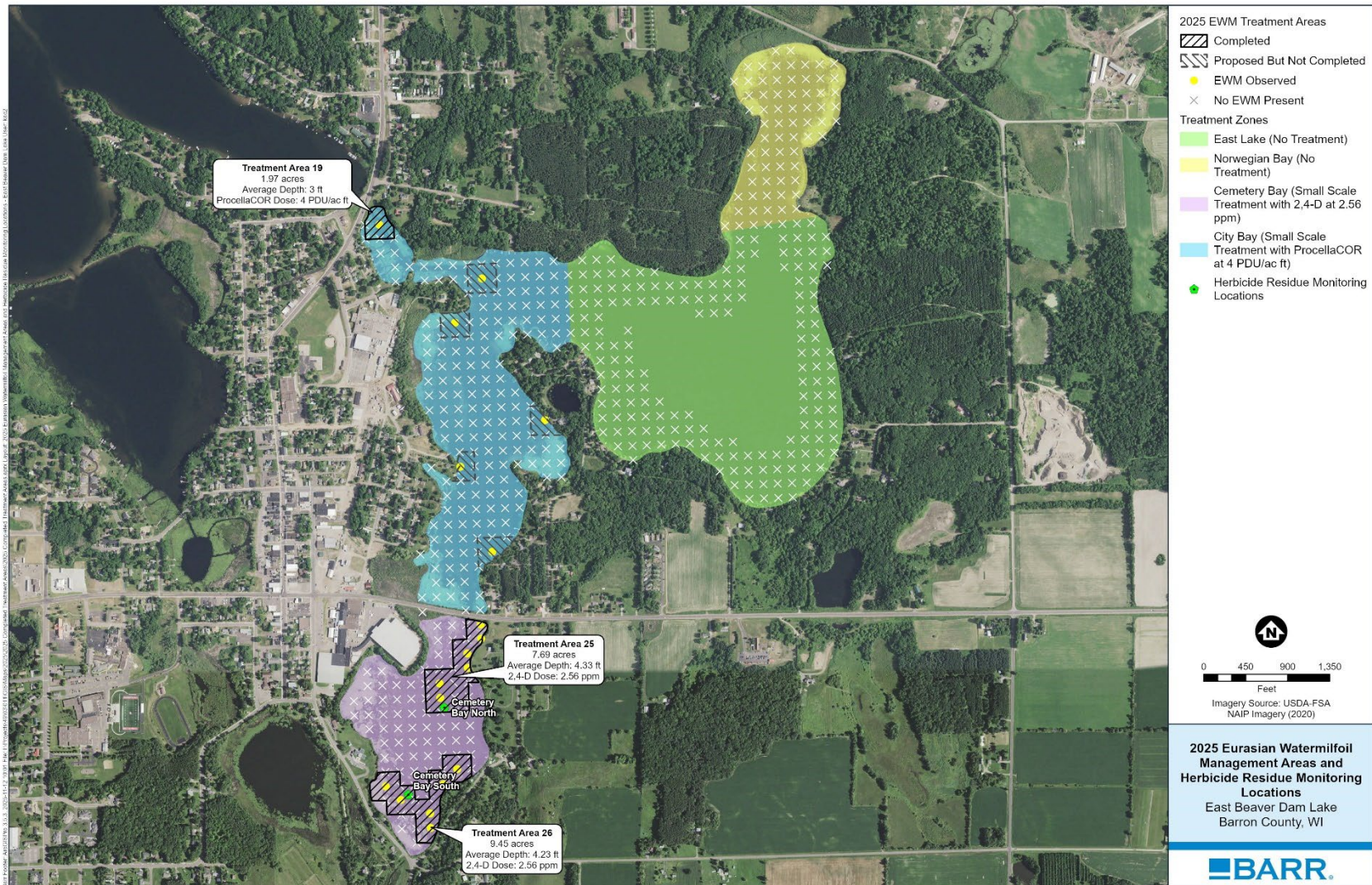
- ProcellaCOR treatment of:
  - Areas in City Bay totaling 1.97 acres,
  - Areas in Rabbit Island Bay totaling 7.19 acres, and
  - Areas in West Lake totaling 16.16 acres.
- 2,4-D treatment of areas in Cemetery Bay totaling 17.14 acres.

No herbicide was applied in Williams Bay, Library Lake, East Lake, or Norwegian Bay in 2025 because EWM was not observed in fall 2024.

To: Beaver Dam Lake Management District (Board of Commissioners)  
 From: Barr Engineering Co. Barr Engineering, Co. (Meg Rattei, Senior Biologist)  
 Subject: 2025 Eurasian Watermilfoil (EWM) Treatment and Monitoring Results  
 Date: November 12, 2025  
 Page: 7



**Figure 2** 2025 Beaver Dam Lake Eurasian Watermilfoil Management Areas : West Basins



**Figure 3 2025 Beaver Dam Lake Eurasian Watermilfoil Management Areas : East Basins**

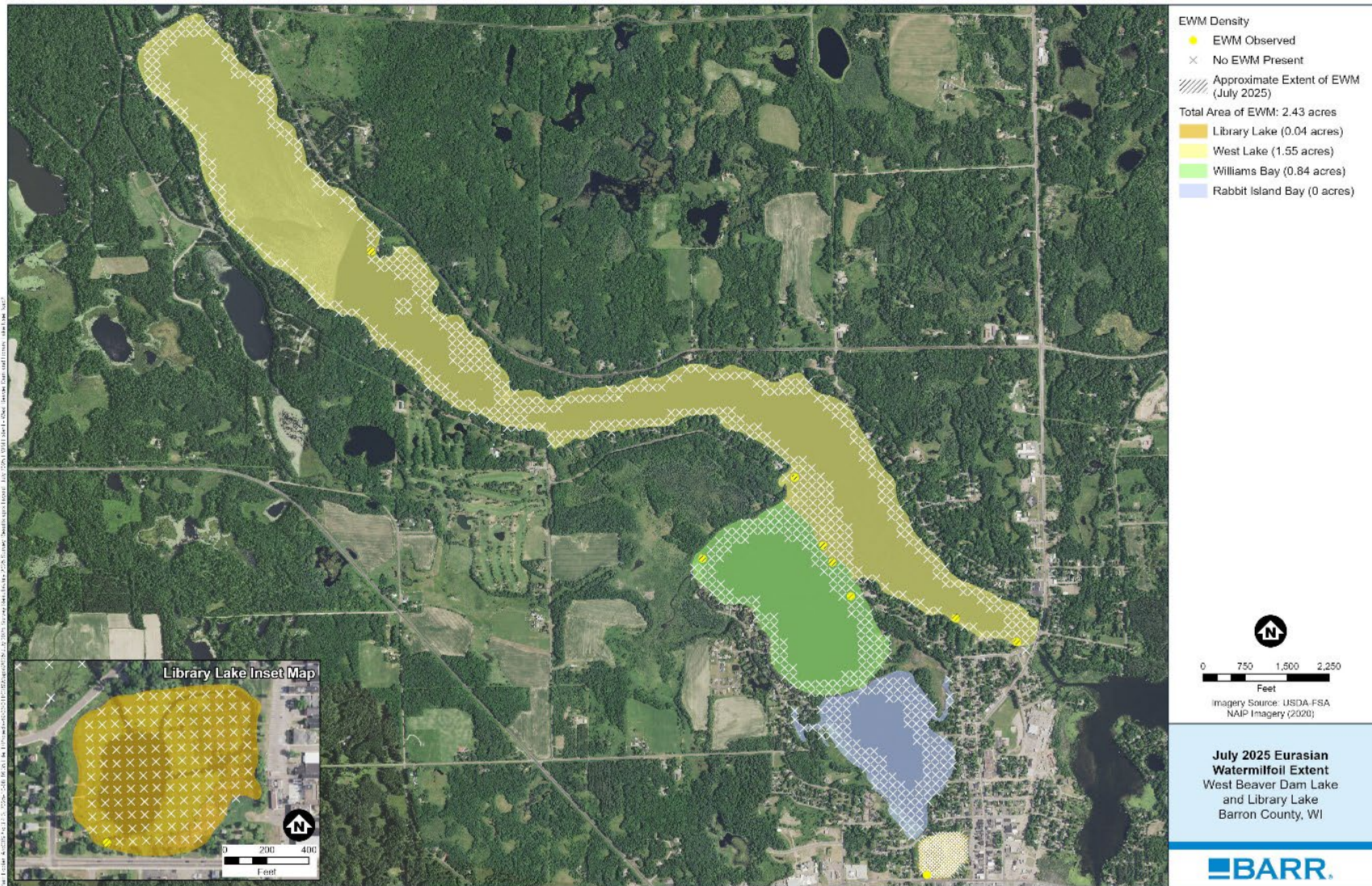
## 2 Lake-Wide EWM

Figure 4, Figure 5, Figure 6, and Figure 7 show 2025 EWM coverage in Beaver Dam Lake. The June 2025 herbicide treatment of 42.46 acres effectively reduced EWM frequency, extent, and littoral area percentage between fall 2024 and summer 2025.

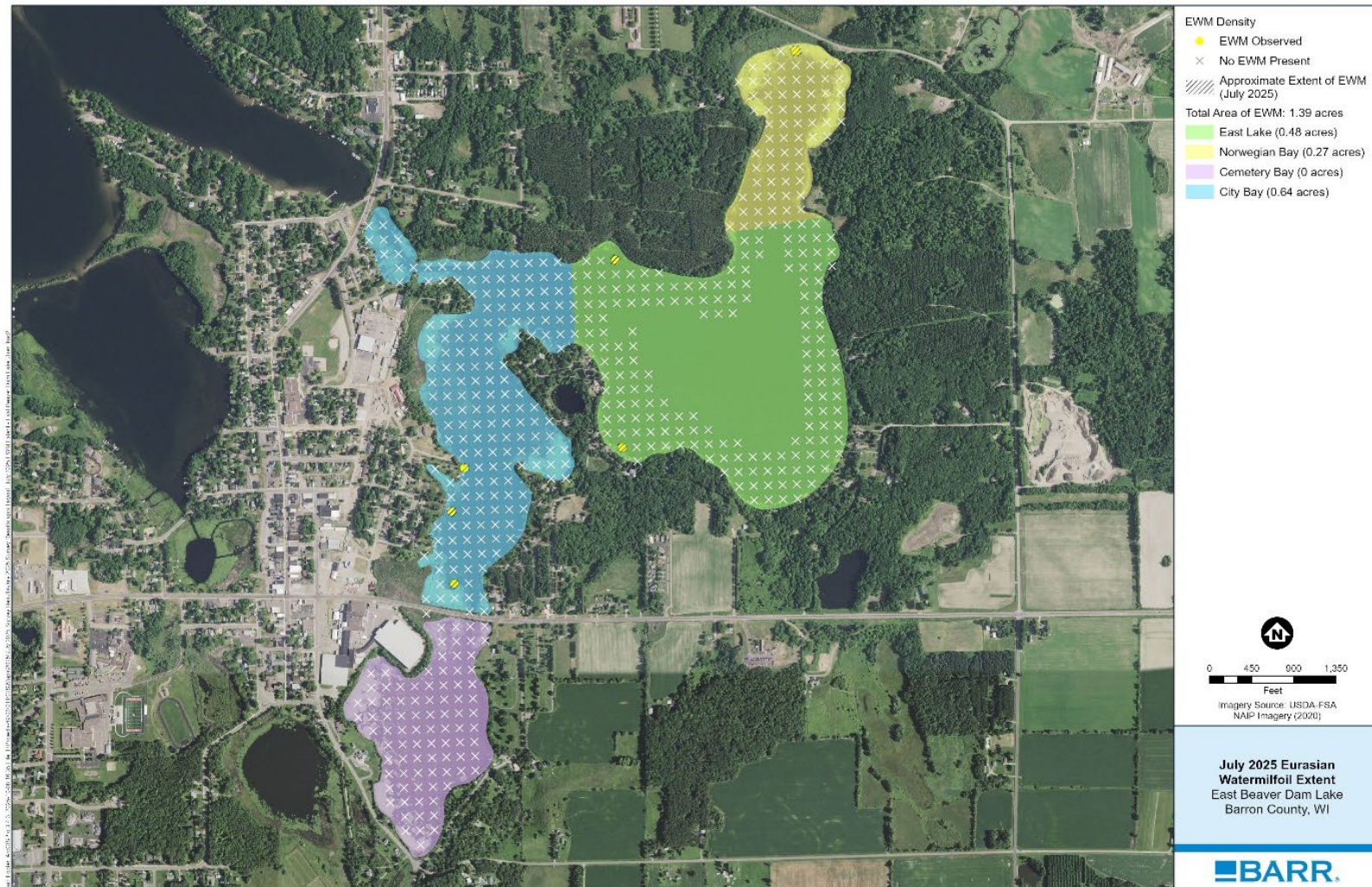
- EWM frequency decreased from 5 percent in October 2024 to 1 percent in July 2025 (Table 1 and Figure 8).
- EWM extent decreased from 22 acres in October 2024 to 4 acres in July 2025 (Table 2 and Figure 9).
- The percent of littoral zone with EWM decreased from 4 percent in October 2024 to 1 percent in July 2025 (Table 3 and Figure 10).

WDNR did not permit herbicide treatment for 27.19 acres of EWM in 2025. As a result, EWM spread between July (Figure 4 and Figure 5) and October (Figure 6 and Figure 7), driven by self-fragmentation, boat dispersal, spread by underground stems, and possibly seeds from prior years.

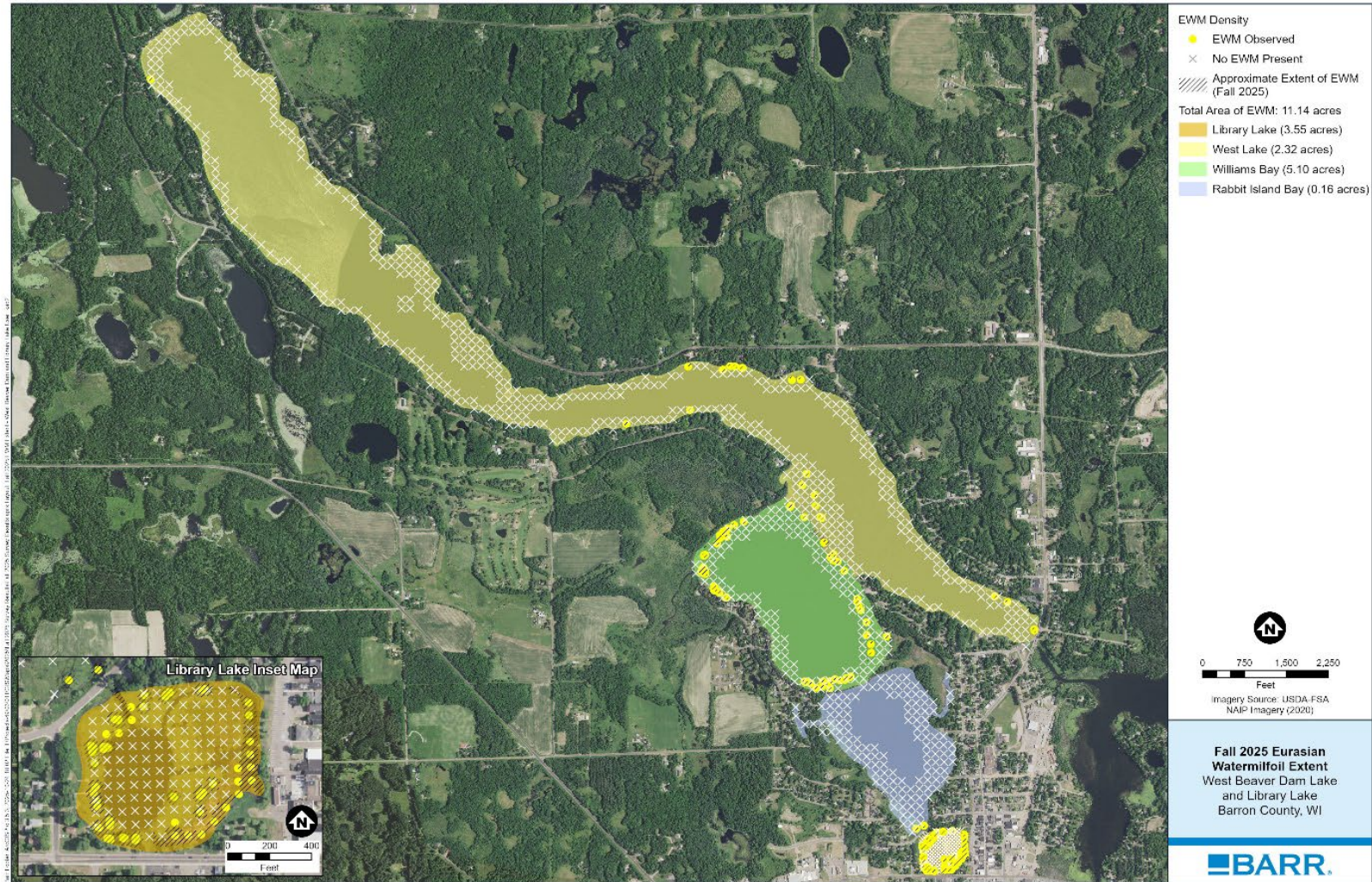
- EWM frequency rose from 1 percent in July to 5 percent in October (Table 1 and Figure 8).
- EWM extent expanded from 4 acres in July to 16 acres in October (Table 2 and Figure 9).
- The percentage of the littoral zone with EWM increased from 1 percent in July to 3 percent in October (Table 3 and Figure 10).



