

## **Orono Bog Boardwalk** Annual Report 2021

The Orono Bog Boardwalk opened on May 17th after a month of work getting it ready. We open late this year because we wanted to monitor the progression of covid. Because of the pandemic we did not have a big celebration as we had planned to have. Because of the pandemic, we posted signs at the Boardwalk asking visitors to please wear a mask when 6-foot distancing could not be maintained around individuals outside of your household. We also installed 2 hand sanitizing stations, one at the cabin area and one at the split at section 106. The City of Bangor provided the stations as well as bottles of hand sanitizer and a couple boxes of cloth masks to hand out to visitors (thanks Tracy Willette). We did not have an honorary opener as in past years. It was basically a soft opening. However Jim was contacted by a reporter from WABI-TV. She interviewed him on May 17th about the re-opening.

As in 2020, the management committee decided not to have guided tours and natural history walks. We also did not have our Boardwalk sign-in sheets at the cabin kiosk for visitors to write comments. We kept the cover on the stereoscope in front of the cabin.

As Director, I thank the many individuals who have volunteered their time and talents this past year, especially the Group Leaders, the Management Committee, and our Facebook and website coordinators: Al and Nancy Larsen, docent scheduling; Phil Locke through July, Dave Easler (August - November) maintenance coordinators; Helen Koch, tour guide scheduler; Donna Dwyer, Facebook coordinator; Jerry Longcore, Orono Land Trust representative to the Management Team, Endowment Fund coordinator, and record keeper of the Operating Fund, Erik Blomberg, University of Maine representative to the Management Committee and OBB webmaster, Tracy Willette, City of Bangor representative to the Management Committee; and Jim Bird, Boardwalk Director. I also thank all of the docents and maintenance volunteers who have contributed greatly to the operation and mission of the OBB. A list of all dedicated volunteers is in **Appendix 1**. We again calculated the number of hours volunteers worked at or for the Boardwalk this year and the total equaled a minimum of 2051 hours. Based on the figure of \$25.56 / hour as a benchmark value for a general volunteer hour in Maine (as reported by Independent Sector (<http://independentsector.org/>)), we will be able to report a minimum \$52,424 of in-kind support when completing grant proposals.

Our year at the OBB was successful in many ways, as described in the sections that follow.

### **Docents**

Docents open and close the OBB gate daily, greet visitors, inform users of rules, maintain the appearance of the cabin and OBB, answer visitors' questions about bog natural history, report any problems to the Director, sell OBB t-shirts, hats, bog bling, and other items, provide local area information and insight, and generally oversee the day-to-day operation of the OBB. Without these volunteers a visit to the OBB would be a much less satisfying experience. We trained one new docent this year: Kyle Myers, 4th year University of Maine EES student. In 2021 we did not hire student interns because of the pandemic. We hope to have at least one student intern for 2022.

A list of OBB docents is provided in **Appendix 1**.

## **Boardwalk Tour and Nature Walk Report - 2021**

In 2021, because of the pandemic, we did not offer guided Boardwalk tours or nature walks. We did, however, make an effort to keep track of unguided tours. All docents were asked to note unguided tours (group, number, date, and time) in the docent log. We had 16 unguided walks. These are walks not guided by Boardwalk volunteers.

The following is a list of unguided tours at the Boardwalk. This is an undercount.

June 30, Dover Foxcroft YMCA, 25 children + 3 leaders

July 17, Western Massachusetts Audubon, 6 adults including leader.

July 21, RAD Campers, 100 children, 8 leaders

August 24, 1st year Husson University students, 35 students + 15 leaders

September 11, In Kinship Archives & Performance Fellowship, all day visit, 25 adults + 3 guides

September 17, UM class SFR 434 (Recreational site management with Prof. John Daigle), zoom class with Jim Bird + after class Boardwalk tour led by John Daigle. 15 students + 1 leader

October 4, UM Ecology and Environmental Sciences class, 70 1st year student + 5 guides. Kate Ruskin, leader

October 6, UM BIO 205 class, 18 students + teacher. Jacquelyn Gill, leader

October 7, UM SFR 107, 40 students + 4 teachers

October 14, UM Forest Vegetation class, 30 students + 3 guides. Bill Livingston, leader

October 19, UM Forest Vegetation class, 30 students + 3 guides. Bill Livingston, leader

October 16, Tahoe Expedition Academy (California), 9 12th graders + 2 guides

October 20, Tahoe Expedition Academy (California), 7 11th graders + 2 guides

November 1, Citizens of Maine, Hampden, 6 adults + 2 guides

November 1, Miles Lane school, Bucksport, 40 4th graders + 5 guides. Gail Wight, leader

November 3, Hampden Academy Envirothon team, 12 high school students + 3 guides. Amy Sidell, leader

### **Maintenance:**

Starting on April 13th, maintenance volunteers worked to get the Boardwalk ready for our May 17th opening. Work included: 1) Installed external brackets along the first 16 sections so that 10' or 11' pipe could be pounded in to make sure the trellis was stable; 2) tighten all brackets and railings along the Boardwalk; 3) checked for cracks or bulges in bench legs; 4) checked status of all large bolts/nuts at section joins; 5) removed left over wooden pallets from the cabin area; 6) put extra footers under the cabin; 7) leaf blow the

Boardwalk and made sure there were no hanging branches over the Boardwalk; 8) continued renumbering sections; 9) brought all Boardwalk sale items to the cabin; 10) brought bottled water to cabin; 11) leveled several sections; 12) repaired several pie-wedges; 13) rake gravel around cabin area; 14) placed “no picking” and “stay on the Boardwalk” signs in the bog; 15) at station 6, put in water measuring pipe and signage; and 16) installed 5 replacement pie wedges.

