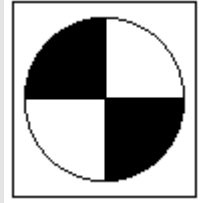


September
2005

Editor:
Roger Edwards

LAKE WISE

A Voice for Quiet Waters



The Oregon Lakes Association Newsletter

PRESIDENT'S PERSPECTIVE

Register for OLA Conference

by Mark Rosenkranz

It is that time of year again where we start making plans to attend the Oregon Lakes Association annual conference. This year the conference will be held October first in Eugene at the Valley River Inn. There is a range of lake related topics to be discussed at the meeting. Of particular interest this year will be results from the newly adopted State cyanobacteria monitoring and alert guidelines. You may have noticed the press releases from the Oregon Health Department restricting activities on several lakes that had cyanobacteria blooms. Related will be a historical perspective of algae in Devils Lake and steps Oswego Lake has taken to reduce algae growth. These are only a few topics being covered at this year's conference. Please visit the OLA website at www.oregonlakes.org to find out more and to register for the conference. A registration form and the agenda are also included in this newsletter.

The annual conference is also time for OLA elections and new member recruitment. Oregon Lakes Association's board consists of five Officers and at least four Directors. Officer and Board opportunities are available this year for those interested in participating. The Board has monthly meetings convened by teleconference and a fall annual meeting. This year we are discussing a regional NALMS meeting between Oregon, Washington, and Idaho to be held in Portland next year. Please state your interest in joining the Board when you sign up for the annual meeting.

Roger Edwards has spent over a year assembling a list of named lakes in Oregon. Although we cannot claim to be a "Land of 10,000 Lakes" like our friends in Minnesota, you may be surprised to learn that we have at least 2,200 lakes here. The Oregon Lakes Association is making this bound list available for a nominal fee at the annual meeting. Make sure you state your interest in the list when you register so enough copies can be printed.

As the summer draws to a close and kids start heading back to school after the Labor Day weekend, Oregon's lakes and reservoirs will be seeing a lot less activity. As the leaves begin to fall and weather cools, rain will begin to fill depleted reservoirs and replenish groundwater. Take time to visit your local lake and watch it change with the season. It is a beautiful time of year to be out on one of Oregon's 2200+ lakes.

See you in October.

Conference Details

For readers planning to attend the 9/30-10/1 OLA Conference, the cities of Eugene-Springfield constitute the second largest metropolitan area in Oregon so there will be ample big city things to do there between Conference events. Eugene's central location also keeps travel arrangements simple for all OLA members converging on the site of our annual gathering. To take advantage of these attractions, the Conference was scheduled when the local Ducks would be away (Oregon at Stanford, kickoff at 2:00 PM, no television scheduled), and there would be rooms available at the Valley River Inn.

On the same weekend, downtown Eugene will be bustling with *Eugene Celebration*, their annual festival of art and entertainment with live performances, food, and marketplace. OLA will share facilities at the VRI with the Eugene Glass School, which will be holding their annual dinner and auction.

The Valley River Inn is a hotel, resort, and conference center on the banks of the Willamette River, just minutes away from the Eugene city center. It was built in 1973 after the US Army Corps of Engineers had demonstrated adequate influence on river stage levels downstream of their Willamette flood control reservoirs. Reservations can be made at (800) 543-8266. For guests specifying the Oregon Lakes Association Conference, deluxe rooms will be available at \$89 per night. Concierge or Riverview rooms will be available for \$109-129. Or you could request the Romance Package for double occupancy with chilled champagne or cider on arrival, a room service chocolate treat, pamper kit of luxurious bath/spa amenities, continental breakfast delivered to your room, and a late checkout time; starting at \$229 per night.

To reach the hotel from I 5, take the 194 B exit to I 105 heading west. From this highway, take the second exit, marked #1, Delta Hwy, Santa Clara-Junction City. Stay in the right lane and exit at the first opportunity onto and across the overpass, and then turn left at the light onto Valley River Way.