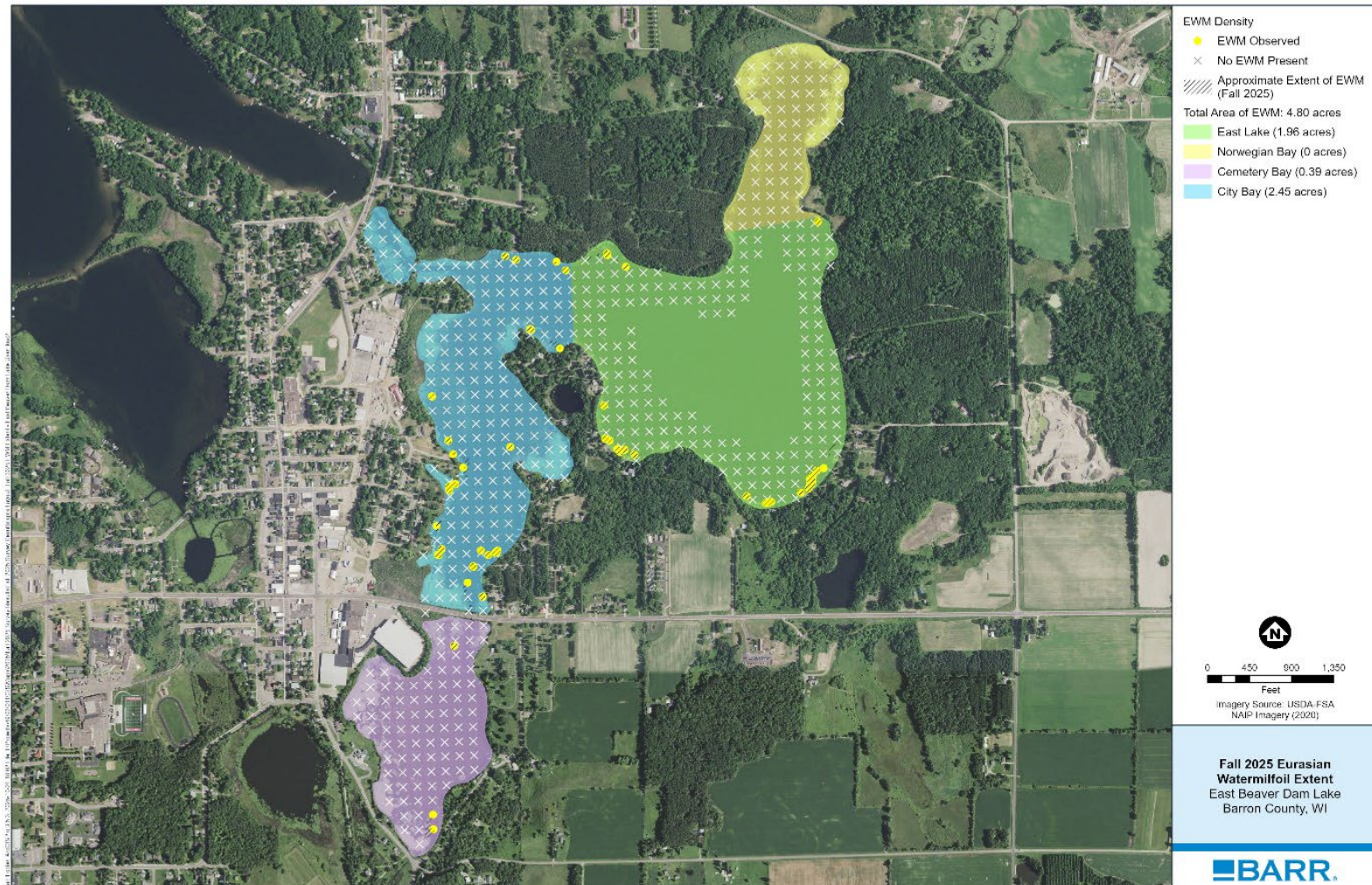
**Figure 4 July 2025 EWM Extent in Beaver Dam Lake (West Basins)**