May 10: Great Northern Docks delivered 10’ and 11’ lengths of pipe to the cabin area. Over the next few weeks, volunteers installed these pipes along the trellis to make sure it was stable. The pipe cost \$1,590 and was paid out of left over funds in our campaign account. Great Northern Dock workers also raised the lips at several sections where they had shifted down due to mis-drilled holes for the hex screws.

In June we had workdays to trim vegetation.

In July, volunteers installed pipes along the 16 sections of the trellis to stabilize it.

In August-November the area experienced heavy rain along with flooding. Our maintenance volunteers worked long hours to stabilize sections 19-35. On many days the water level was almost over the Boardwalk. We were able to get it stabilized but it was a constant struggle. One major problem that developed was that the weld on the corner of 2 sections broke. We were able to come up with a temporary solution but we have to find a permanent solution. Dave Easler took photos of the broken welds and we sent to Great Northern Docks to see if they can repair. As of 3/4/2022 they are working on a plan.

Jerry completed an annual maintenance review of the OBB which includes activities that should be completed every year to ensure the safety of the OBB.

Throughout the year we had a problem with the outhouse doors being locked (from the inside). Jerry Longcore put rubber flaps over the eyes so that the hook could not accidentally lodge in the eye. It worked!

In July, Phil Locke, our long time maintenance coordinator, informed Jim that he would be stepping down. All of you know Phil and his contributions to the Boardwalk. From 2004-2019 Phil worked tirelessly at the Boardwalk, volunteering many hundreds of hours to keep the Boardwalk safe for our visitors. Phil was out at the Boardwalk many days each week making sure all was well. Over the years, Phil: Replaced hundreds of wooden deck boards, replaced a couple of full 8’ sections and a couple of 1/2 sections, cut the wood for railings and when needed repaired or replaced railings, rebuilt many wooden benches, designed and built (with Karl Hill) the kiosks roofs, built our wonderful picnic table and repaired another one, helped build the cabin, schedules maintenance work sessions, kept maintenance volunteers informed of the work needed to be done, helped re-stain the cabin, made sure we had the supplies needed to maintain the Boardwalk, kept our cabin organized, built a model of a wooden section complete with red bench so we can show current visitors what the Boardwalk was like before replacement, created a 4-notebook plant id guide, and the list goes on and on. We all owe Phil a huge debt of gratitude for the work he has done over many years. THANKS Phil!! Phil will remain a maintenance volunteer. The Boardwalk Management committee will dedicate one of the two kiosks at the cabin in honor of Phil.

Jim asked Dave Easler if he would be the new Boardwalk maintenance coordinator and he agreed to take this important volunteer position. Thanks Dave! Until we closed at the end of November Dave made several trips to the Boardwalk accomplishing a variety of tasks: Installed a motion sensitive light in the cabin, reposi-

tioned the donation sign on the kiosk so it can be easily seen by visitors coming off the Boardwalk, re-numbered many sections, kept set screws tight, raised and leveled sections, and leaf blowing,

All through November we had problems keeping the set screws tight on the pipes we had installed along the first 35 sections. The result was that often the Boardwalk sections were a little unstable. We also had to re-stack the composite shims on one section which we (Jerry, Dave, and Jim) were able to do.

In September-October we had to close the Boardwalk for several days because high water at sections 19-35 was making it unstable and not safe for visitors.

We closed the Boardwalk for the season on November 27. Over the next couple days much was accomplished by 10 dedicated volunteers - Thank you Jerry Longcore, Al Larson, Gerry and Donna Dwyer, Steve McKay, Dick McClay, Helen Koch, Chris Jones, Christopher D'Amico, and Jim Bird: Cleaned up around cabin; cleaned interpretive stations and cover; removed kiosk signs, thermometer, brochure holder, donation box, and green chains; cleaned kiosk signs and cover; removed water pipe and signage at interpretive station 6; removed signs at cabin area; removed signs at parking lot; removed "no picking" and "stay on Boardwalk" signs from bog; removed hand sanitizer bottles from stations; put trash and bottle bins in cabin; and removed all sale items from cabin to Directors house.

**Financial:** (Jerry Longcore)

On July 1, we received \$7,158 from the interest on our endowment account. The money will be deposited in our Boardwalk operations account.

Our weekly totals of donations and sales were excellent this year despite the fact we had reduced docent coverage.

Sales record summary:

<b>2021, Summary of Sales Records</b>	
<b>Items</b>	<b>Number</b>
<b>HATS</b>	
Bog hat ?	1
Dragonfly	9
Northern Leopard Frog	12
Canada Warbler	16
Black Bear	8
Pitcher Plant	13

<b>T-SHIRTS</b>	
Pitcher Plant	45
2019 T-shirt	7
Boardwalk Vista	2
<b>BOOKS</b>	
Bogs & Fens	10
The Bog Walker's Companion	10
<b>CARDS</b>	
Fiddlehead	3
Boardwalk	7
Pitcher Plt	6
Lara Max	10
Foliage	2
Lady's Slipper	6
Fall	6
Cards (no identity noted)	32
<b>OTHER</b>	
Brochure, Color	24
Sticker	14

**Boardwalk donors:**

Boardwalk Director Jim Bird hand wrote scores of "thank you" notes to our donors.