Lake List Available from OLA

Have you ever visited Creep and Crawl Lake? Or relaxed at Beetles Rest Reservoir? Do you know where to find 15 Lost Lakes? All of these excursions can be completed within the boundaries of Oregon. A list of these and about 2200 other lakes, reservoirs, ponds, and puddles has been assembled and will be available for purchase at the OLA Conference in Eugene. The list was compiled from entries in the *Atlas of Oregon Lakes*, the USGS six volume series *Lakes of Oregon*, the McArthurs' book of *Oregon Geographical Names*, Larson and Donaldson's *A Compilation of the Named Lakes in Oregon*, and the dam inventory maintained by the Oregon Water Resources Division. The list's format provides the lake's name and common variants, its county, a brief description, and a reference. It gives users a single resource that will likely include a lake in question. For example, Creep and Crawl Lake is "one of ten lakes clustered in Clatsop Plains sand dunes", and Beetles Rest Reservoir is "a Klamath County impoundment on Agency Creek, immediately north of Agency Lake". The \$10 fee for the list will support the work of OLA.

Fern Ridge Repairs Are Underway

The dam at Fern Ridge Lake has been in the news since July 2002 when a 10-foot diameter depression was first noted on its downstream face. The discovery led to attentive monitoring of the dam as well as several pointed examinations, experiments, expert opinions, public explanations, and an Environmental Assessment. The culmination of this attention was reached in early June of this year when excavation to expose and replace the dam's deteriorating drain system was begun. This year's OLA Conference gives attendees a good opportunity to take a look at the ailing structure, 12 miles west of downtown Eugene. While it is now drawn down for the repairs, in a normal year Fern Ridge is one of the most heavily used recreation sites in Oregon.

The idea of constructing a reservoir on the Long Tom River was part of a US Corps of Army Engineers response to the Federal Flood Control Act of 1938 to control the annual flooding that occurred in the Willamette River basin. Fern Ridge would be one of thirteen reservoirs in the plan and it was the first to be completed. Construction began in 1940 and the reservoir began to fill the following year. The earth-fill dam was 6,600 feet long, 50 feet high, and had a gated concrete spillway. It contained an 8 inch perforated pipe along its entire length, with 11 lateral drains to move the collected water to Kirk Pond, at the downstream toe of the dam.

The lake that formed behind the dam covers 9360 acres, and at normal full pool (374' elevation) it contains 101,200 acre feet of water. The maximum depth is 33 feet, but the mean depth is just 11 feet, so a drawdown of 2-3 feet will significantly reduce the size of the lake. Over the years the Corps has estimated that storage of flood waters in the reservoir has prevented more than \$401 million in flood damage and produces about \$10 million in benefits to the region from the 975,000 annual visitors who are drawn to the lake's five public parks, three boat ramps, two public and three private marinas. The size of the lake and the abundant winds there make it a popular site for sail boating. The water is also used for irrigation and to meet downstream minimum flow requirements.

To coordinate the needs of all these users, the Corps normally will minimize drawdown through the summer into September. By the end of November the drawdown should be at minimum flood pool level of 353', and the reservoir is operated for flood control until February when storage for the summer months begins. Filling is usually completed by mid-April. In August of 2003, the concern about the dam's safety put a maximum pool limit of 371' in place. At this level, the boat ramps can still be used but two of the three would be shut with a further drop of 2-3'. This restriction was lifted in January 2004 when the results of initial testing showed the dam could withstand the pressure. By December 2004, the continuing erosion and a better characterization of the damaging processes underway produced a maximum pool limitation of 360'. A declaration of an "active state of failure" generated a Congressional appropriation for repairs in February 2005. The first construction contracts were signed in April and work began soon thereafter.

The repair will expose and remove the 7000' of original drainpipe from the downstream face of the dam. The excavation will extend 10' beyond the centerline at the top of the dam. Excavated material will be saved and used to rebuild the dam and for some habitat projects along the lakeshore. The new drains will include sand and rock filters to block the erosion of the dam's core. A series of wells along the dam's length will provide a way to remove water seeping into and around the drains. The dam will then be rebuilt, with riprap added to its upstream slope. The reservoir will be held at 350-355' elevation throughout the repair. The target date for completion is November 2005, although the Corps recognizes that this accelerated schedule may not be

achieved if unavoidable delays are encountered. An August progress report states the old drains have been removed and gravel for the new drains is being put in place.