**Figure 5 July 2025 EWM Extent in Beaver Dam Lake (East Basins)**



**Figure 6** October 2025 EWM Extent in Beaver Dam Lake (West Basins)



**Figure 7** October 2025 EWM Extent in Beaver Dam Lake (East Basins)

### 2006-2025 Beaver Dam Lake Frequency of Occurrence

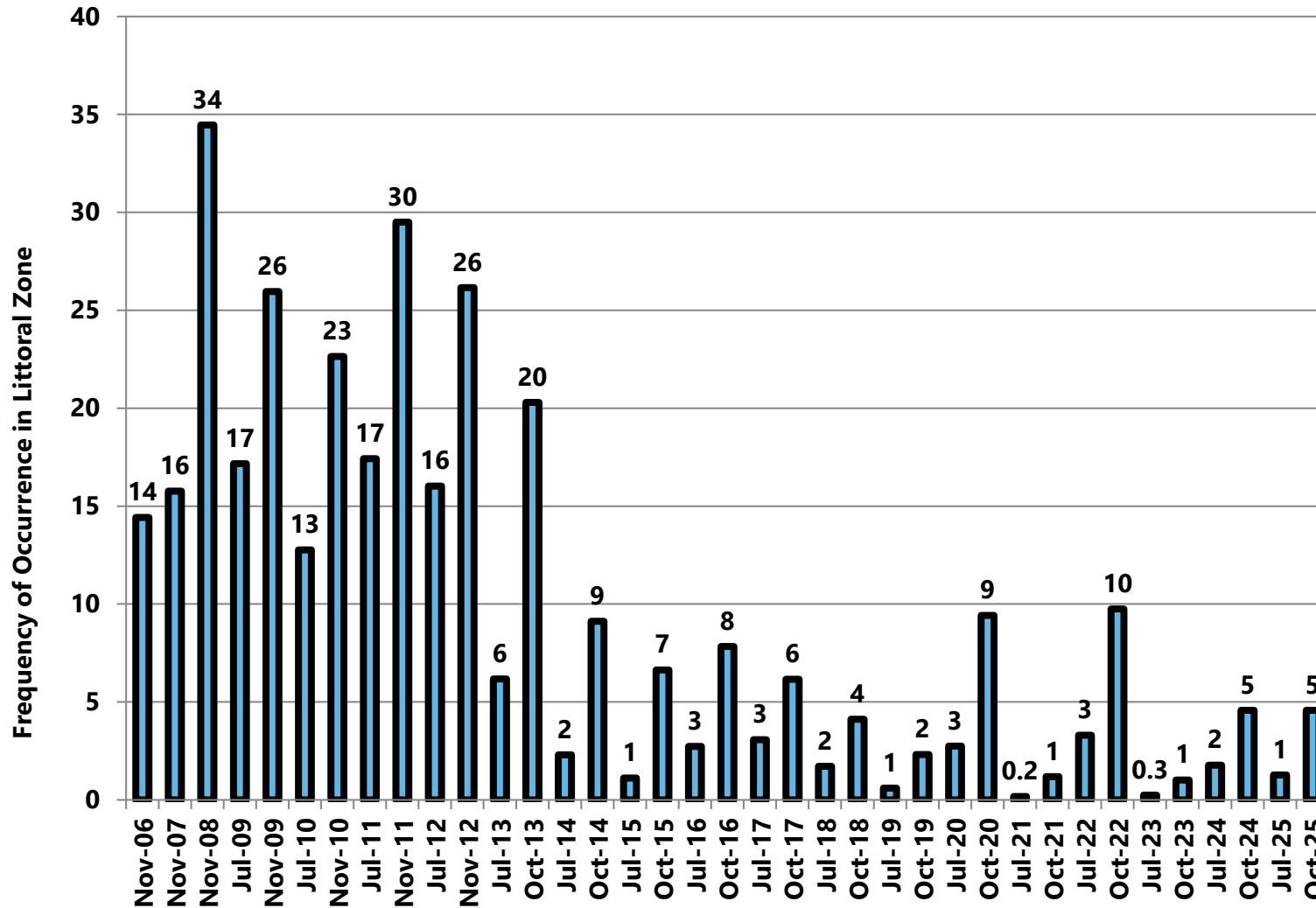


Figure 8 2006-2025 Beaver Dam Lake Frequency of Occurrence in the Littoral Zone

### 2006-2025 Beaver Dam Lake EWM Extent

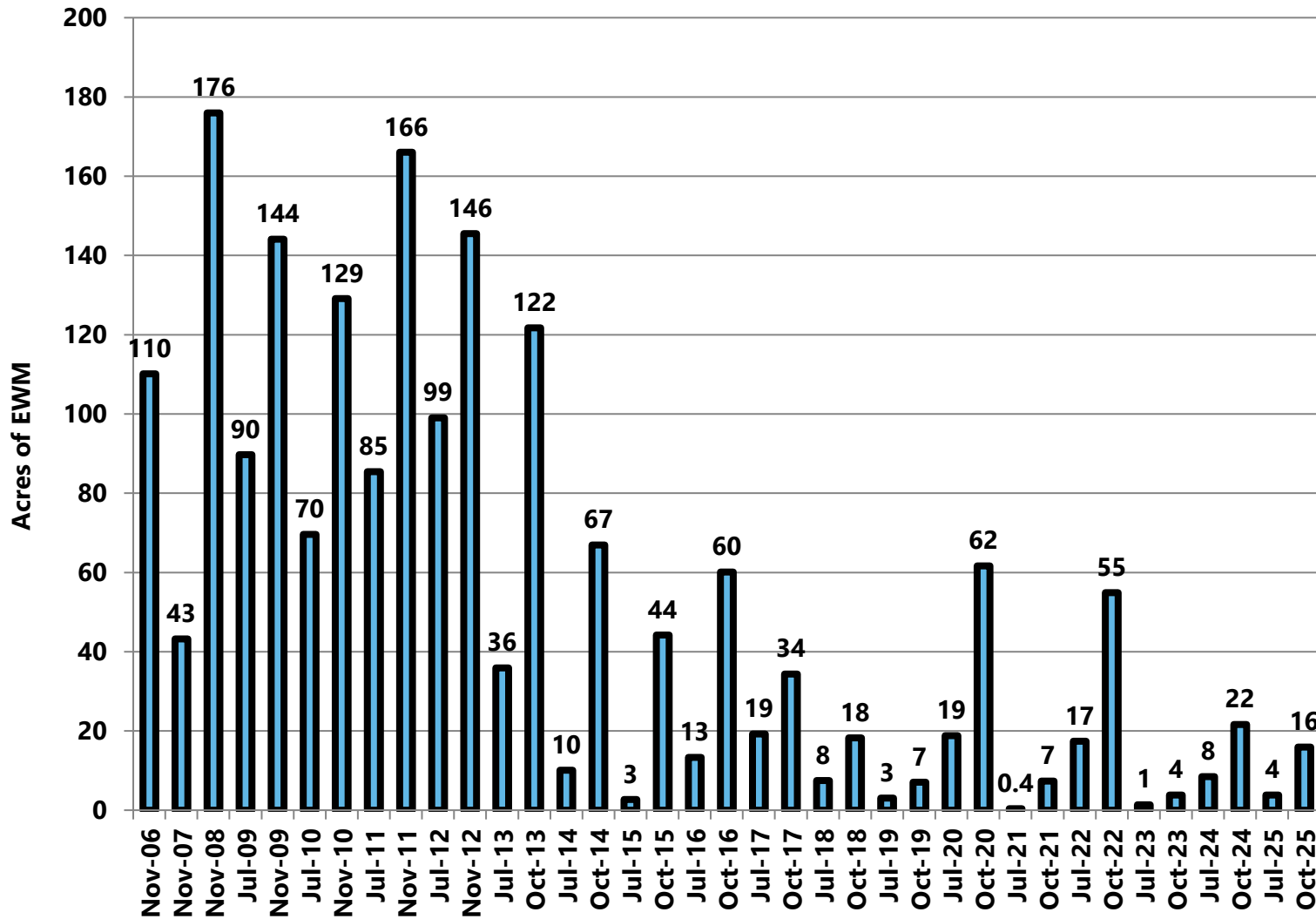


Figure 9 2006-2025 Beaver Dam Lake EWM Acreage

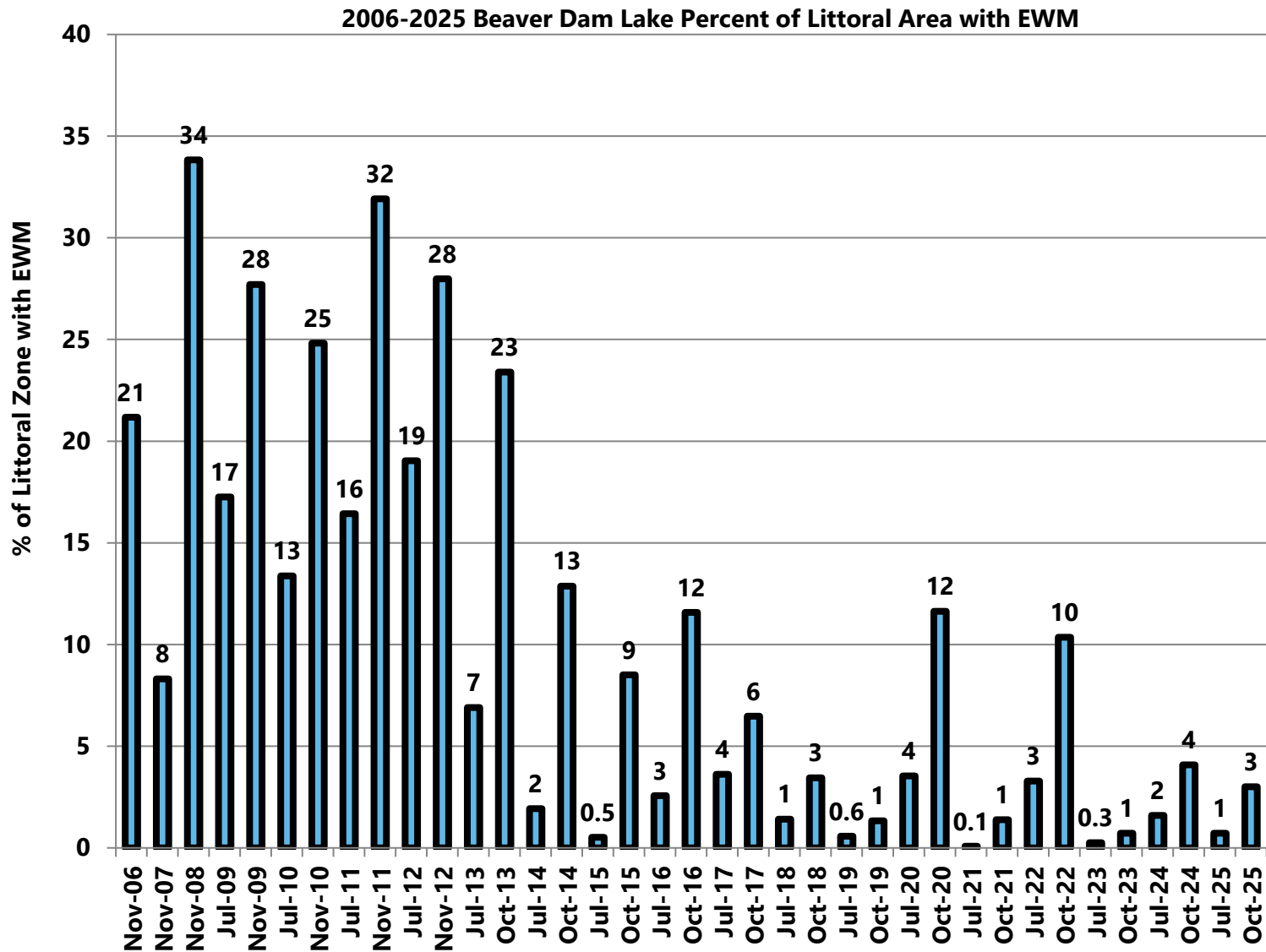


Figure 10 2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM

### 3 Individual Bays/Basins EWM

#### West Lake EWM

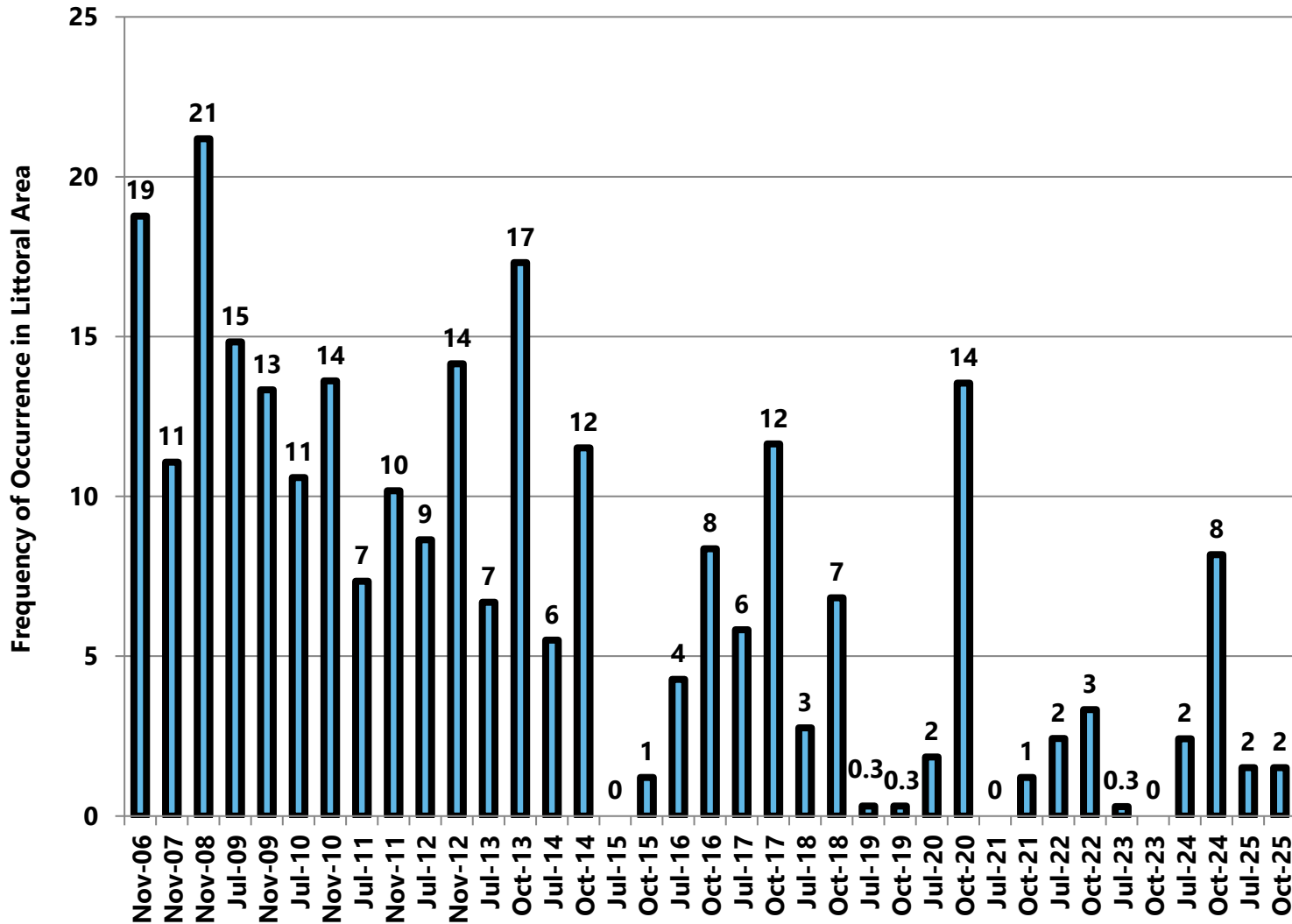
Figure 4 and Figure 6 show EWM extent in West Lake in 2025. The June 2025 ProcellaCOR treatment (16.16 acres) reduced EWM from fall 2024 to summer 2025; however, complete removal was not achieved because WDNR did not permit treatment of an additional 13.47 acres:

- Frequency: 8% (Oct 2024) to 2% (July 2025) (Table 1, Figure 11)
- Extent: 12 acres to 2 acres (Table 2, Figure 12)
- Percent of littoral zone with EWM: 8% to 1% (Table 3, Figure 13)

All EWM plants observed in July were removed with a rake. However, between July and October, EWM reappeared. This resurgence is attributed to regrowth from surviving root crowns within the sediment or boat dispersal.

- Frequency remained at 2% (Table 1, Figure 11)
- Extent increased from 1.5 to 2.3 acres (Table 2, Figure 12)
- Percent of littoral zone with EWM rose from 1.1% to 1.6% (Table 3, Figure 13)

**2006-2025 Beaver Dam Lake EWM Frequency of Occurrence: West Lake**



**Figure 11** 2006-2025 Beaver Dam Lake EWM Frequency of Occurrence in Littoral Zone: West Lake

2006-2025 Beaver Dam Lake EWM Extent: West Lake

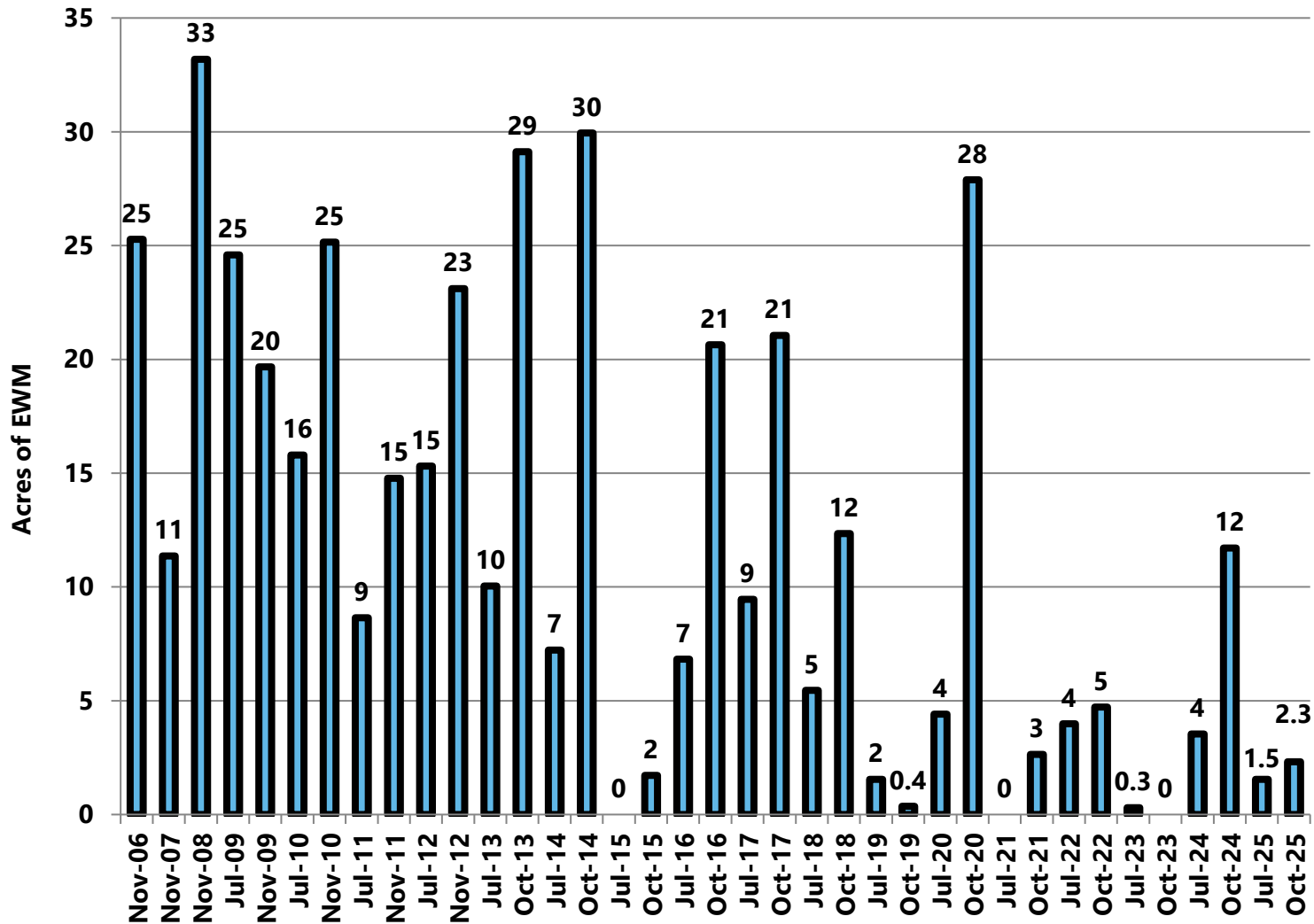
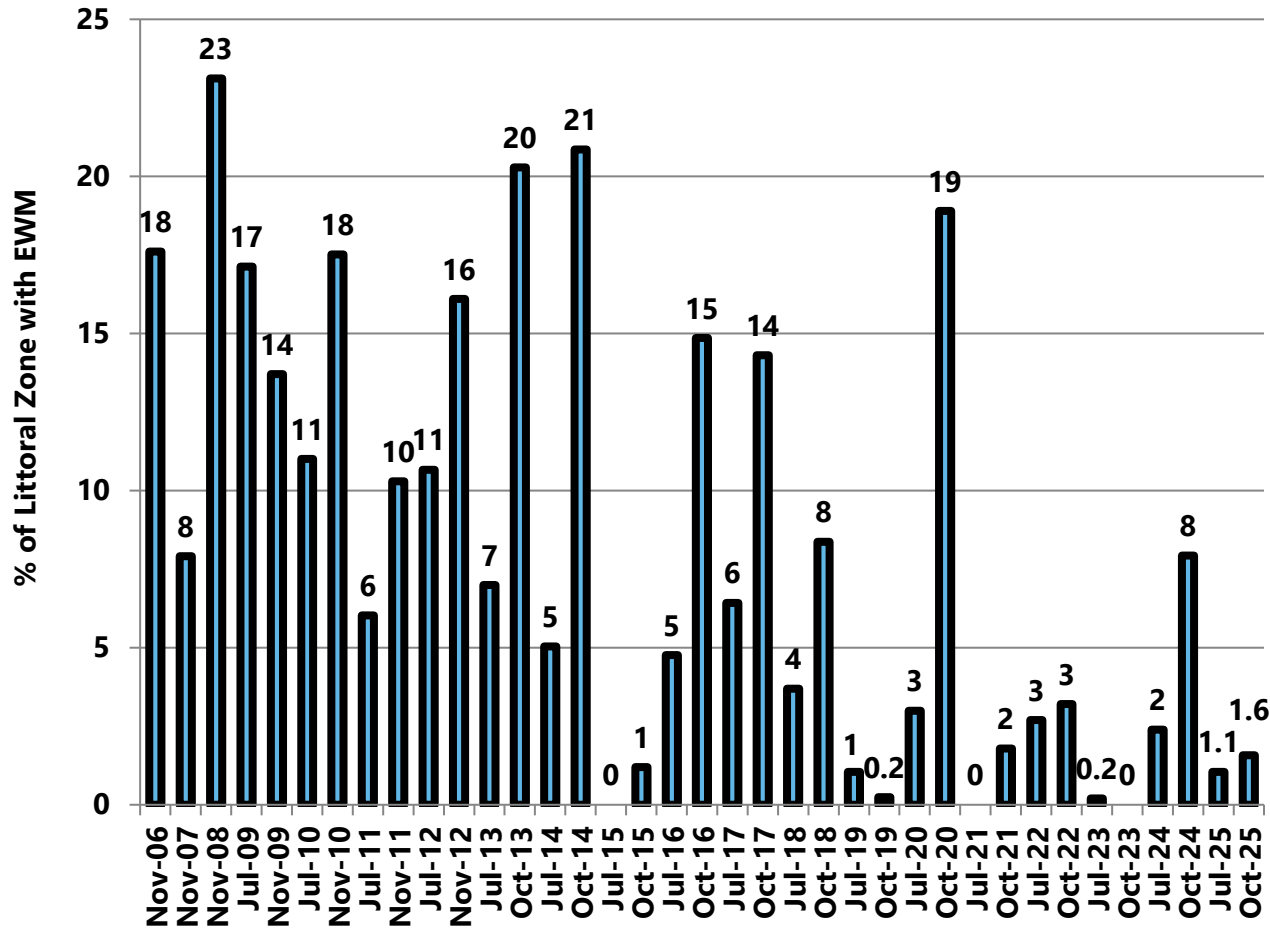


Figure 12 2006-2025 Beaver Dam Lake Acreage: West Lake

**2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: West Lake**



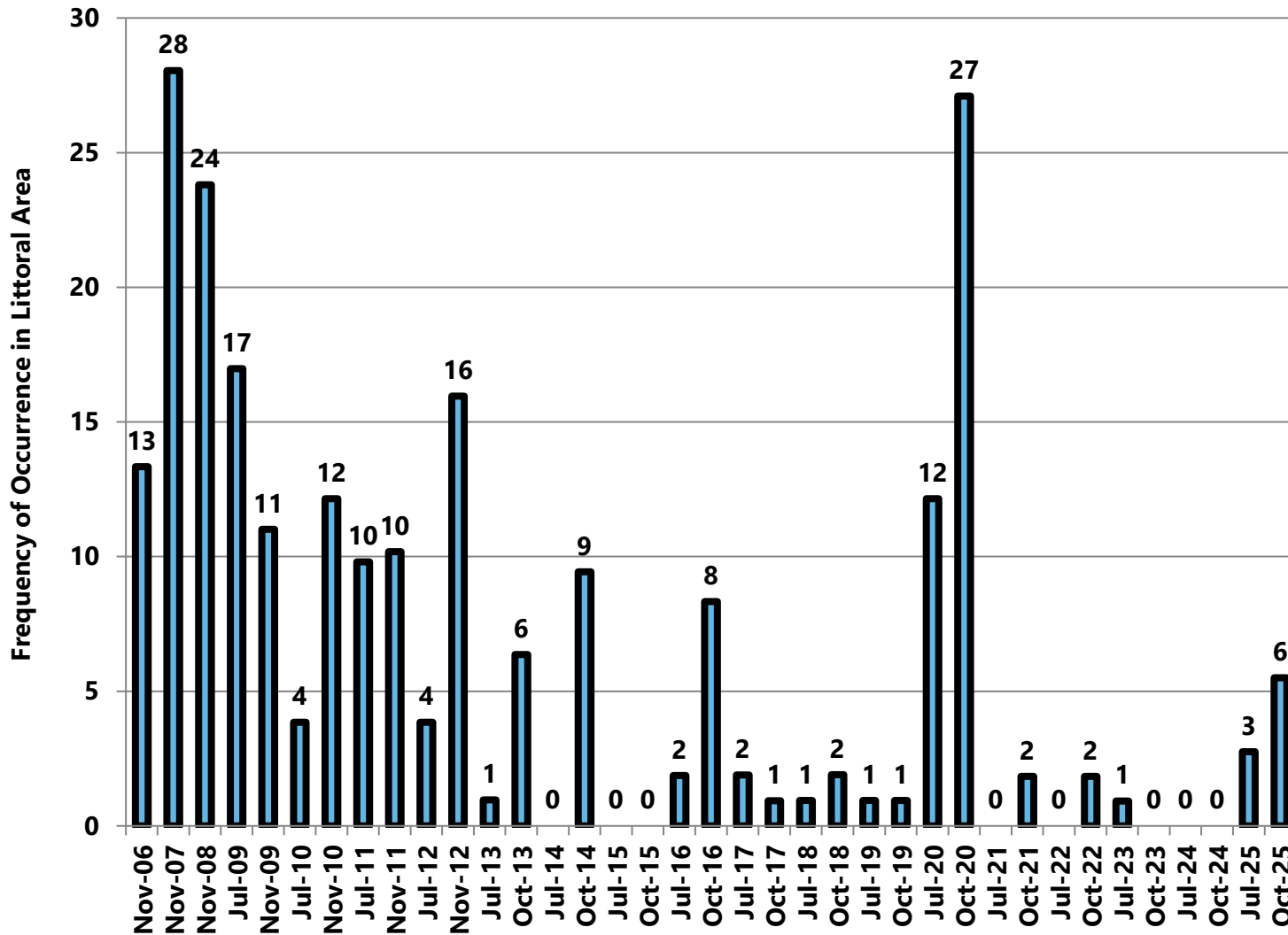
**Figure 13** 2006-2025 Percent of Littoral Zone with EWM: West Lake

## Williams Bay EWM

Figure 4 and Figure 6 show the extent of EWM in Williams Bay. Herbicide was not used in 2025 because EWM was not observed in fall 2024. In summer 2025, EWM was detected again, and all plants were removed using a rake. EWM was also found in fall 2025. Its return in 2025 is likely due to boat dispersal.