**Other:**

Ron Davis report: Ron Davis has authored a wonderful report entitled: “An Illustrated Memoir and Historical Account of the Creation of the Orono Bog Boardwalk.”

For the past several years we have sent out a one-page OBB update to 300-400 our donors. This year we sent out 360 letters that focussed on the work we did in the 2021 season. The letter was illustrated with 5 wonderful photographs by Dave Easler, Donna and Gerry Dwyer, and the University of Maine. Mary Bird did the letter layout, University of Maine Foundation’s Holly Hatch ran off the color copies, and Kevin Frazier supplied the donor addresses. Thank you all! The letter resulted in many donations as well as some book sales.

### **Boardwalk T-Shirts and Hats**

We ordered and received all 5 Boardwalk hats: Canada Warbler, Pitcher Plant, Muskeg Darner, Black Bear, and Leopard Frog. Over the years the Canada Warbler and Leopard Frog hats have been our biggest sellers

### **New Dean of NSFA**

Dr. Diane Rowland was appointed Dean of the University of Maine College of Natural Sciences, Forestry, and Agriculture. Jim meet with her on August 10th to discuss the Boardwalk. Erik Blomberg, UM representative to the Boardwalk Management Committee, also met with her on a different day. Jim and Erik came away from the meetings extremely encouraged by her enthusiasm and commitment to the Boardwalk.

### **Visiting Researchers**

In July, Professor Xavier Comas, Dept. of Geosciences at Florida Atlantic University came to the Boardwalk to collect a peat monolith to conduct laboratory work to measure the spatial and temporal distribution of biogenic gases (methane and co2) in the soil to estimate gas releases over time and rates of gas production in the soil. Professor Comas received permission from the Boardwalk Management Committee. He received a research permit from the University of Maine (Keith Kanoti, UM forest manager). Andy Reeve, Jerry Longcore, and Jim Bird accompanied Professor Comas on his collection trip along the Orono/Bangor town line, about 100’ from section 494 (outside the Boardwalk footprint). Also in July, Professor Chris Moore, Colby College, conducted an ant diversity survey along the Boardwalk. He received permission from the Boardwalk Management Committee. He received a research permit from the University of Maine (Keith Kanoti, UM forest manager).

### **EAB Trap**

For the past several years, the U.S.Department of Agriculture, Animal and Plant Health Inspection Service (APHIS) has put up an Emerald Ash Borer “purple” trap at section 10. The trap goes up in the first 2 weeks of June and is taken down in September. This trap is a great education tool as all of our tour guides talk about it to Boardwalk visitors. Based on research, EABs are attracted to the color purple. So far no EABs have been found at the OBB. This year APHIS did not put up the EAB trap. We hope to have it up in 2022.

### **Boardwalk Cards**

In 2021 we had all 3 Lara Max cards and they sold very well. We had a few Peggy Clark Lumpkins pitcher plan cards and have ordered more for the 2022 season.

### **Dogs on the Boardwalk**

Both of our Boardwalk signs (at cabin and at Tripp Dr. parking lot) note that dogs are not allowed on the Boardwalk - service animals excepted. However the signs seemed not to deter dog walkers on the Boardwalk. Mary Bird made several bright colored "no dog" signs and Jim put them up at the Tripp Driver parking lot and at the cabin. Although we still had some visitors take their dogs on the Boardwalk, the number of Boardwalk dog walkers decreased substantially over past years.

### **Wildlife Observations**

On May 14, Jerry Longcore observed a snapping turtle at Boardwalk section 14. The turtle was attempting to crawl up on a hummock. This is the first reported sighting of a snapper at the Boardwalk.

June 2, 2 black bears were spotted in the city forest.

On June 10th a Boardwalk visitor reported a probable bobcat on the Boardwalk between Interpretive Stations 1 and 2.

Coyote scat was found on the Boardwalk several times this year.

On September 23, an eastern racer (snake) was observed near section 106.

On October 6, a porcupine was observed high up in an oak tree neat the cabin.

### **Outhouse**

In 2021, outhouse duties were transferred to the City of Bangor Parks and Recreation Department. They will continue to maintain the outhouse for the foreseeable future. Thanks Dave Easler (and others) for cleaning the outhouse.

### **Webpage and Facebook page**

Our webpage managed by Erik Blomberg, is updated on a regular basis. Our Facebook page managed by Donna Dwyer is updated frequently. Both our Facebook and Web pages help us recruit volunteers and publicize the OBB. Thank you Erik and Donna!

### **Boardwalk Camera**

The City of Bangor is maintaining a night-time camera at the start of the Boardwalk.

### **Boardwalk Vandalism:**

On September 4, Dick McClay, on his opening walk of the Boardwalk called Jim to report that someone removed the water pipe at Interpretive Station 6 and threw it into the bog. Dick returned to the cabin to get some waders and went back out to retrieve the water pipe and placed it in its proper position. Thanks Dick!