Cyanobacteria Update

Oregon's cyanobacteria season is underway. Even with the higher threshold adopted for this year's monitoring, the Oregon Department of Human Services has issued water contact advisories for Crane Prairie, Larison Cove at Hills Creek Reservoir, Goodman Creek Arm at Lookout Point Reservoir, Odell Lake, Packard Creek Arm at Hills Creek Reservoir, the easternmost section of Hills Creek Arm of Hills Creek Reservoir, and upstream of the Hampton boat ramp in Lookout Point Reservoir. Most of these sites have histories of elevated cyanobacteria counts. The Crane Prairie advisory was issued on June 24 and cancelled on July 22, and the advisory at Odell Lake lasted from July 19 to August 4. Advisories are lifted after counts have dropped below the threshold level of 100,000 cells/mL for two weeks. The waiting period offers assurance the counts won't spike again and gives time for any toxin produced to degrade. Last year, advisories were issued into September so there still may be lakes to be added to the posted list by season's end.

The advisories have been noticed. The resorts at Crane Prairie and Odell Lake have reported that reservations have been cancelled after their advisories were posted. There have been radio and television news stories in Bend and Eugene, and summary articles in the Oregonian and the Bend Bulletin. This media coverage sends the same message into living rooms that some vacationers have found posted at the water's edge; there is a health risk associated with high concentrations of cyanobacteria cells, and these blooms can occur in Oregon lakes. The advisories have generated other lessons as well:

- ✓ Toxin analyses document past conditions and negative results have no predictive value.
- ✓ Tracking illness from exposure to cyanobacteria toxins is difficult because the symptoms are similar to other causes and may go unreported.
- ✓ Watching lakes for visible scums may save the effort and expense of performing algae cell counts.
- ✓ Public awareness of cyanobacteria is not yet so great that people will automatically avoid contact with affected waters.
- ✓ There are still splendid vistas and fresh air at posted lakes.

The repeated appearance of the standard advisory format is also beginning to generate questions about the cause of the blooms and what can be done to make them stop. While there is enough experience from sites throughout the world to provide options for these questions, it remains to be seen if the will to make the necessary changes can be mustered.

A Douglas County Landmark

Ben Irving Reservoir is a distinctive feature on recent maps of Douglas County. There is no mention of it however in the *Atlas of Oregon Lakes*, or the Douglas County volume of the USGS *Lakes of Oregon*. Curiosity about this omission led to an investigation that found the reservoir was created in 1980, too late to meet the publication dates of these references. Time marches on.

The reservoir is a tribute to Ben Irving, a native Oregonian who worked for decades to document the water resources of Douglas County. A trained surveyor and engineer, he collected precipitation and stream flow data throughout the county, set up flood warning zones at susceptible locations, and identified dam sites to serve future needs. He was elected as County Surveyor in 1945 and remained in public service until 1966, a year before his death.

The reservoir is on Berry Creek, a tributary of Olalla Creek in the South Umpqua River basin. The watershed above the dam has an area of 17.5 mi². The dam blocks a narrow valley with rock outcrops on either side. It is an earth-fill structure with a concrete overflow spillway. The dam height is 130' and provides a storage capacity of 11,250 acre feet. At full pool, the reservoir covers 250 acres. It is primarily used for recreation and irrigation. There is a well-tended park and boat ramp on the north shore.

Property Rights on the Lakeshore

The recently concluded session of the Oregon Legislature briefly considered a bill that specifically defined the ability of the public to utilize private lands adjacent to navigable waterways. Bills addressing this general topic have also been introduced in previous sessions. In this year's session, SB 1087 was introduced by Senators Ted Ferrioli and Kate Brown to establish a statewide management plan to govern the recreational use of Class I waterways. A careful reading of the bill reveals it is actually restrictive in nature toward the existing rights and practices along navigable streams. While the bill ultimately was not acted upon, it did create some discussion among OLA Board members and should also be of interest to water recreationists and lakeshore dwellers.

As explained at the 2003 OLA Conference in Lakeside, the people of Oregon own and have the right to use the bed and banks of all navigable streams, rivers, and lakes up to the ordinary high water line. Any activity that can be described as navigation, commerce, recreation and fishing is allowed. These lands are administered by the Oregon Division of State Lands. There is a designated procedure to determine navigability, but a waterbody that has the length, width, and depth to enable boats to make successful progress through its waters will generally meet the required criteria. For example, on the basis of these guidelines, the State Land Board and Governor Kulongoski agreed on June 14 that the 174 mile reach of the John Day River from Tumwater Falls to Kimberly was navigable.