- Frequency rose from 0% (Oct 2024) to 3% (Jul 2025) to 6% (Oct 2025) (Table 1, Figure 14)
- Extent went from 0 acres (Oct 2024) to 1 acre (Jul 2025) to 5 acres (Oct 2025) (Table 2, Figure 15)
- Percent of littoral zone with EWM climbed from 0% to 2% (Jul 2025) to 11% (Oct 2025) (Table 3, Figure 16)

**2006-2025 Beaver Dam Lake EWM Frequency of Occurrence: Williams Bay**



**Figure 14** 2006-2025 Beaver Dam Lake EWM Frequency of Occurrence in Littoral Zone: Williams Bay

### 2006-2025 Beaver Dam Lake EWM Extent: Williams Bay

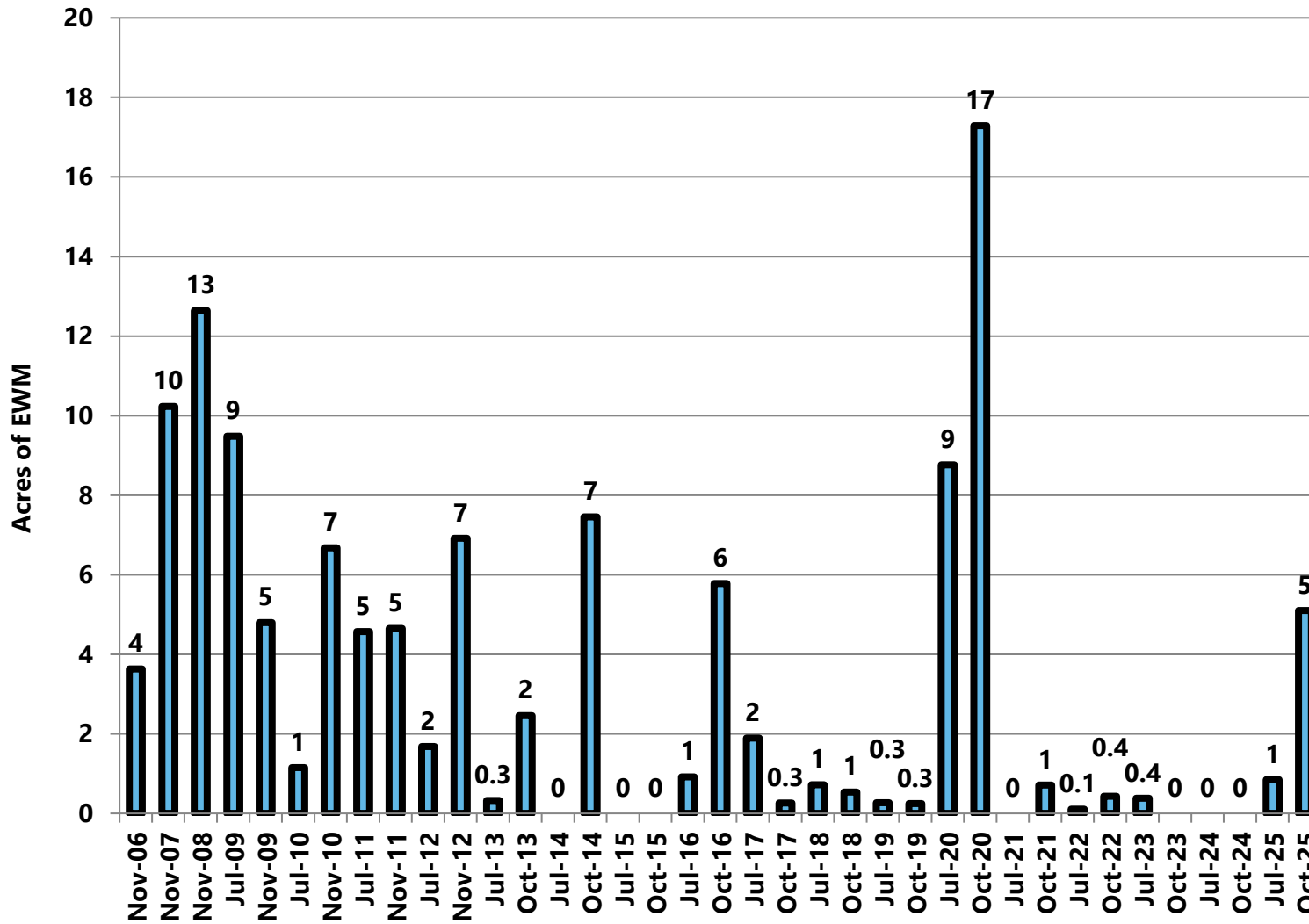


Figure 15 2006-2025 Beaver Dam Lake Acreage: Williams Bay

2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: Williams Bay

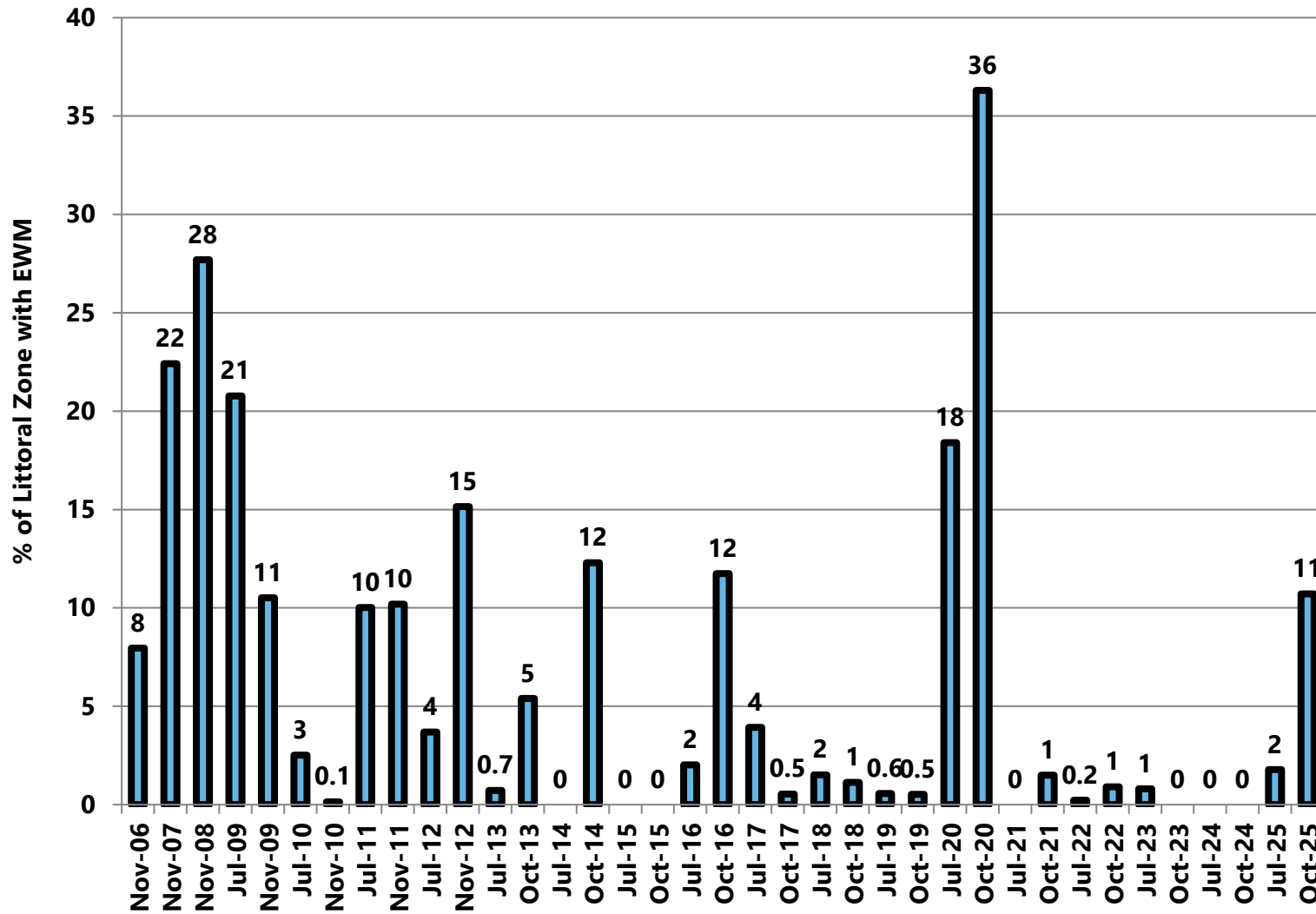


Figure 16 2006-2025 Percent of Littoral Zone with EWM: Williams Bay

## Rabbit Island Bay EWM

Figure 4 and Figure 6 show the EWM coverage in Rabbit Island Bay for 2025. The June 2025 ProcellaCOR treatment (7.19 acres) eliminated all living EWM from the bay, with only a few dead plants found during July sampling.

- Frequency: dropped from 8% (Oct 2024) to 0% (July 2025) (see Table 1, Figure 17)
- Extent: decreased from 3 acres to 0 acres (see Table 2, Figure 18)
- Percent of littoral zone with EWM: reduced from 5% to 0% (see Table 3, Figure 19)

By October, EWM reappeared. The reappearance is likely due to boat dispersal.

- EWM frequency remained at 0% (Table 1, Figure 11)
- EWM extent rose from 0 to 0.2 acres (Table 2, Figure 12)
- Percent of littoral zone with EWM went from 0% to 0.3% (Table 3, Figure 13)

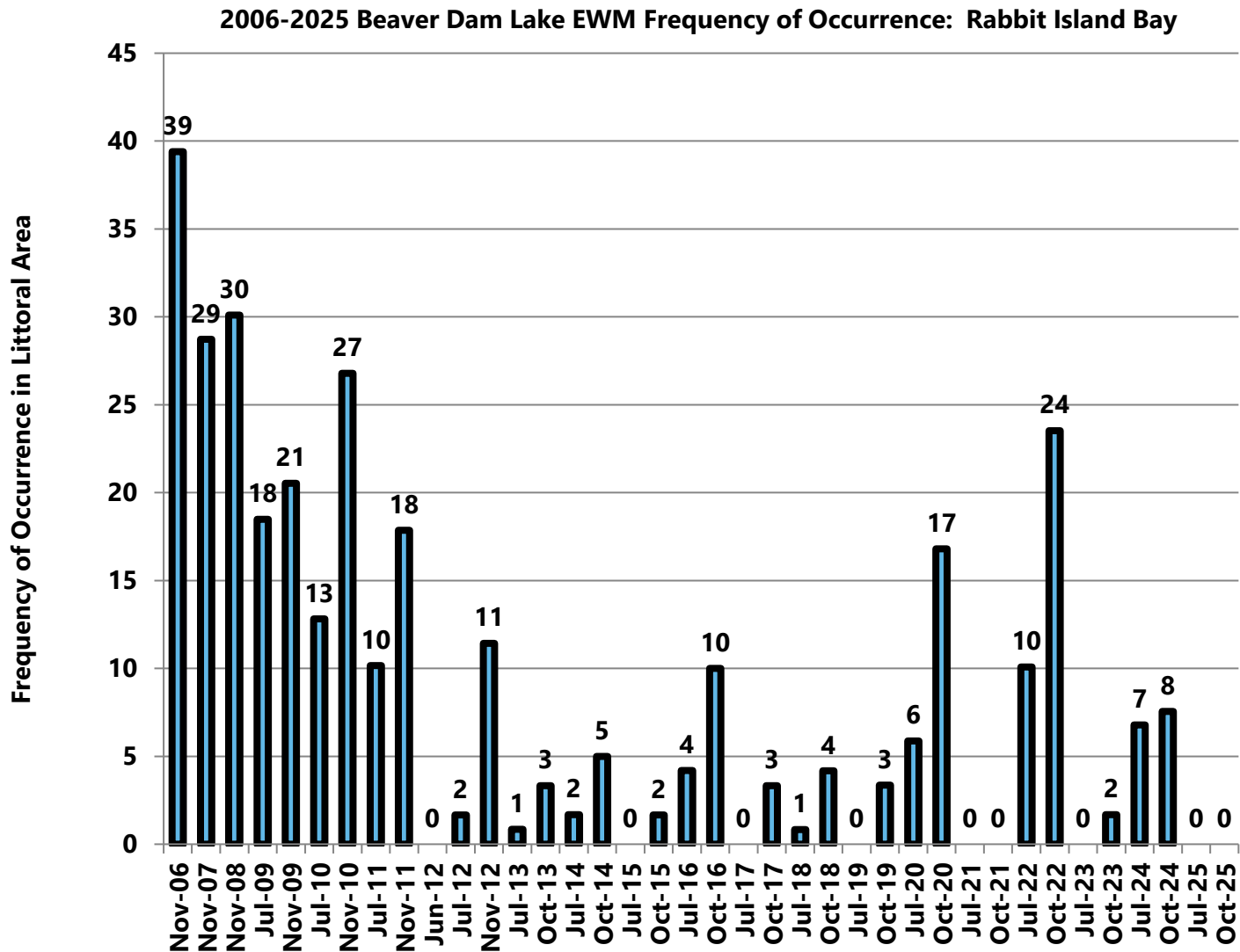
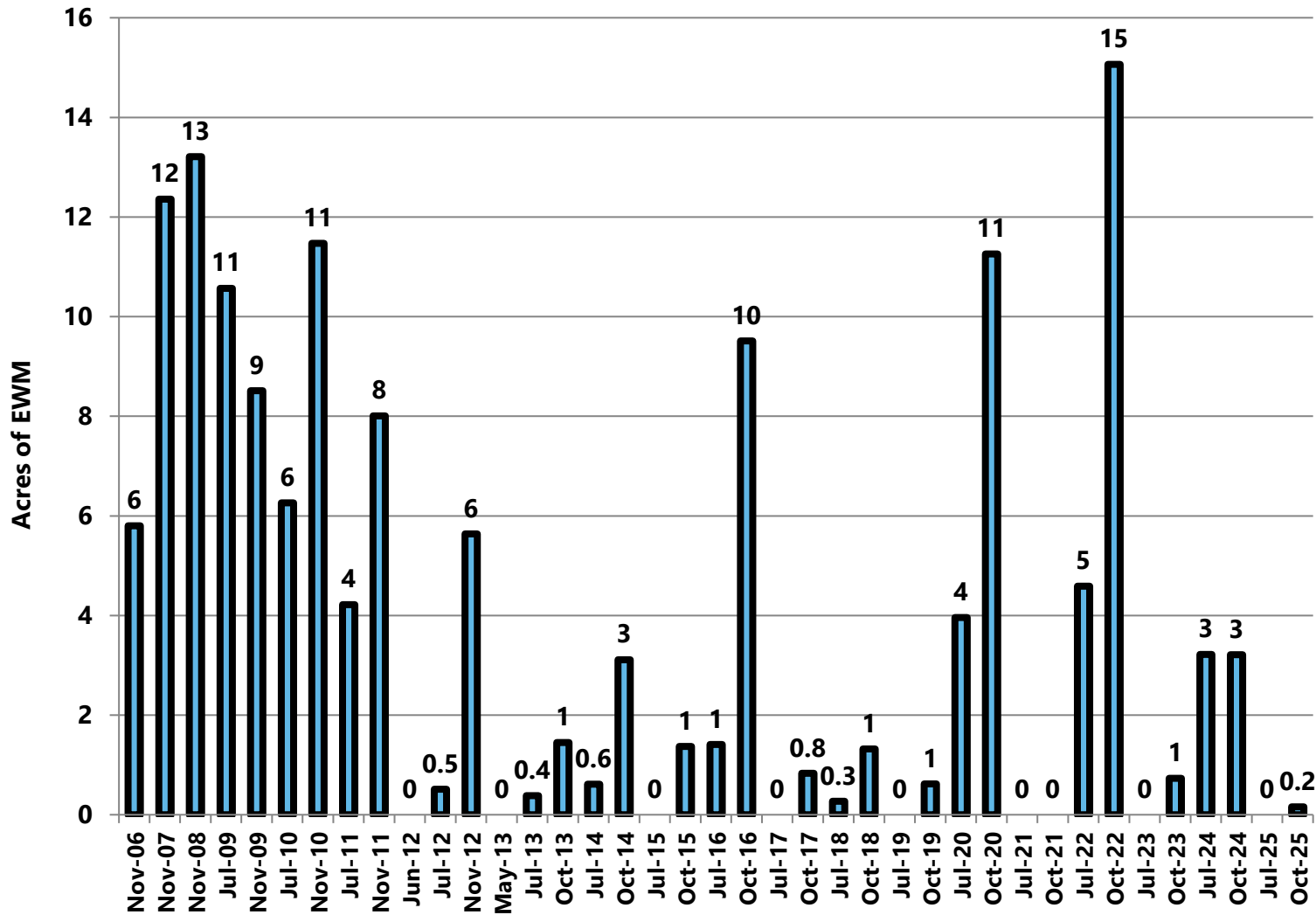