Three of our carabiners that we use to hold up the shelf/tables at the information kiosks were stolen. Several new carabiners were purchased and put in the green box tray.

A spring from one of the outhouse door was taken. Thanks Tracy Willette for replacing.

### **Boardwalk Stereoscope**

Great Northern Docks made a wonderful viewing stereoscope that shows the OBB going off into the distance. Steve Merriam installed the stereoscope in front of the cabin. Over the course of the season, many visitors (especially children) enjoyed this unique view of the Boardwalk. Unfortunately in the past two years we have been unable to use it because of covid. We hope that in 2022 we can again use this wonderful display. Thank you Great Northern Docks!

Boardwalk Management Committee meeting, July 8 at Jim Bird's house

### **Bottle/Can Return**

The OBB continues our bottle deposit at Burby and Bates in Orono. We typically make about \$60-\$150/year. Thanks Jerry!

### **Conclusion**

Despite the pandemic and low staffing levels, we accomplished much in 2021. I have tried to include all that we have accomplished this year, but if I have missed something or neglected to mention someone, please let me know.

Thank you all!

Jim Bird  
Director, Orono Bog Boardwalk James.Bird@maine.edu  
3/7/2022



Note: 1=docent, 2=general volunteer, 3=maintenance volunteer, 4=walk guide, 5=walk leader, 6=committee leader/co-leader

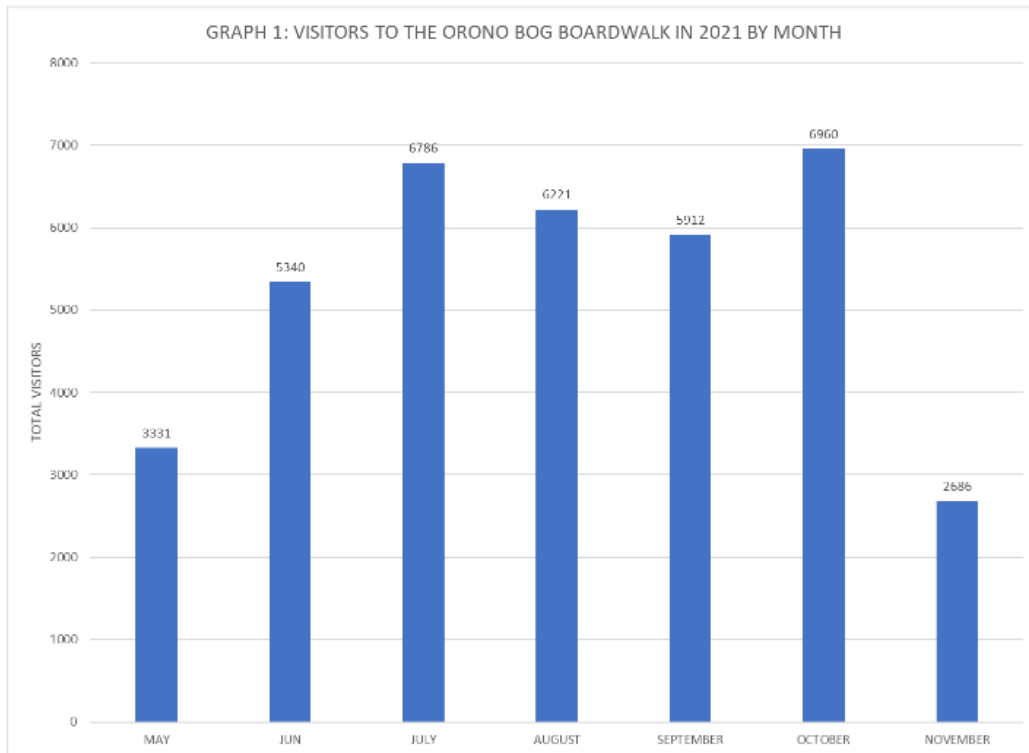
Mark Anderson (2)  
Grace Bartlett (4)  
Jim Bird (1,2,3,6)  
Mary Bird (2)  
Erik Blomberg (2,6)  
Hope Brogunier (1,2)  
John Daigle (4)  
Christopher D'Amico (3)  
Ron Davis (1,2)  
Maddie Demoranville (1)  
Donna Dwyer (1,3,6)  
Gerry Dwyer (3)  
Dave Easler (3,6)  
Roxie Easler (2)  
Sharon Fitzgerald (1,3)  
John Fitzgerald (2,3,6)  
Jacquelyn Gill (4)  
Chris Jones (1,3)  
Brandon Keim (1)  
Helen Koch (3,6)  
Al Larson (1,2,3,6)  
Nancy Larson (2,6)  
Phyllis Leeman (1,2)  
Phil Locke (2,3)  
Jerry Longcore (1,2,3,6)  
Joyce Longcore (2)  
Dick McClay (1,3)  
Steve McKay (3)  
Kyle Myers (1)  
Laurie Osher (1)  
Andy Reeve (2,6)  
Kate Ruskin (4)  
Christa Schwintzer (1)  
Trudy Tremblay (1)  
Tracy Willette (6)

The counter was installed by Andy Reeve at the start of the season. The following detailed analysis of the visitor numbers was done by John Fitzgerald. Thanks Andy and John!