The ODSL requested a legal opinion on the questions of ownership and use of waterways in Oregon and Attorney General Hardy Myers issued his answer on April 21, 2005. While the opinion generally cites decisions referring to navigable streams, the tone of the response would likely be applicable to lakes as well. The sections dealing with conflicts between public users and adjacent property owners give a clear indication of acceptable practices. Previous court rulings have found that "a riparian owner takes his title subject to the right of the public to navigate a stream". "The public is entitled to reasonable enjoyment in a stream that is navigable and the riparian owner to reasonable enjoyment of their rights, each without unnecessary interference from the other. A reasonable enjoyment signifies such an exercise of the right as common prudence would dictate, so as not to affect correlative or concurrent rights injuriously. This requires care and circumspection in its exercise, and, if injury should be the proximate result of the want of care, liability would logically attach. But the exercise thereof with proper care and without negligence can entail no liability."

The same findings are presented with equivalent eloquence in another ruling where it is stated that "the public right of passage is to some extent, necessarily the dominant right, because it is the right to move on or by.

However the public may not exercise this right in a way that is usurping, excessive, or unreasonable. The public right must be exercised without unnecessarily interfering with the riparian proprietor, and as modified by his right to make a reasonable use of the stream for his own purposes.” More specifically, “When a water is navigable, the authority for a member of the public to meddle with or touch upon the adjacent private upland is founded in necessity”. And again, “The navigability of a stream does not give to the navigator a right of way on the land, except for necessity”. So a definition for necessity here is key. Examples of danger, retrieving stranded possessions, or portage are cited. In all of these instances, the navigator is responsible for damages to the property. Another finding that looks at a different aspect of necessity states, “The inability to access the uplands must not nullify the right to use a navigable waterway”.

It is evident then that the courts have granted a public right of access beyond the ordinary high water line, but under limited circumstances. It is hard to speculate on the precise boundaries of the acceptable limits. Portage is not a major issue on lakes but a capsized boat could certainly send floundering navigators shoreward. Does sending wakes crashing onto the shoreline constitute usurping, excessive, or unreasonable exercise of the right of passage? Or are such annoyances to be expected when a riparian owner takes title to his property? Lake access is less of a problem than for streams due to the confined nature of lakes; a single lake access point can serve for both entry and exit. Local customs and covenants can also provide direction on acceptable conduct. But in the end, we must all remember that a day at the lake means different things to different people.

A Better Mousetrap?

The State Marine Board is considering a petition they have received that requests a 1 foot maximum wake zone be established on a 2 mile stretch of the Willamette River immediately south of Portland. Zones where no wake is permitted are common but a zone with a wake height limitation is a little novel. The petitioner has crafted a self-calibrating meter that measures the maximum height of a set of wake waves above the calm water level. This device then quantifies wake height and so makes enforcement possible, although not particularly simple.

Perhaps boaters will exercise a bit more caution where their wake can be monitored, but they will be quite a distance away when the meter reading is recorded. An article in the Fall 2004 issue of *LakeLine* points out that wakes are the product of several interacting factors, including boat speed, hull design and length, water depth, distance between boat and meter, and the combined effects of passing boats; all of which makes calibrating boat operation to conform to a specific threshold requirement a daunting prospect. Nevertheless, is the time right to insert a new wake limitation between the existing no wake and unrestricted zones? The State Marine Board is interested in your opinion. Details of the proceedings are available on the web at www.boatoregon.com, and Randy Henry is the coordinator for the policy request. A decision on the petition under consideration is expected in September or October.

LAKE WISE
The Oregon Lakes Association
Newsletter 2005 #3

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OLA Mission: The Oregon Lakes Association, a non-profit organization founded in 1988, promotes understanding, protection, and thoughtful management of lake and watershed ecosystems in Oregon. For additional information on OLA, write to the address above, or visit our website.