Figure 17 2006-2025 Beaver Dam Lake EWM Frequency of Occurrence in Littoral Zone: Rabbit Island Bay

**2006-2025 Beaver Dam Lake EWM Extent: Rabbit Island Bay**



**Figure 18** 2006-2025 Beaver Dam Lake EWM Acreage: Rabbit Island Bay

2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: Rabbit Island Bay

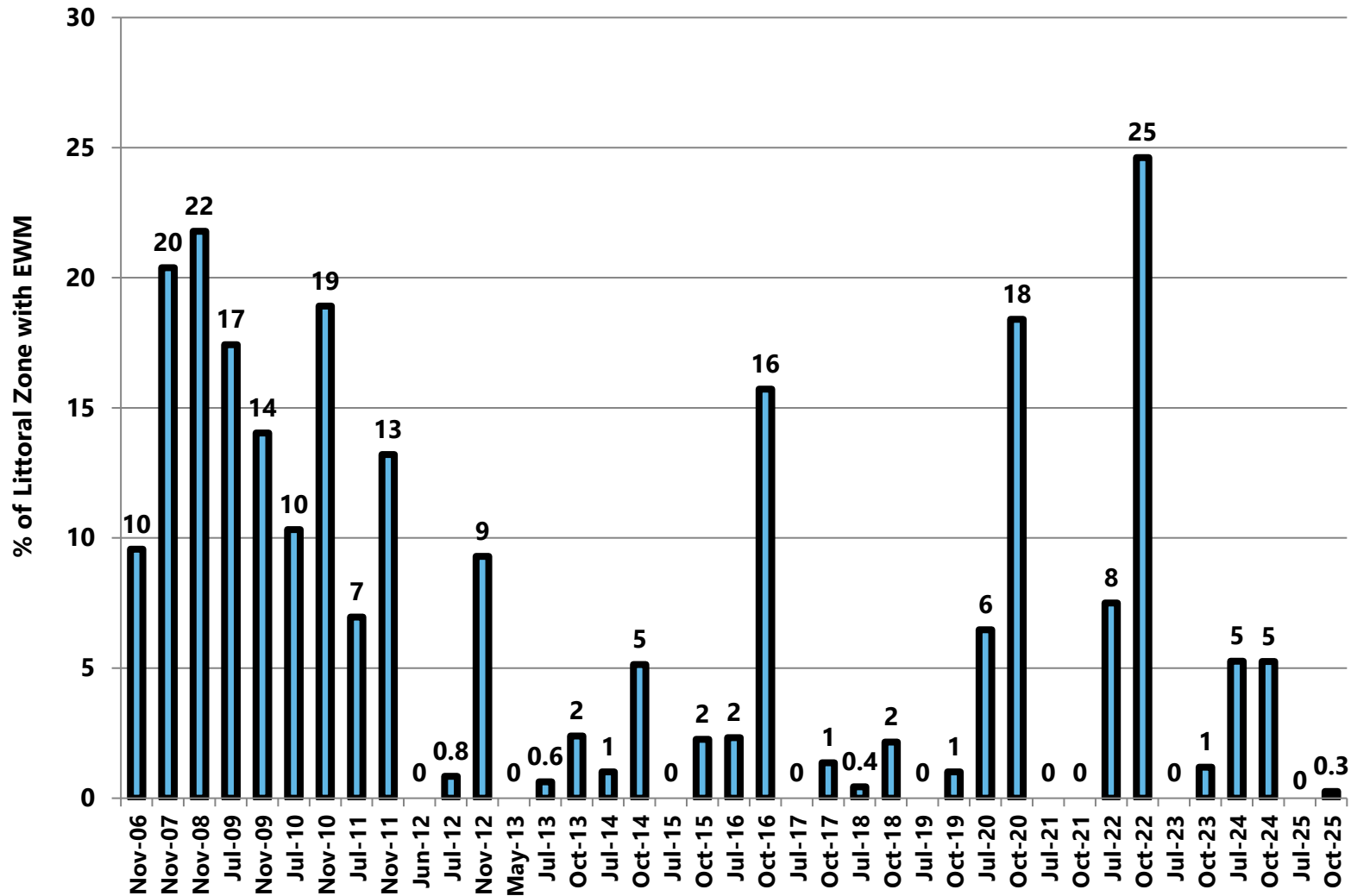


Figure 19 2006-2025 Percent of Littoral Zone with EWM: Rabbit Island Bay

## Library Lake EWM

Figure 4 and Figure 6 show the EWM coverage in Library Lake for 2025. EWM was not detected in Library Lake during October 2024, and the single EWM plant found in July 2025 was removed using a rake. EWM was observed again in October 2025. This recurrence is likely due to boat dispersal and/or seeds previously deposited in the sediment.

- Frequency rose from 0% (Oct 2024) to 0.7% (Jul 2025) to 22% (Oct 2025) (Table 1, Figure 20)
- Extent went from 0 acres (Oct 2024) to 0.04 acres (Jul 2025) to 3.6 acres (Oct 2025) (Table 2, Figure 21)
- Percent of littoral zone with EWM climbed from 0% to 0.1% (Jul 2025) to 26% (Oct 2025) (Table 3, Figure 22)

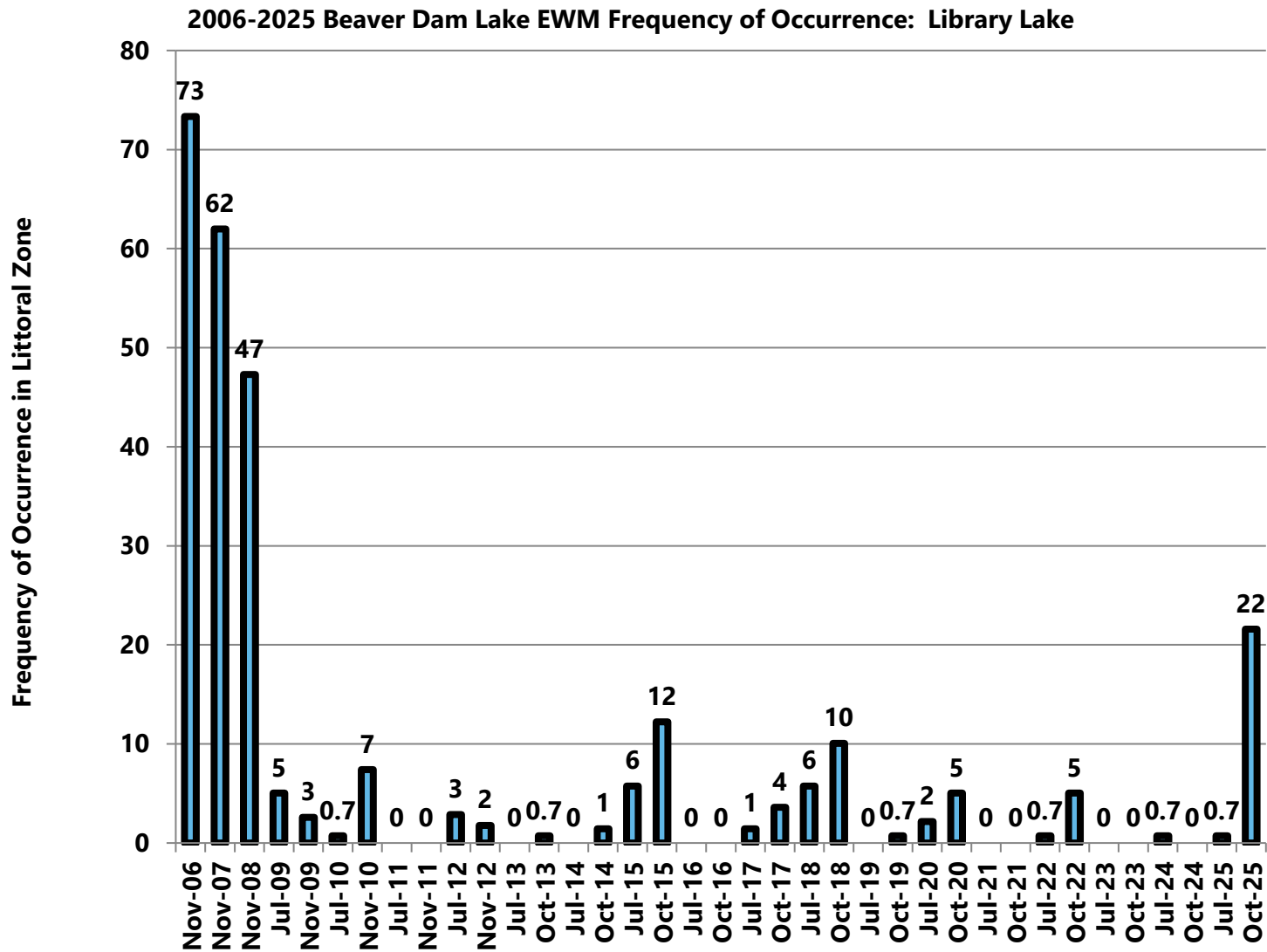


Figure 20 2006-2025 Beaver Dam Lake EWM Frequency of Occurrence in Littoral Zone: Library Lake