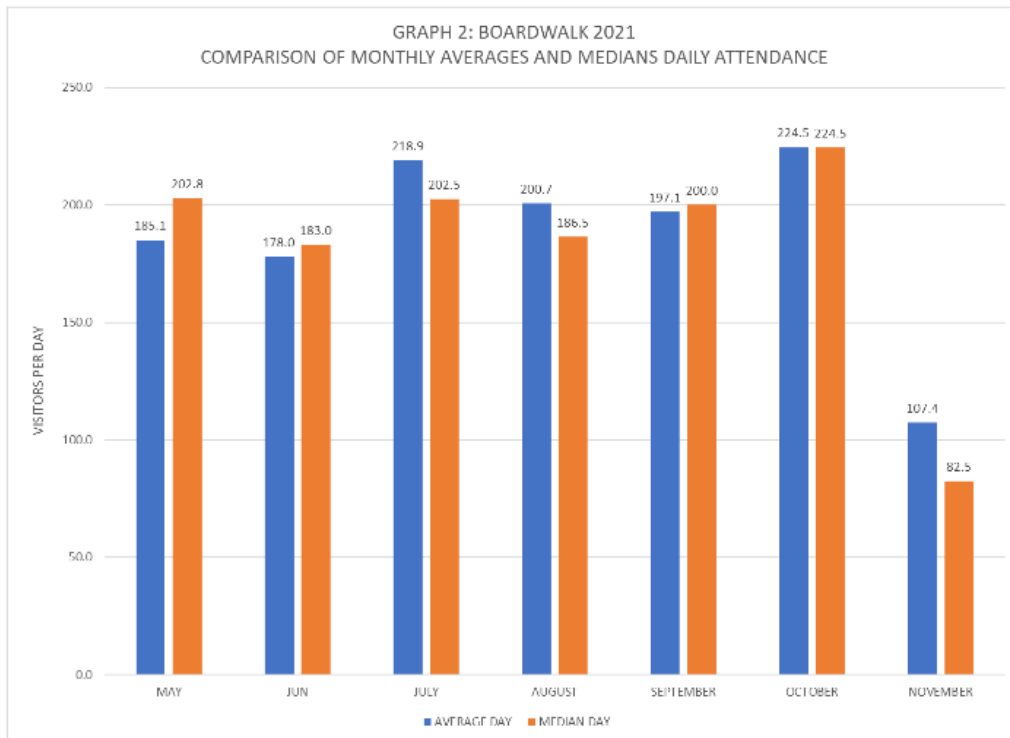
In 2021 The Orono Bog Boardwalk had a record high 37,235 visitors. <Table 1>

TABLE 1							
ORONO BOG BOARDWALK ATTENDANCE BY MONTH IN 2021							
		PERSONS <COUNTS/2>					
		TOTAL		VISITORS PER DAY			
RANK	MONTH	VISITORS	#DAYS	AVERAGE DAY	MEDIAN DAY	BEST DAY	
5	MAY	3331	18	185.1	202.8	310	
6	JUN	5340	30	178.0	183.0	340	
2	JULY	6786	31	218.9	202.5	399	
3	AUGUST	6221	31	200.7	186.5	427	
4	SEPTEMBER	5912	30	197.1	200.0	445	
1	OCTOBER	6960	31	224.5	224.5	515	MONDAY OCT. 11
7	NOVEMBER	2686	25	107.4	82.5	360	
rank is based on average visitors per day							
	YEAR	37235	196	190.0	185.8	515	
			jrf-11/21				

Graph 1 shows that the highest monthly attendance was in October with 6,960 visitors. July was second and August third.



Graph 2 shows the daily attendance by month both in terms of average and median. Average daily attendance was highest in October at about 225 visitors per day. November was lowest at about 107 visitors per day.



Graph 3 and Table 2 show boardwalk visitors by day of the week. Saturday led in popularity followed by Sunday and Monday (#3). Tuesday, Wednesday, Thursday and Friday were the lowest attendance days with their relative ranking depending on whether the comparison is done based on average or median.