OLA welcomes submissions of material that furthers our goals of education and thoughtful lake management in Oregon, and is grateful for the corporate support that helps sustain the organization. Corporate members are offered a one-time opportunity to describe their product or service to Lake Wise readers. These descriptions are not endorsements, and opinions appearing in Lake Wise are not OLA policy statements.

Visit our website: www.oregonlakes.org

NALMS News

As a State chapter of the North American Lake Management Society, OLA encourages its members and others with an interest in lakes to consider joining NALMS. This organization is an excellent resource for dealing with lake problems. Their selection of publications provides insights that they have garnered from experience throughout North America and beyond. A recent addition to the NALMS book shelf is "How's the Water?", a 306 page manual from the Wisconsin Lakes Partnership dealing with recreational use conflicts. It sells for \$17.56 to members and \$21.95 to non-members.

The latest issue of their quarterly magazine *LakeLine* (vol 25#2, Summer 2005) focuses on shoreline revegetation, and includes a very useful accumulative index covering 1990 to 2004 (vol 10-24). NALMS now offers a simple subscription to *LakeLine* for \$25 per year. The magazine is also a part of their membership packages. Individual issues can be purchased from their website, www.nalms.org.

The June 2005 issue of NALMS' peer reviewed journal, *Lake and Reservoir Management*, includes a paper of OLA member Jacob Kann and UW Professor Emeritus Eugene Welch, describing the correlation of wind speed and fish kills in Upper Klamath Lake. The fish kills result from low dissolved oxygen levels and exposure to ammonia in late summer when algae blooms are degrading. While other factors are involved, the paper describes how poor lake circulation makes these conditions worse when insufficient wind allows the water to stagnate and stratify.



Valley River Inn

A W E S T C O A S T H O T E L

2005 Annual Meeting of the Oregon Lakes Association

Friday Sept. 30	Valley River Inn – Siuslaw Room
7:00 – 9:00 pm	Board of Directors Meeting (Open to all Members) (Agenda – <i>Mark Rosenkranz</i>)
Saturday Oct. 1	Valley River Inn – McKenzie Room
8:00 – 8:45	Registration – <i>coffee & rolls</i>
8:45 – 8:55	Welcome – <i>Mark Rosenkranz, OLA President</i>
8:55 – 9:15	NALMS update – <i>Dr. Harry Gibbons, PNW NALMS Director</i>
9:15 – 9:25	Introduction to Session 1 <i>Dave Gilbey Water Resources Manager, City of Lake Oswego</i>
9:25 – 10:00	State Cyanobacteria Guidelines – First Years' Results <i>Dr. David Stone, Toxicologist, Oregon Health Services</i>
10:00 – 10:30	Oswego Lake – Alum Demonstration Project <i>Mark Rosenkranz, Water Resources Mgr, Lake Oswego Corp.</i>
10:30 – 10:45	Break – <i>refreshments (Posters)</i>
10:45 – 11:20	McKenzie Watershed – Effects of Climate Change <i>Karl Morgenstern, Eugene Water and Electric Board</i>
11:20 – 12:00	Devils Lake – Recent Paleolimnology Results <i>Joe Eilers, Principal, Max Depth Aquatics</i>
12:00 – 1:30	Lunch (On Your Own)
1:30 – 1:40	Introduction to Session <i>Dr. Mark Sytsma Portland State University, Portland</i>
1:40 – 2:10	Oregon Invasive Species Council – Outreach and Education <i>Robyn Waldeck, PSU Center for Lakes and Reservoirs</i>
2:10 – 2:30	Waldo Lake – <i>Laura Johnson, PSU Center for Lakes and Reservoirs</i>
2:30 – 3:00	Curlyleaf Pondweed – Life Phenology in Blue Lake <i>Steve Wells, Center for Lakes and Reservoirs</i>
3:00 – 3:15	Break – <i>refreshments (Posters)</i>
3:15 – 3:40	Cougar Reservoir – Multiple Intake Tower Installation <i>Laurie Rice, Army Corps of Engineers</i>
3:40 – 4:10	Cougar Reservoir – Sediment Transport and Deposition <i>Patrick O'Brien, Army Corps of Engineers</i>
4:10 – 4:30	Open Discussion
4:30 – 4:40	Concluding Remarks – <i>Mark Rosenkranz</i>