2006-2025 Beaver Dam Lake EWM Extent: Library Lake

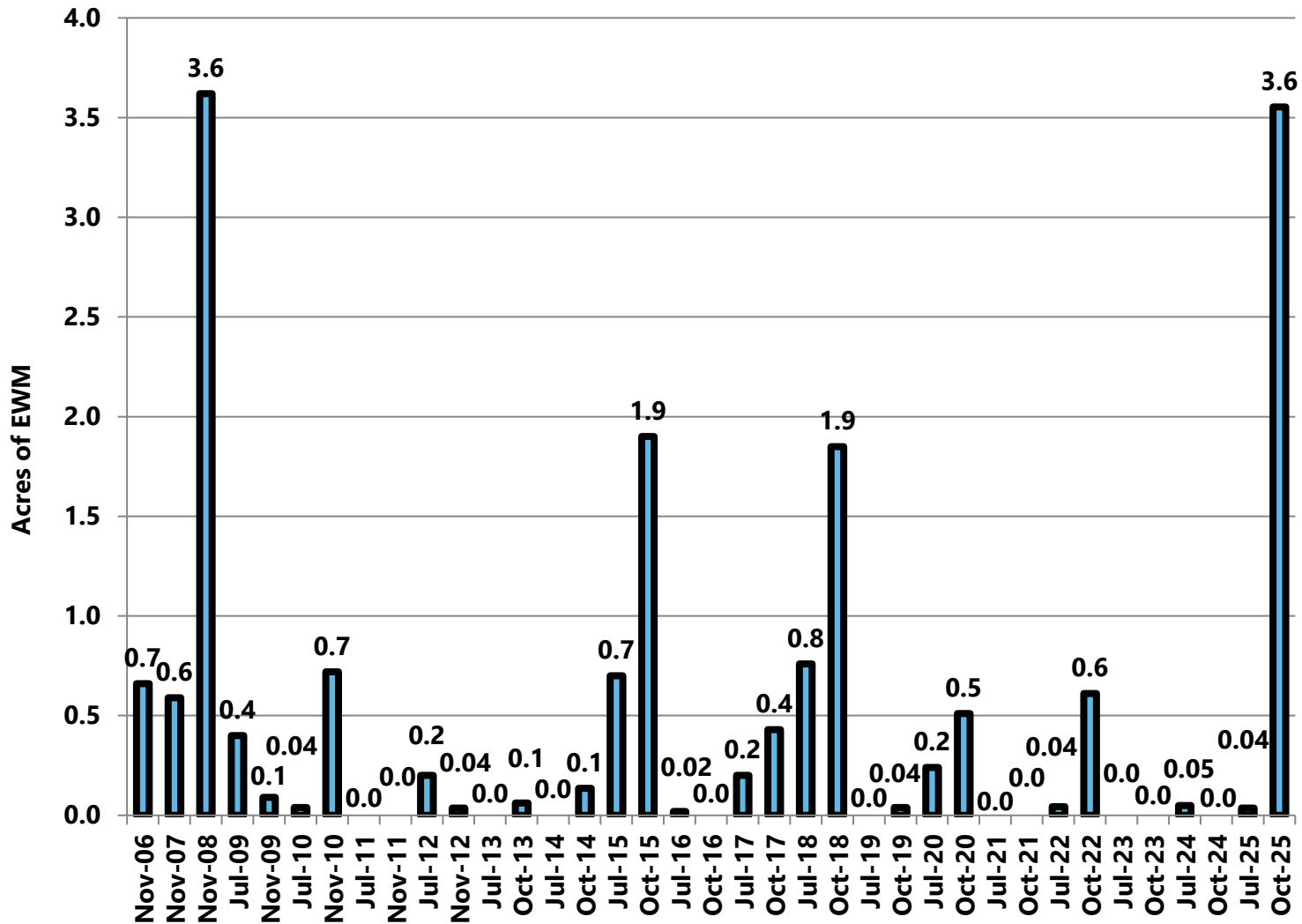


Figure 21 2006-2025 Beaver Dam Lake EWM Extent: Library Lake

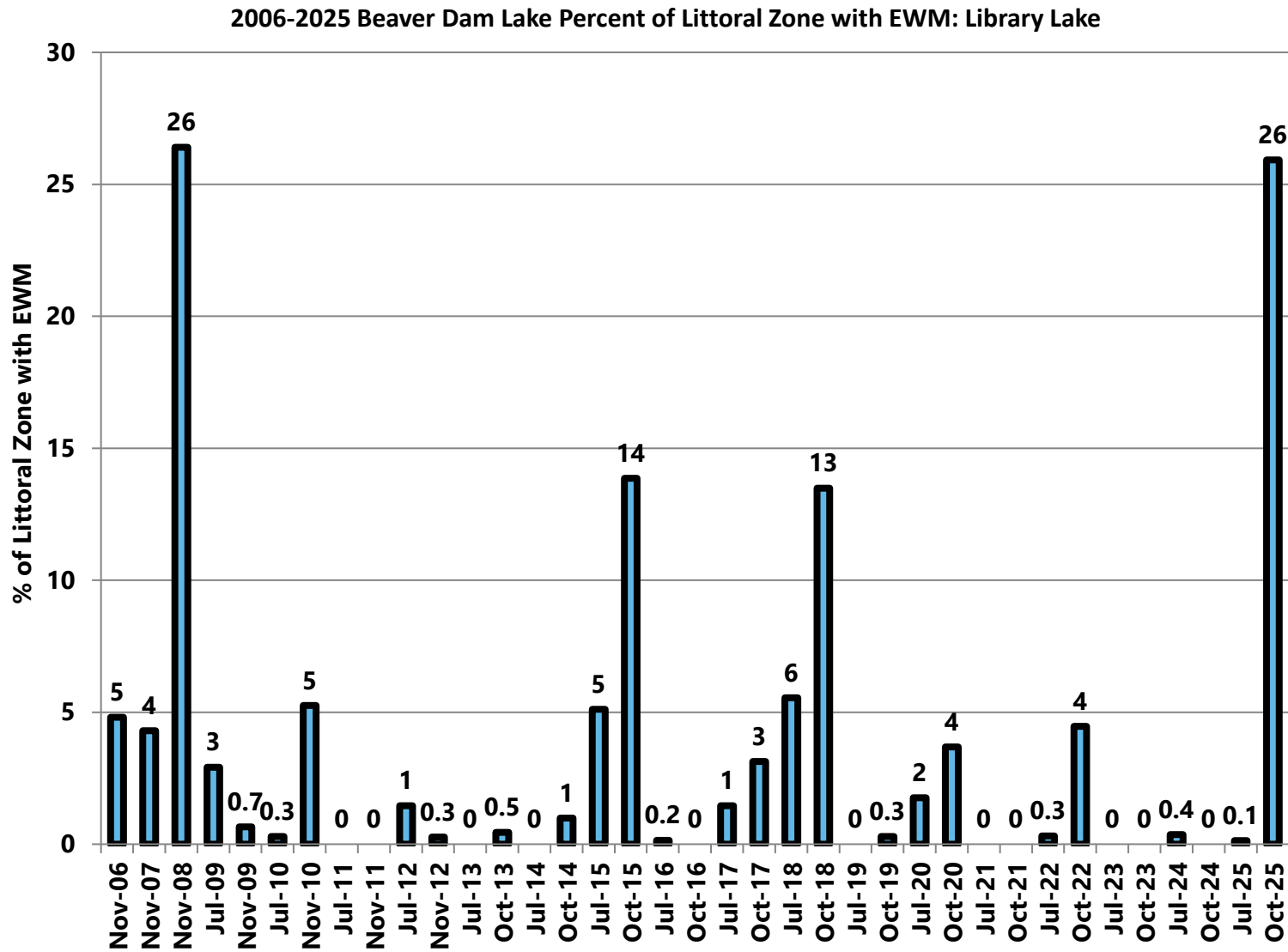
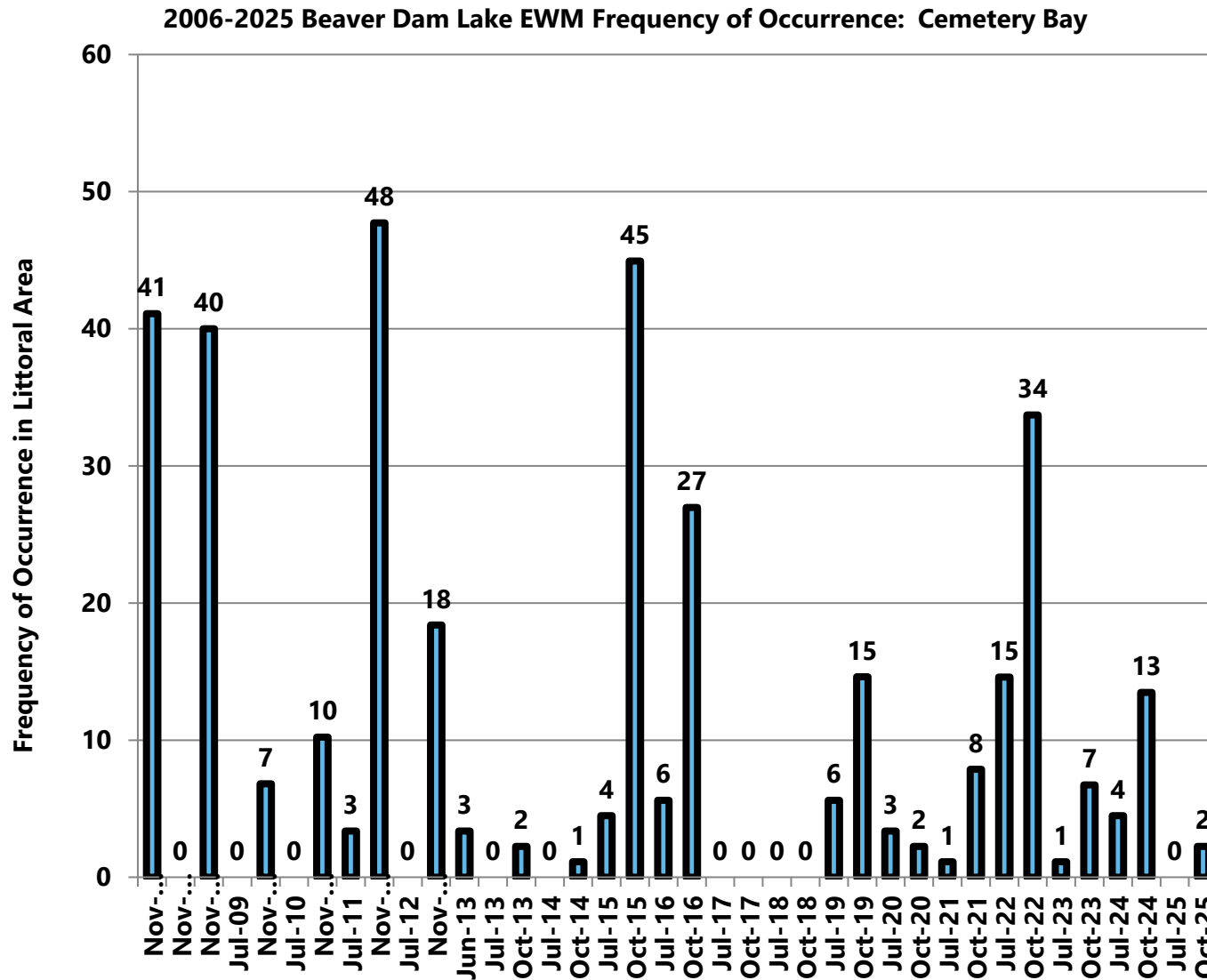


Figure 22 2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: Library Lake

## Cemetery Bay EWM

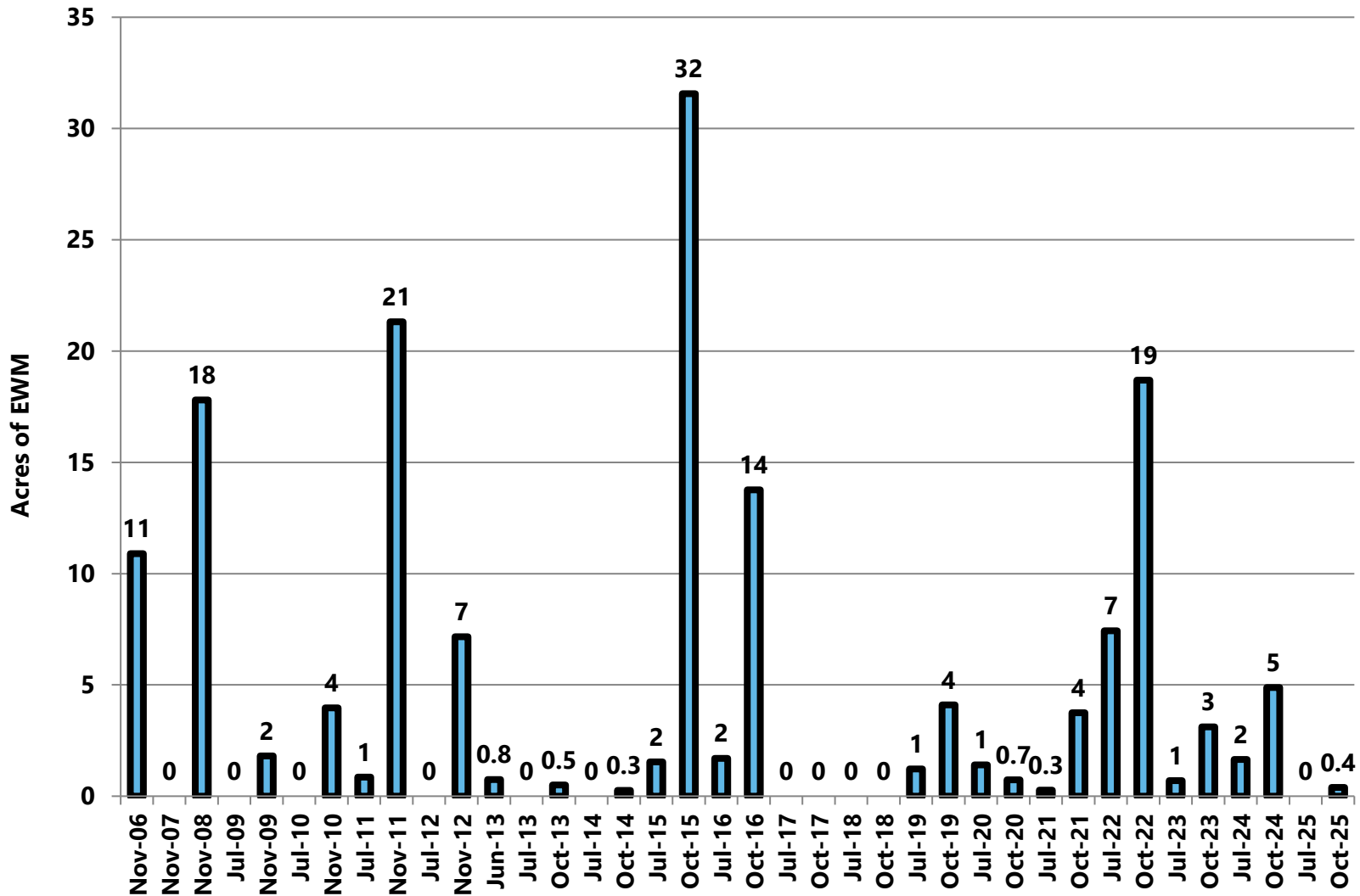
Figure 5 and Figure 7 show distribution of EWM in Cemetery Bay in 2025. After applying 2,4-D to 17.14 acres in June, no living EWM was found in July, though dead leaflets remained; EWM returned in October, likely due to boat dispersal.

- Frequency dropped from 13% (Oct 2024) to 0% (Jul 2025), then rose to 2% (Oct 2025) (Table 1, Figure 23)
- Extent decreased from 5 acres (Oct 2024) to 0 (Jul 2025), then increased to 0.4 acres (Oct 2025) (Table 2, Figure 24)
- Percent of littoral zone with EWM fell from 9% (Oct 2024) to 0% (Jul 2025), then increased to 0.7% (Oct 2025) (Table 3, Figure 25)



**Figure 23** 2006-2025 Beaver Dam Lake Frequency of Occurrence: Cemetery Bay

**2006-2025 Beaver Dam Lake EWM Extent: Cemetery Bay**



**Figure 24** 2006-2025 Beaver Dam Lake EWM Extent: Cemetery Bay

2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: Cemetery Bay

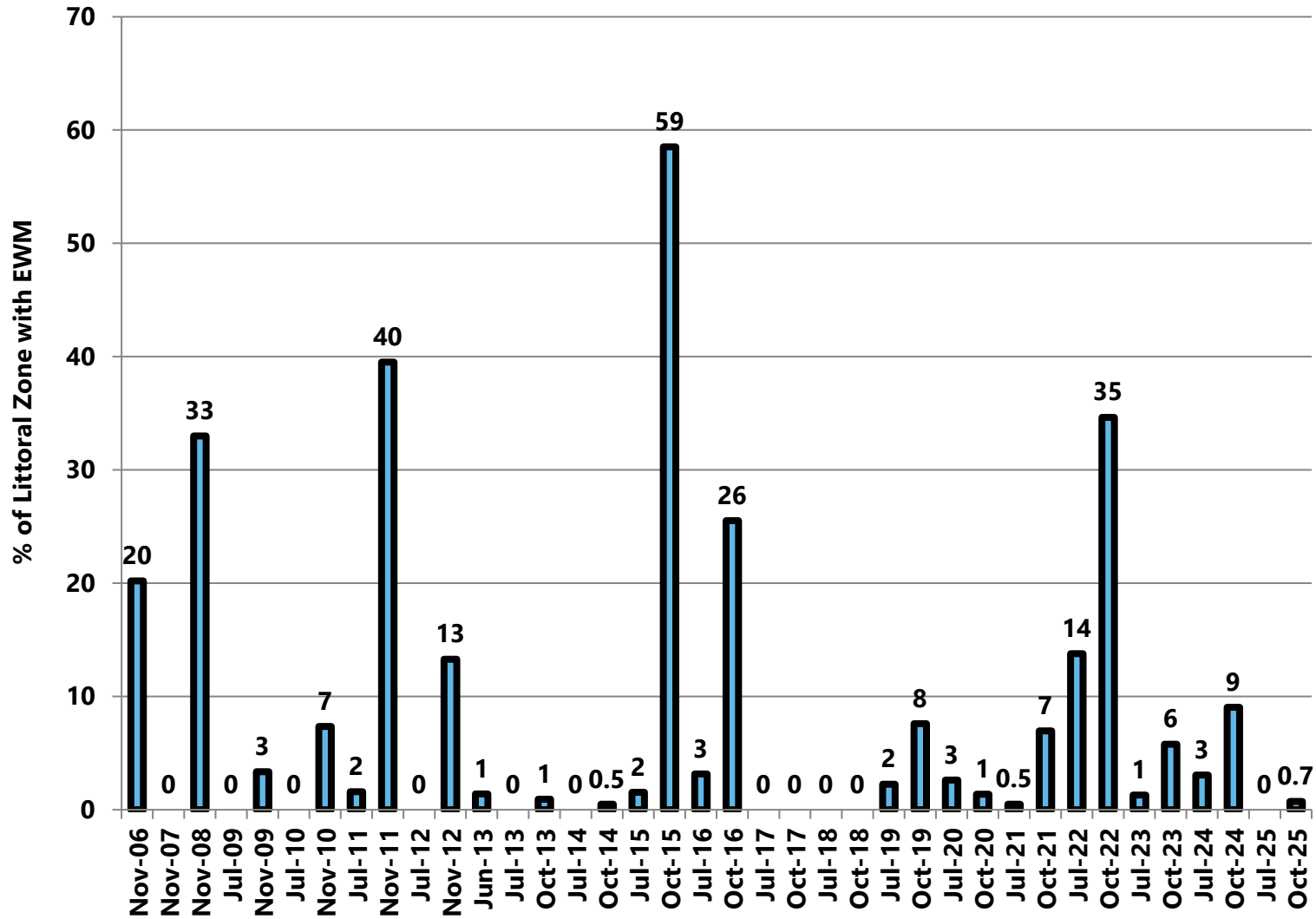


Figure 25 2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: Cemetery Bay

## City Bay EWM

Figure 5 and Figure 7 show EWM extent in City Bay during 2025. The June 2025 ProcellaCOR treatment (1.97 acres) resulted in a reduction of EWM from fall 2024 to summer 2025; however, complete removal was not achieved because WDNR did not permit treatment of an additional 8.51 acres:

- Frequency decreased from 3% (Oct 2024) to 2% (July 2025) (Table 1, Figure 26)
- Extent decreased from 2 acres to 0.6 acres (Table 2, Figure 27)
- Percent of littoral zone with EWM declined from 2% to 1% (Table 3, Figure 28)

Between July and October, EWM coverage increased, driven by self-fragmentation, boat dispersal, and/or spread by underground stems.

- Frequency increased from 2% (July 2025) to 5% (October 2025) (Table 1, Figure 26)
- Extent rose from 0.6 acres to 2 acres (Table 2, Figure 27)
- Percent of littoral zone with EWM went up from 1% to 2% (Table 3, Figure 28)