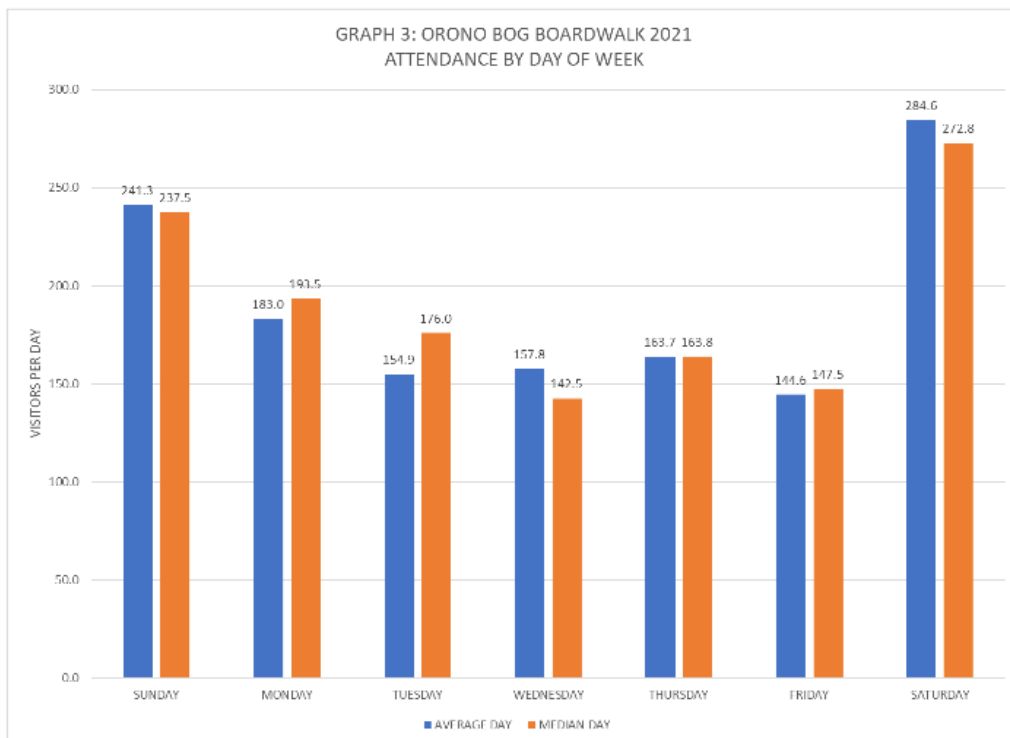


TABLE 2										
ORONO BOG BOARDWALK ATTENDANCE BY DAY OF THE WEEK IN 2021										
		PERSONS <COUNTS/2>								
		TOTAL		VISITORS PER DAY						
RANK	DAY	VISITORS	#DAYS	AVERAGE DAY	MEDIAN DAY	BEST DAY				
2	SUNDAY	6756	28	241.3	237.5	442				
3	MONDAY	5125	28	183.0	193.5	515	MONDAY OCT. 11			
6	TUESDAY	4337	28	154.9	176.0	311				
5	WEDNESDAY	4417	28	157.8	142.5	340				
4	THURSDAY	4583	28	163.7	163.8	283				
7	FRIDAY	4050	28	144.6	147.5	283				
1	SATURDAY	7968	28	284.6	272.8	468				
rank is based on average visitors per day										
	YEAR	37235	196	190.0	185.8	515				
			jrf-11/2 1							

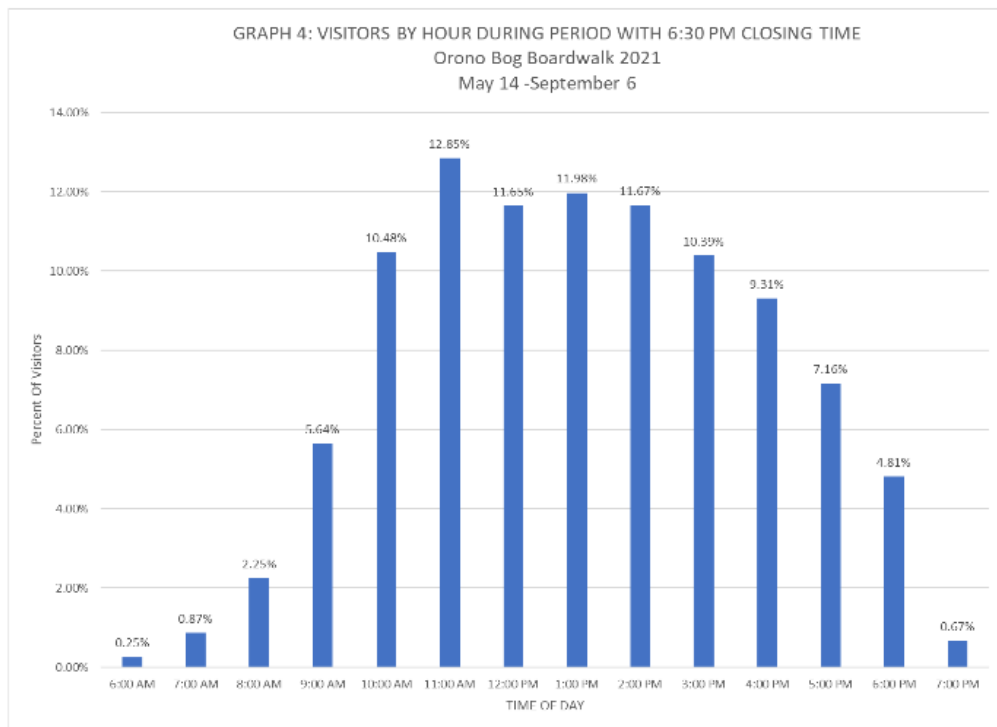
Table 3 shows the top 30 days for total attendance in 2021; these were the days with over 300 visitors. Indigenous Peoples' Day (Columbus Day), Monday November 11 was #1 with 515 visitors. #2 was Saturday of the same weekend <October 9> with 468 visitors. Tied for #3 were Saturday September 4 (of Labor Day weekend) and the following Saturday September 11, both with 445 visitors. Rounding out the top 5 was Sunday Oct. 10 (again Indigenous Peoples' Day weekend) with 442 visitors.

