



CLARION

A Publication of The Colorado Lake and Reservoir Management Association
April 2004

www.CLRMA.org



Rocky Mountain Regional Lake and Reservoir Management Conference

"Lakes and Reservoirs - the Aquatic 'Gold' of the Western Landscape"

May 12-14, 2004

Sheraton Denver West Hotel, Denver, Colorado

By Sharon Campbell

The upcoming Rocky Mountain Regional Conference is rapidly approaching. We currently have 8 vendors and 39 participants registered for the conference. Remember, our goal is to have at least 100 participants and many CLRMA members have indicated that they plan to attend. Please register on the NALMS web site at www.nalms.org as soon as you can!

South Dakota Lakes and Streams Association has had to withdraw as our conference partner. They are re-structuring their organization and it's taking longer than anticipated. CLRMA has already determined to proceed with the conference as planned, however, we will have to stay very strictly within our revised budget to make sure that the conference can break even or show a small profit.

Some very good news is that the RMRC is already receiving sponsorship funding from a variety of State, Federal, and Corporate sponsors. We would like to acknowledge the Bureau of Reclamation, U.S. Geological Survey, the Colorado River Water Conservation District, the Colorado Water Quality Control Division, Denver Water, and Coors as proud sponsors for the Rocky Mountain Regional Conference. We appreciate their support!

The abstract submittal deadline for the conference is now closed. We currently have 33 oral presentation and 4 poster abstracts for the conference. We are still looking for a few more oral and poster abstracts to fill the program. We have finalized the preliminary RMRC program and hope to include it as an insert in this issue of the Clarion. We will also post the preliminary program on both the NALMS and CLRMA websites. Take a look to see what you may be missing if you don't register for the conference.

There is still room for participants in both the pre- and post-conference workshops at the RMRC. On Wednesday, May 12, 2004 from 8 am to 12 noon we are offering "EXCEL-lent Training: Learn Enhanced Tips to super-charge your EXCEL applications." The cost for the workshop is \$65. The course will be taught by Dr. Darrell Fontane, Director of the International School for Water Resources and Professor of Civil Engineering at Colorado State University. On Friday, May 14, 2004 from 1 - 5 pm we are offering a "Running a Successful Monitoring Program" workshop. The cost for the workshop is \$50. The course will be taught by Dr. Noel Burns, Lakes Consulting, Auckland, New Zealand. Both of these workshops are fully described in this issue of the Clarion. Again, register for the conference and the two workshops on the NALMS website at www.nalms.org.

Legislative Update

By Sara Duncan

It has long been said that water issues should be decided on geographical and not political bases. Often water votes reflect the peculiar hydrology of Colorado, but election years are the exception that proves the rule, and nowhere was that more evident than Rep. John Salazar's water mitigation bill, HB 1040. In fact, whether to mitigate transbasin diversions became the seminal water issue of the 2004 session of Colorado's General Assembly.

HB 1040 was drafted to reflect existing language in the 1937 Water Conservancy Act that calls for mitigation of transbasin diversions out of the mainstem of the Colorado River by water conservancy districts subject to the Boulder Canyon Project Act. Under HB 1040 the tests for mitigation are no decree or change of water right diverting water from one water division to another may be recognized unless the court requires "that the present appropriation of water and prospective beneficial uses of water within the water division from which the water is exported will not be impaired or increased in cost at the expense of the water users in that division." Further, no court hearing would be necessary if the exporting entity entered into a mitigation agreement with a water conservancy or conservation district in the basin of origin.

Opponents to HB 1040 cited the impossibility of determining "prospective beneficial uses", the questionability of equating mitigation for changes of water rights and for decrees for unappropriated water, and the built-in conflict of interest requiring an intergovernmental agreement between exporters and local water districts that were fighting for the same water. Supporters, many from Denver, were eager to compel mitigation and to assist Rep. Salazar in his race for Congress. The bill finally lost on second reading on February 27th by two votes. It is anticipated this bill will return in some form next session, and the issue of mitigation will continue to be debated in the political arena.