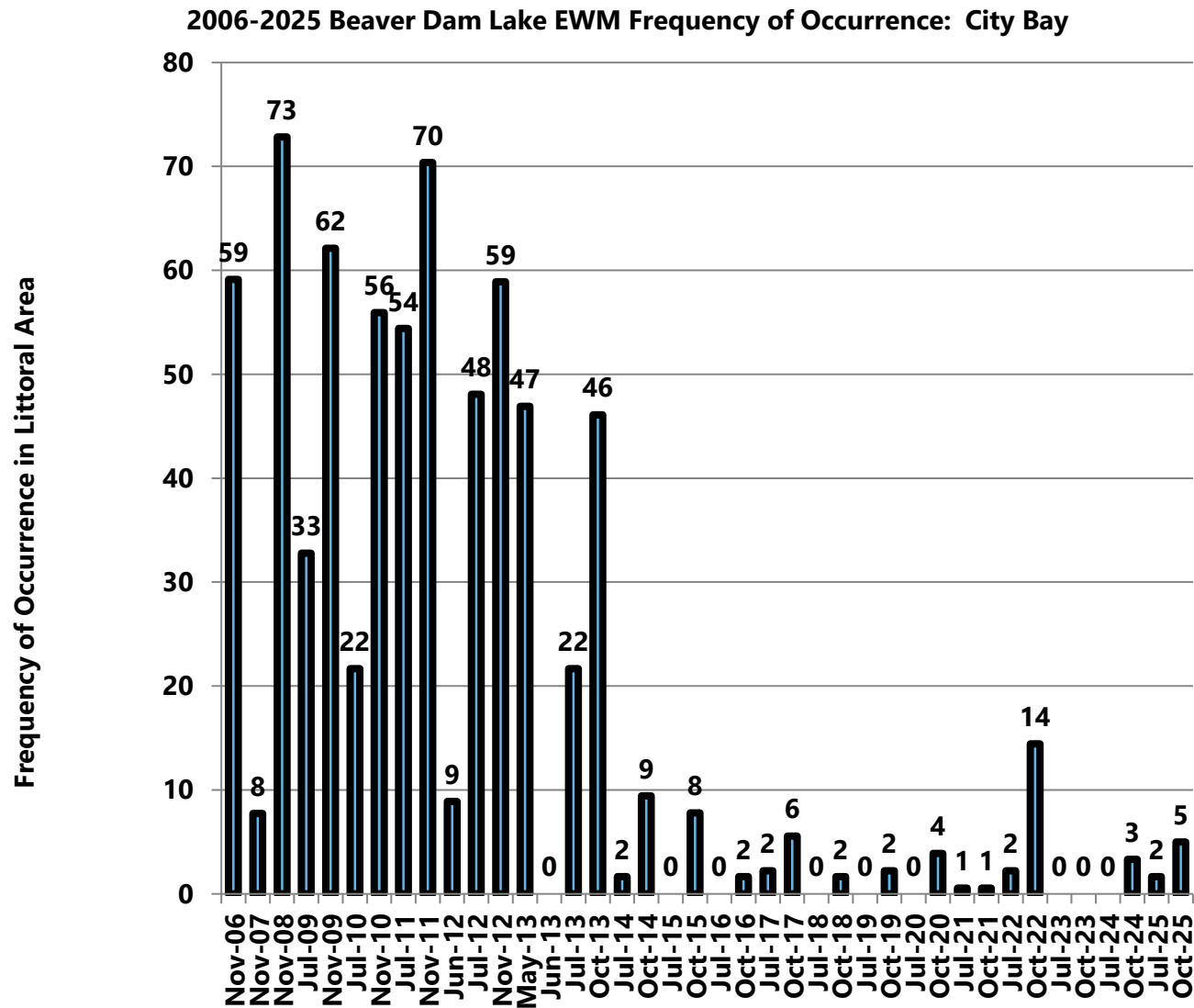


Figure 26 2006-2025 Beaver Dam Lake EWM Frequency of Occurrence: City Bay

### 2006-2025 Beaver Dam Lake EWM Extent: City Bay

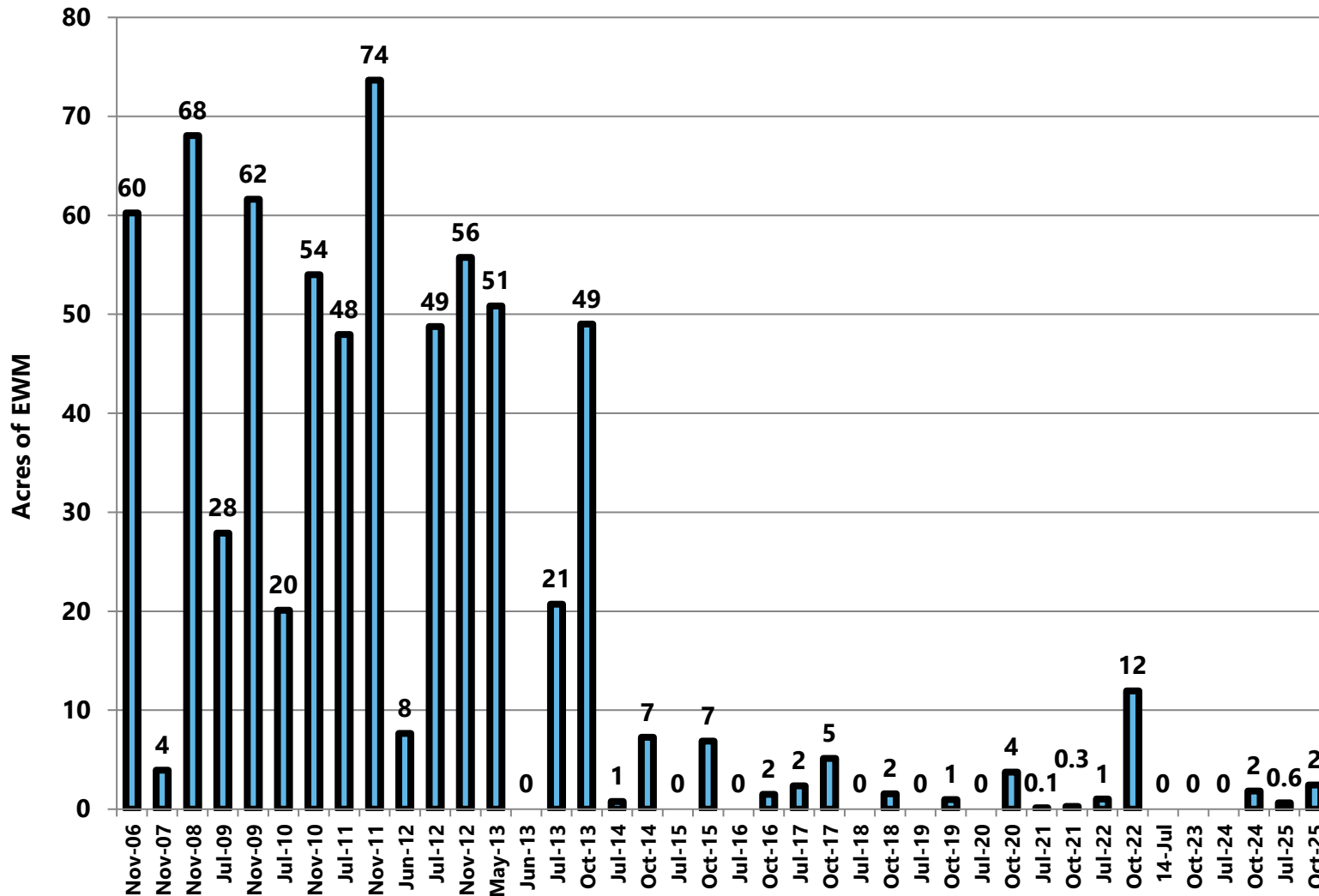


Figure 27 2006-2025 Beaver Dam Lake EWM Extent: City Bay

2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: City Bay

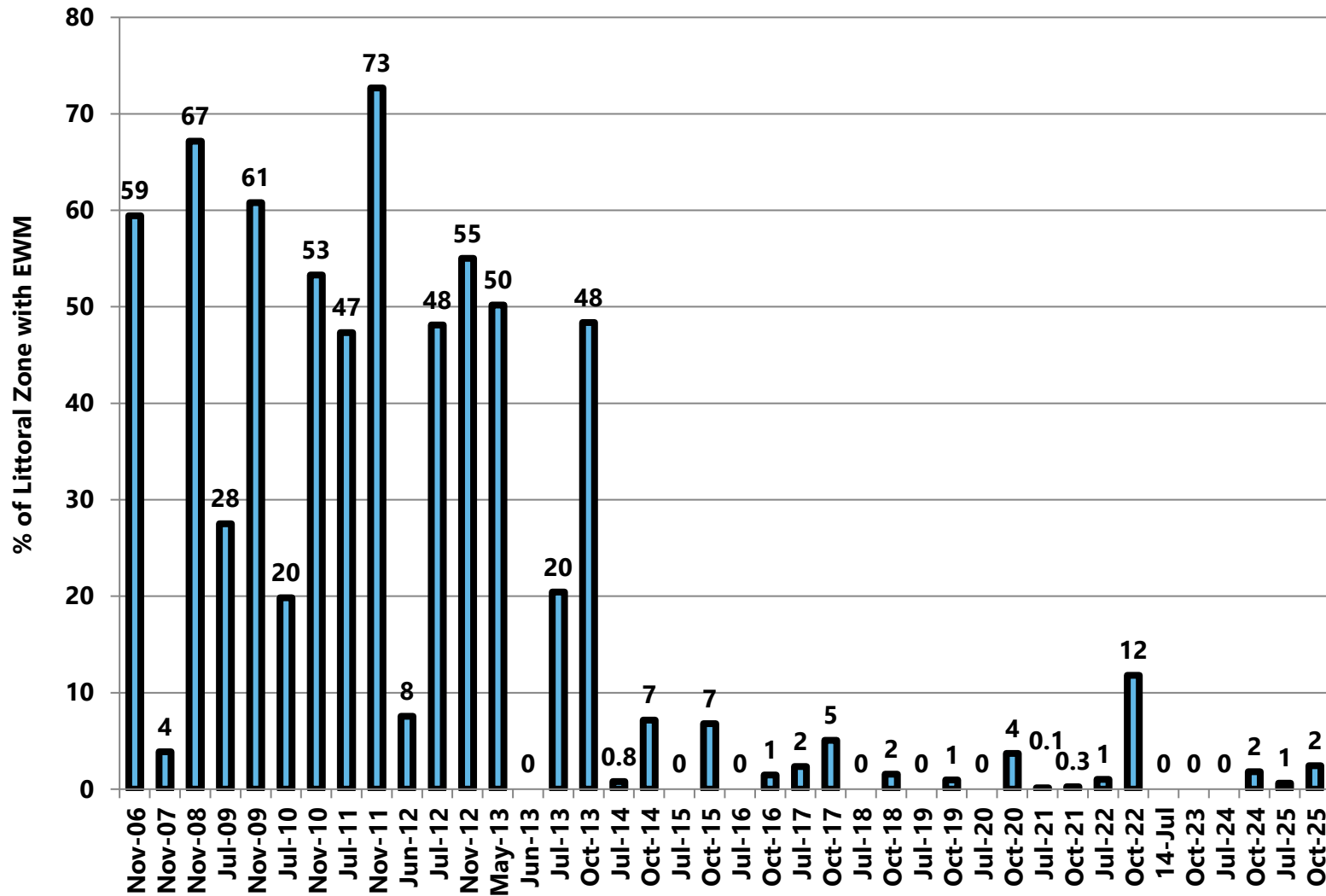


Figure 28 2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: City Bay

## East Lake EWM

Figure 5 and Figure 7 show the extent of EWM in East Lake. EWM was not observed in East Lake during 2023 and 2024. In summer 2025, EWM was detected again, and all plants were removed using a rake; it was also detected in fall 2025. Its return in 2025 was likely due to boat dispersal.

- Frequency: 0% (Oct 2024), 1% (Jul/Oct 2025) (Table 1, Figure 29)
- Extent: 0 acres (Oct 2024), 0.5 acres (Jul 2025), 2 acres (Oct 2025) (Table 2, Figure 30)
- Littoral zone with EWM: 0% (Oct 2024), 1% (Jul 2025), 3% (Oct 2025) (Table 3, Figure 31)

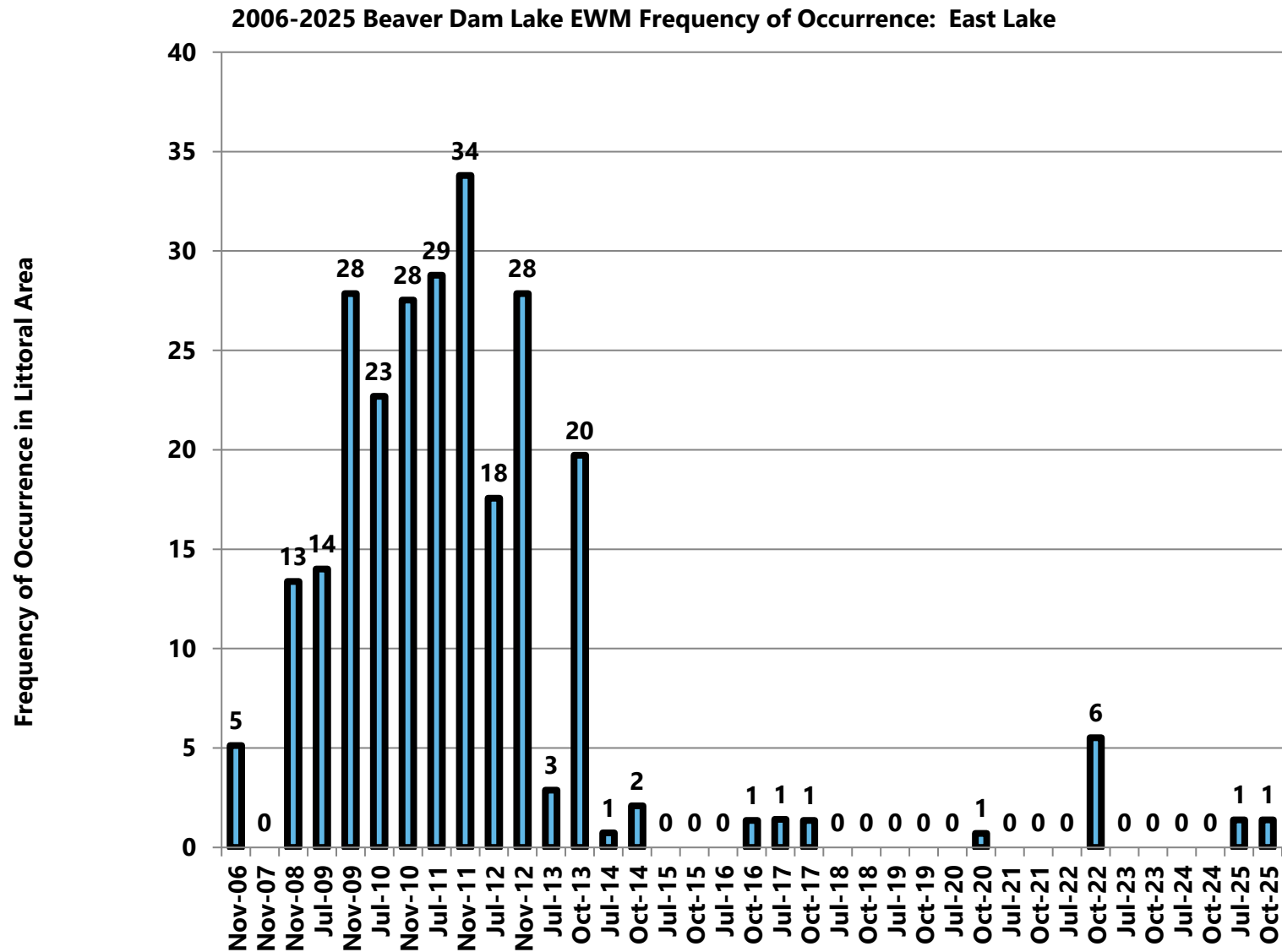
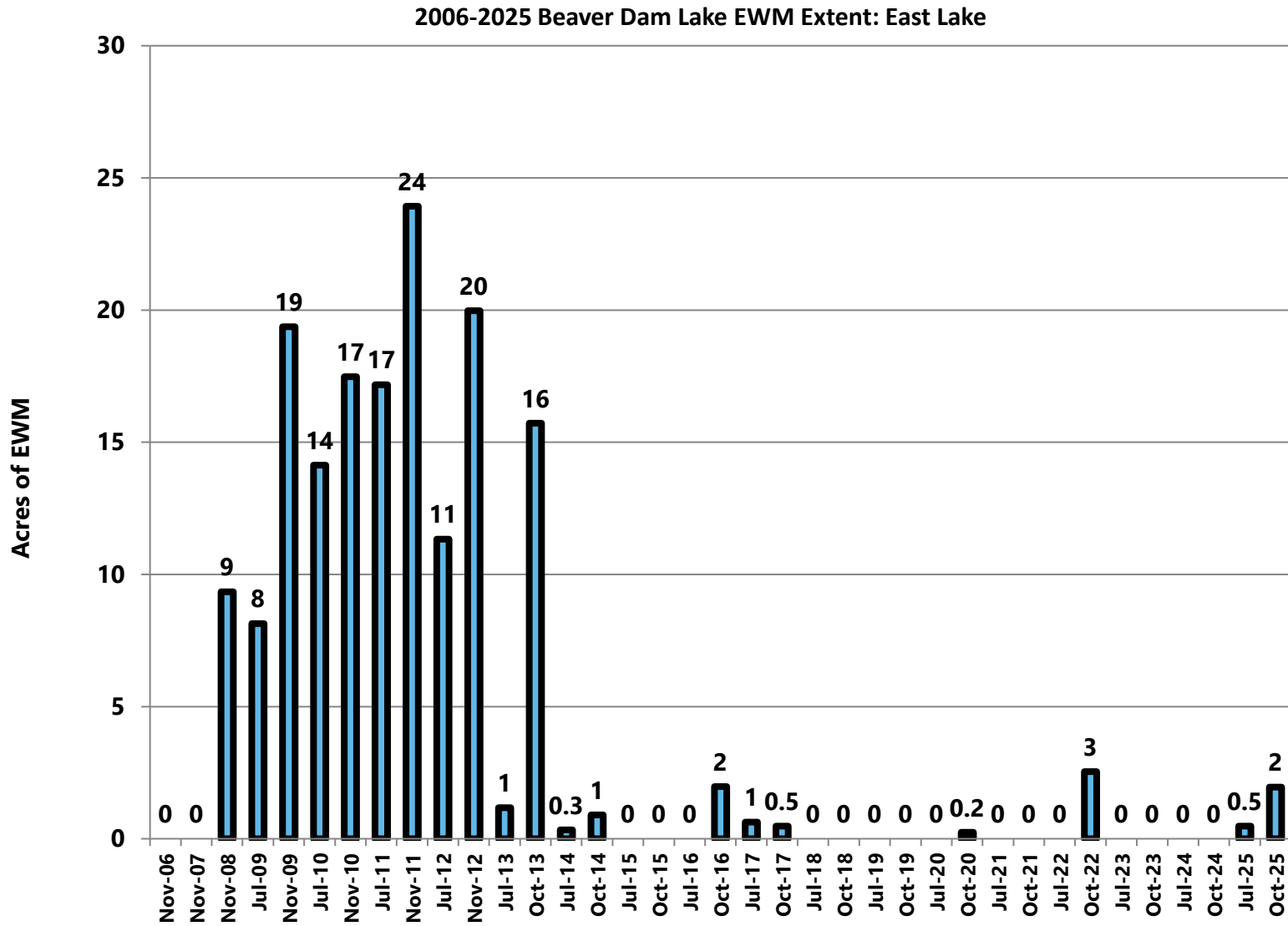
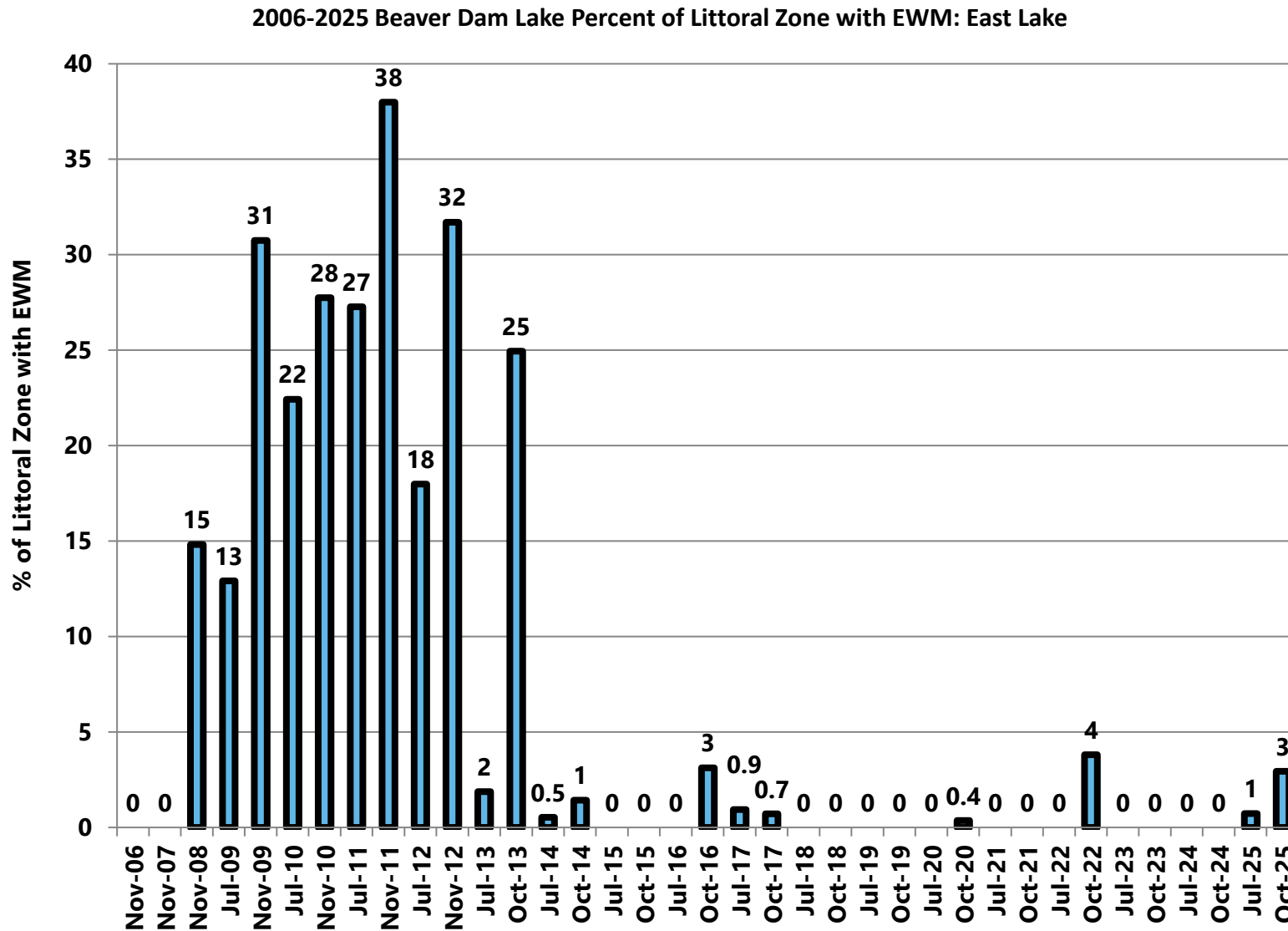