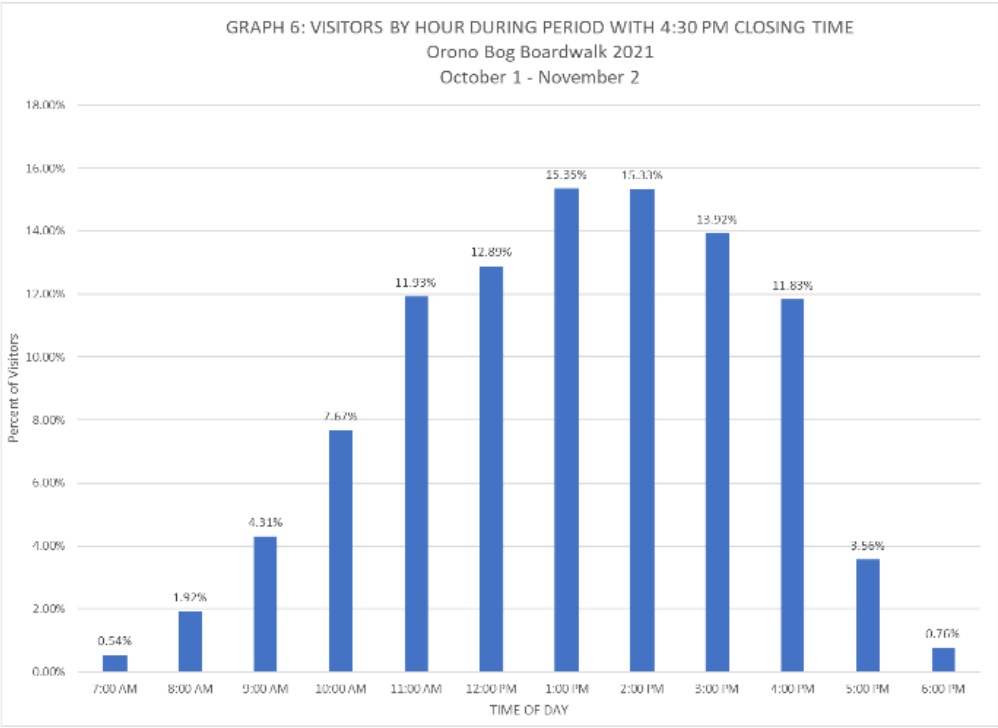
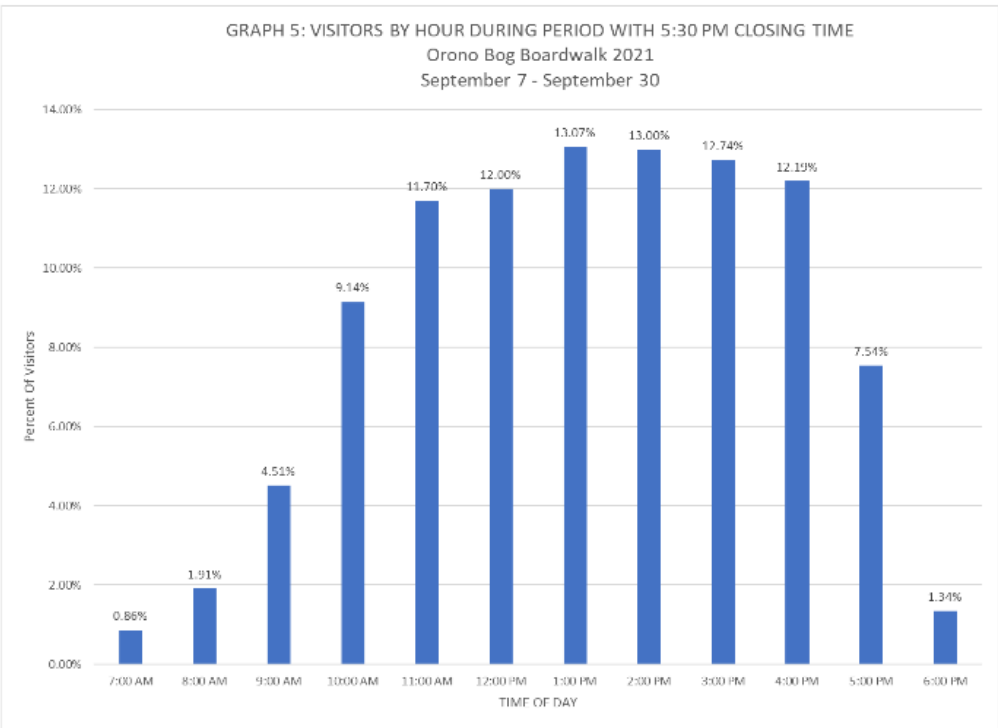
TABLE 3										
TOP 30 HIGHEST ORONO BOG BOARDWALK ATTENDANCE DAYS IN 2021										

	<these days all had 300 or more visitors>										
RAN K	DAY OF WEEK	DATE	VISITORS				RAN K	DAY OF WEEK	DATE	VISITORS	
1	MON	21-10-11	515	INDIGENOUS PEOPLES' DAY			16	SUN	21-07-11	345	
2	SAT	21-10-09	468				17	WED	21-06-23	340	
3	SAT	21-09-04	445				18	SUN	21-06-13	338	
4	SAT	21-09-11	445				19	MON	21-10-04	335	
5	SUN	21-10-10	442				20	SAT	21-07-24	325	
6	SUN	21-08-01	427				21	SAT	21-06-12	323	
7	SAT	21-09-25	424				22	MON	21-07-05	323	
8	SAT	21-07-31	399				23	SAT	21-08-28	320	
9	SAT	21-10-02	396				24	WED	21-10-06	318	
10	SAT	21-07-10	364				25	SUN	21-06-20	316	
11	SAT	21-11-13	360				26	SUN	21-08-15	314	
12	SUN	21-09-19	356				27	TUES	21-07-13	311	
13	SUN	21-09-12	355				28	WED	21-05-19	310	
14	SUN	21-09-05	351				29	SUN	21-10-24	309	
15	SUN	21-10-03	350				30	MON	21-09-06	307	LABOR DAY
				jrf-1 1/21							