One water bill that has become law is HB 1035 sponsored by Rep. Hoppe and Sen. Entz. This bill forbids the current practice of proxy voting by absent members of the CWCB. Other bills likely to be passed are HB 1073 by Rep. Matt Smith and Sen. Entz to correct an early measure that created

Columbine Lake in Deep Water with Wal-mart

By Steve Lundt

Located in the City of Arvada, this 10-acre urban lake next to a strip mall might be reduced in size by 20%. The City of Arvada is working with Wal-mart to build a store that would require the Lake to be temporarily drained and reduced by 2 acres in order to make room. Local residents are not happy about this and have placed "Save our Lake" signs around the neighborhood.

Columbine Lake was originally a gravel pit during the construction of I-70. After the highway was built, the pit slowly filled in with natural spring water and has turned into a nice, small lake supporting your normal community of aquatic organisms. There is even a trail around the lake that locals use regularly.

What this all comes down to is the almighty dollar: the City of Arvada will receive needed tax money from the development, Wal-mart will open up another profit-making store, nearby homeowners will worry about property values, organized labor unions will negotiate contracts, small businesses might have to close doors, and our economy will keep rolling all in the name of progress. All the while, our natural resources, Columbine Lake, will be exploited.

Someday when I am *King of all Lakes* (being the CLRMANATOR just isn't enough), I will make sure "progress" will never again fill in a lake, wetland, river, fen, bog, or pond. Until then, good luck to the Columbine Lake lovers and thanks for speaking up for the lake.

a broad duty of notification of surface owners “upon which water is or will be placed to beneficial use.” Theoretically this could include urban landowners who water their lawns. The bill has passed the General Assembly and is on its way to the Governor.

Other bills likely to pass are the Colorado Water Conservation Board construction fund bill, HB 1221 that contains money for the third year of updating the state satellite water monitoring system as well as money for the enlargement of Elkhead Reservoir and HB 1365 that creates a state office of Water Conservation and Drought Mitigation Planning.

An interesting resolution is HJR 1009 that asks the Bureau of Reclamation to do a full EIS prior to approving Aurora’s lease for space in Pueblo Reservoir. The resolution is pushed by opponents to Aurora’s activities in the Arkansas Basin. This is the first time in memory Republican legislators have asked for more federal interference on water issues. The bill has passed the House and awaits an Agriculture and Livestock Committee hearing in the Senate.

Finally, Sen. Ken Gordon, after getting his notification of source water for home buyers bill out of the Senate, lost it in the House. S. 101 attracted fierce opposition from the realtors. Sen. Gordon vows to bring the bill back next year.

Still waiting to be heard are bills addressing water governance in the South Metro Area. Rep. Smith is pushing for a water conservancy district and it is unclear what Sen. Dyer is going to do. Meantime the Douglas County water suppliers are working on an intergovernmental agreement that may bypass the legislature. This process demonstrates anything can happen while the legislature is in session, especially during an election year.

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What's Happening in NALMS

Thinking of updating your resume? NALMS's Certified Lake Manager (CLM) and Certified Lake Professional (CLP) programs have a new look and would look great on your resume. Contact Ken Wagner at KWagner@ENSR.com if you are interested in a new, shiny tool for your career toolbox.

SPOTLIGHT ON.....

Name: "The CLRMANATOR" (formerly known as Steven Eliot Lundt)

Age: 32

Years with CLRMA/NALMS: 1.5 with CLRMA, 3 with OLA (Oregon chapter), 2 with ILMS (Indiana chapter), and 7 years and 7 International symposiums with NALMS

Years in Colorado: lived in Denver between 1994-1997 and 2002-Present

What do you do? Water Quality Specialist with Metro Wastewater Reclamation District working on Barr Lake, Milton Reservoir, Prospect Reservoir, and Horse Creek Reservoir to document water quality conditions and to help with reservoir management.

Family? One son, 2 yrs old, and surrounded by informative in-laws

When I'm not working I am... being a homeowner, a husband, and a dad in downtown Denver dreaming of being a mountaineering guide in the mountains.

Your idea of happiness? When every aspect of my life is in line: a healthy and happy kid, a cheerful and happy wife, strong and fit mind and body, and I am heading off for a week long vacation in the great outdoors.