Figure 29 2006-2025 Beaver Dam Lake EWM Frequency of Occurrence: East Lake



**Figure 30** 2006-2025 Beaver Dam Lake EWM Extent: East Lake

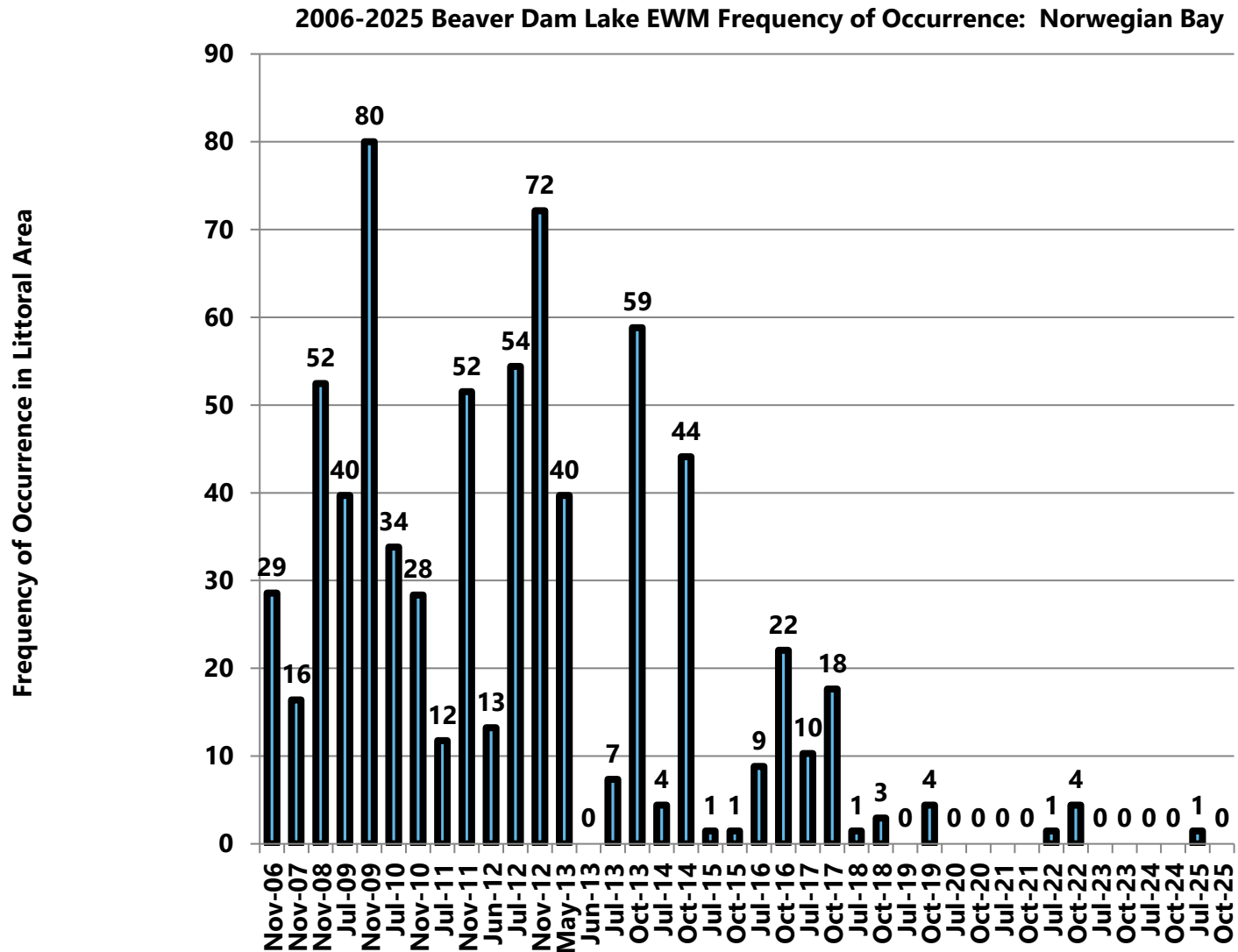


**Figure 31** 2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: East Lake

## Norwegian Bay

Figure 5 and Figure 7 show the extent of EWM in Norwegian Bay. EWM was not observed in Norwegian Bay during 2023 and 2024. In July 2025, several EWM plants were found along the north shoreline and were removed using a rake. The presence of EWM may have resulted from boat dispersal. However, no EWM was detected in October 2025.

- Frequency: 0% (Oct 2024), 1% (July 2025), 0% (Oct 2025) (Table 1, Figure 32)
- Extent: 0 acres (Oct 2024), 0.3 acres (Jul 2025), 0 acres (Oct 2025) (Table 2, Figure 33)
- Littoral zone with EWM: 0% (Oct 2024), 1% (Jul 2025), 0% (Oct 2025) (Table 3, Figure 34)



**Figure 32** 2006-2025 Beaver Dam Lake EWM Frequency of Occurrence: Norwegian Bay

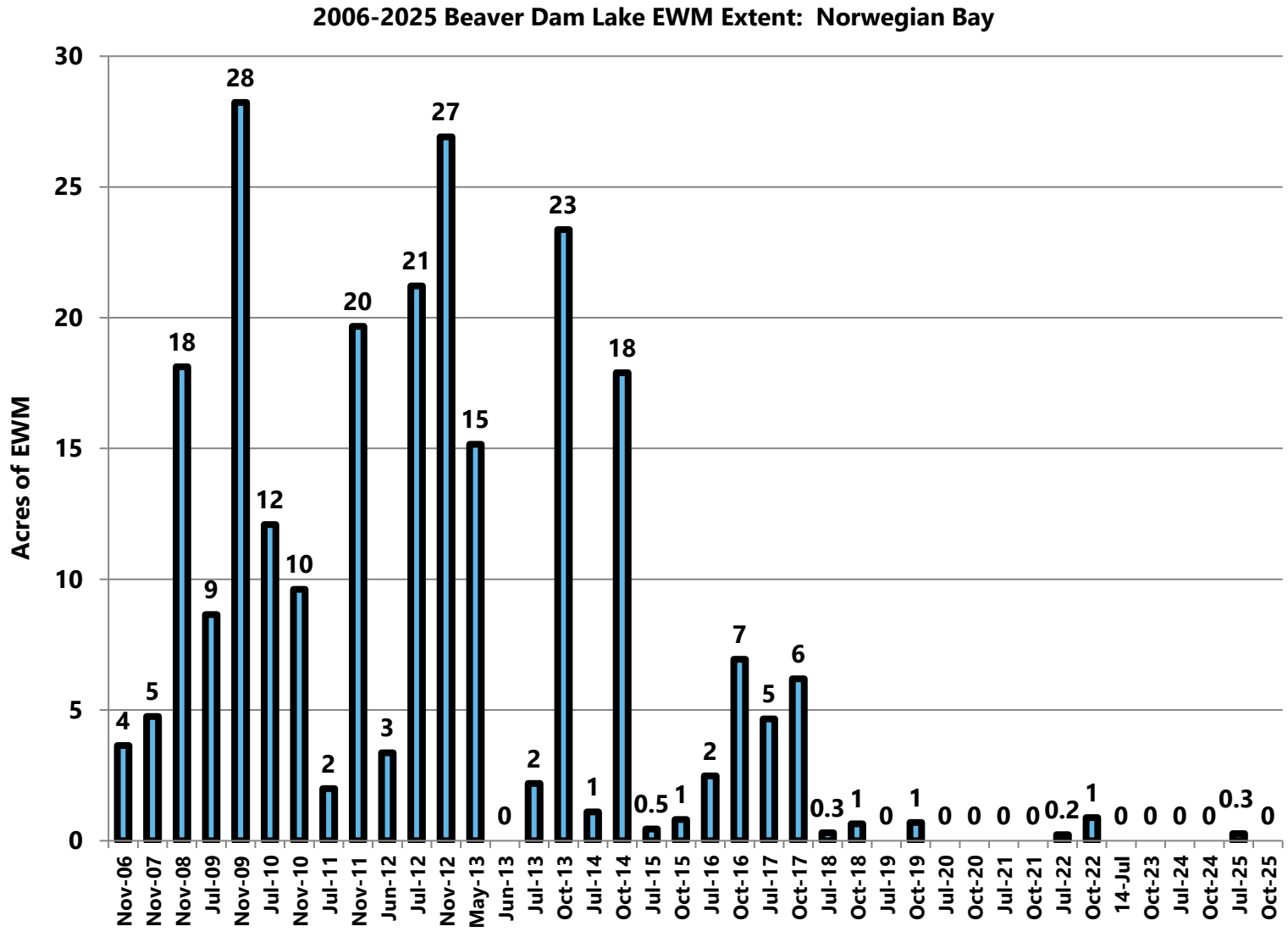


Figure 33 2006-2025 Beaver Dam Lake EWM Extent: Norwegian Bay

2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: Norwegian Bay

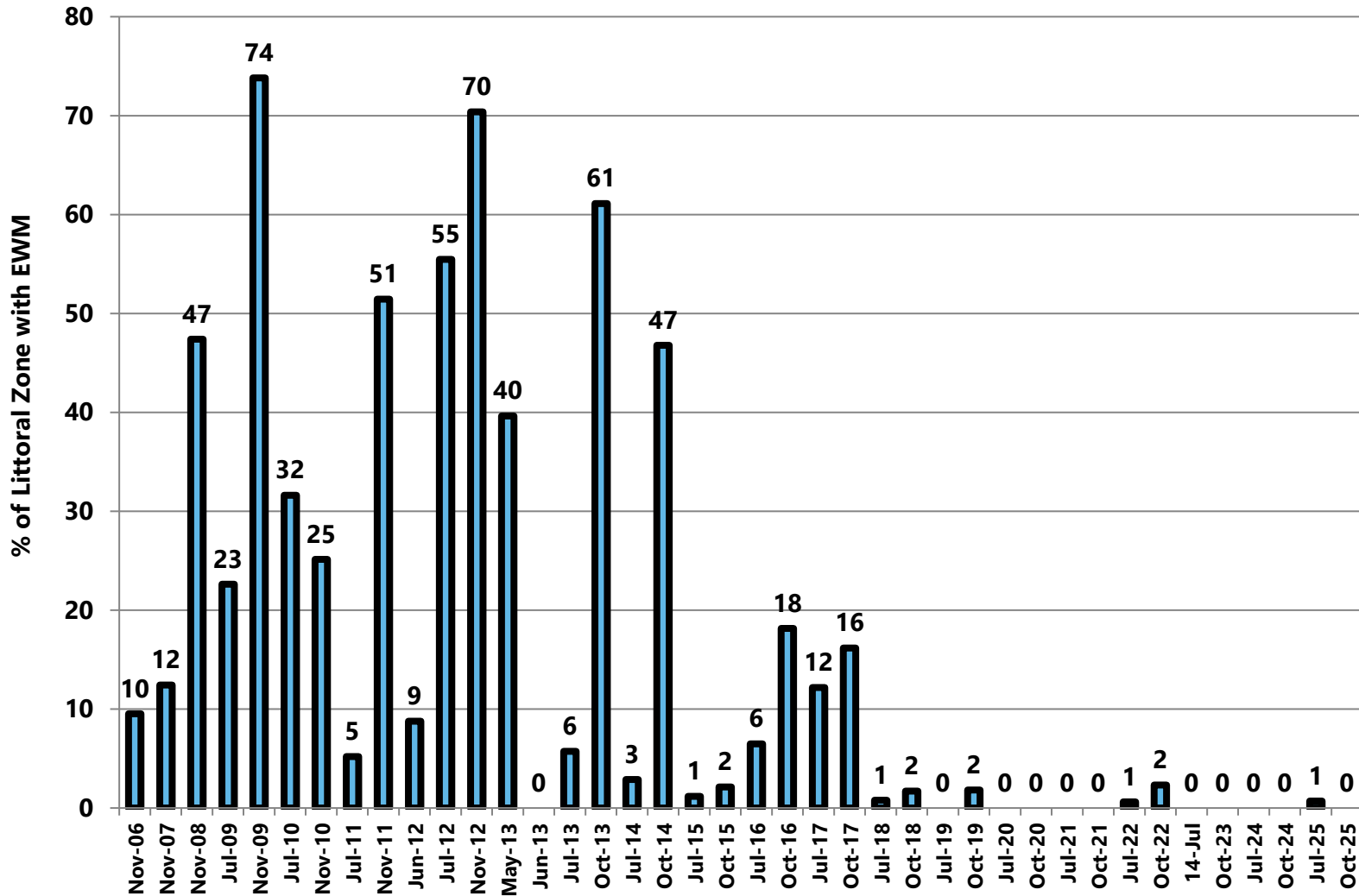


Figure 34 2006-2025 Beaver Dam Lake Percent of Littoral Zone with EWM: Norwegian Bay