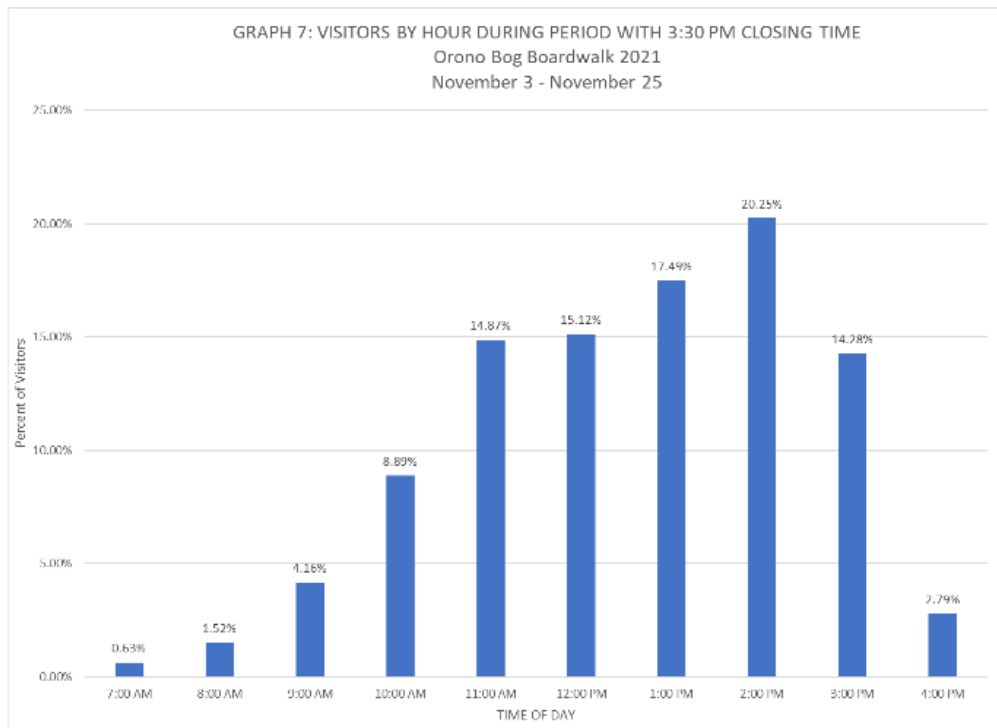
Of the top 30 attendance days, 11 (37%) were Saturdays, 11 (37%) were Sundays, 4 (13%) were Mondays, 3 (10%) were Wednesdays, 1 (3%) was a Tuesday. No Thursdays or Fridays were in the top 30 attendance days.

Graphs 4, 5, 6, and 7 show visitors to the boardwalk by hour of the day for each of the four closing times over the course of the year. These graphs could be used to determine which hours of the day would be best for volunteer staffing if the goal is to maximize the number of visitors encountered.









Over the course of the year the average daily midpoint for visitors can be calculated. That is the time of the day where half of the visitors on average have come before and half will come after. It turns out that it did not vary a lot. For the 6:30 PM closing time the midpoint was 12:30 PM. It was 12:45 PM when the closing time was 5:30 PM, 12:42 PM when the closing time was 4:30 PM, and 12:16 PM when the closing time was 3:30 PM.

Peak (busiest) hour was 11AM for 6:30 PM closing, 1PM for both 5:30 PM and 4:30 PM closings, and 2PM for 3:30 PM closings.

The best window for coverage was 10AM-3PM for the 6:30 PM closing time. It shifted to 11AM-4PM for the 5:30 PM and 4:30 PM closing times. With the 3:30 PM closing time the best window narrowed to 11 AM-3PM and was likely to actually be 11AM to closing.

For the purpose of this analysis, Night Visitors are defined as visitors to the Orono Bog Boardwalk between 9 PM and 5 AM regardless of the time of the year. This writer does not know if there were any authorized visits during those hours but the counter logged 47 such visitors over the course of the year.

There were an even higher number of visitors during the peripheral hours between the official boardwalk closing times and 9PM and between 5AM and the official opening times which I will not attempt to detail here.

TABLE 4 summarizes night visitations by month. The most night visitors were in June with 17 followed by October with 12. There were twenty nights over the year with such visitors with a quarter of those nights

being in June and a quarter in October. The largest group was six individuals and occurred on the night of June 4. Groups of five came in on the nights of June 22 and October 2.

TABLE 4			
Night Visitors By Month			
ORONO BOG BOARDWALK - 2021			
<during the hours from 9PM to 5AM>			
MONTH	# VISITORS	# NIGHTS	LARGEST GROUP SIZE
MAY	1	1	1
JUNE	17	5	6
JULY	3	2	2
AUGUST	5	3	3
SEPTEMBER	6	3	3
OCTOBER	12	5	5
NOVEMBER	3	1	3
	47	20	6
jrf-11/21			