Not many people know that... my true calling in life was to be a point guard in the NBA. I was suppose to be the next John Stockton until I stopped growing at 5' 9.58".

What do I like to do most? Riding up and down single-track trails or hiking above tree line. Indoors, it is to wrestle with my son.

If I won the lottery, ... I would stop working, take off for about 2 years and explore every national park and monument in North America, and then come back and become an elementary teacher. I would use my off days to volunteer by handing out money directly to people that I see need it the most (e.g. set up a college fund for an inner-city, neglected child). I would also invest some of my cold cash into the hydrogen car technology; it is the way of the future.

Last book I read... "Touching the Void" by Joe Simpson. Probably the most impressive physical and mental feat ever carried out by a single human being.

What political office would you like to hold? None, I really don't care for politics. But if I have to answer every question, then I guess I would like to be the park superintendent for the Yellowstone National Park system (I think that is a political office??).

Toughest aspect of your job? The smell! Nothing like commuting to work on my bike year round and having to smell 1.5 million people's wastewater every morning.

What famous person would you like to meet? Meriwether Lewis, to hear what the land was like west of the Mississippi River before European settlement and see if I could join the Corp of Discovery.



COLORADO LAKE AND RESERVOIR MANAGEMENT ASSOCIATION

WWW.CLRMA.ORG

2004 Membership Invoice

1. PLEASE FILL OUT FORM COMPLETELY

First & Last Name:	Day Phone:
Organization:	Fax:
Address:	E-mail:
City & State:	Membership Type:
Zip:	NALMS Member:

2. PLEASE CIRCLE YOUR MEMBERSHIP COST BELOW:

Category	NALMS Member			Not a NALMS Member		
	1-year	2-year	3-year	1-year	2-year	3-year
Individual (I)	\$15	\$25	\$30	\$20	\$35	\$45
Organization* (O)	\$75	\$120	\$140	\$100	\$170	\$215
Student (S)	\$5	\$8	\$10	\$10	\$18	\$25
Contributor	>\$200					

*Include Name and other information for up to 5 individuals

3. PLEASE SEND CHECK PAYBLE TO:

“Colorado Lake & Reservoir Management Association” and return with this form to:
 CLRMA, P.O. Box 350144, Westminster, CO 80035-0144

(To charge your renewal to a credit card, please provide the following information:)

Type of card: _____

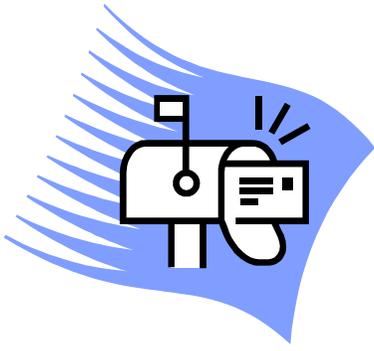
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(Payment by credit card will be in accordance to card issuer agreement.)

4. PLEASE SIGN UP FOR ONE OF THE FOLLOWING ACTIVITIES:

CLRMA Web Page Development _____	2004 Regional Conference _____
Fall Conference _____	Presenter _____
Student Contact _____	Membership Committee _____
Exhibitor _____	Board of Directors _____



In an effort to reduce mailing cost, CLRMA would like to establish an e-mail distribution list for the CLARION. If you would rather receive the CLARION as a PDF file, please let Travis Bray know. His e-mail address is travis.bray@denverwater.org

Thanks for your help!



1 page = \$200 for 4 issues or \$60/issue
1/2 page = \$100 for 4 issues or \$30/issue
1/4 page = \$50 for 4 issues or \$15/issue
(For more info: travis.bray@denverwater.org)

West Slope Story

By Sarah Clements

In the next few CLARION's, I plan on highlighting some of the water quality issues facing some of the reservoirs throughout the west slope. Today, however, I'm writing about an opportunity Colorado taxpayers have that has a positive impact on watersheds at a local level throughout the state. The Colorado Watershed Protection Fund (CWPF), part of the State of Colorado Individual Tax Check-Off program, is one way that all taxpayers can help protect and support our water resources. In 2002, the state legislature added the CWPF to the tax check-off program so taxpayers can give a voluntary donation to watershed protection. CWPF donations received through the tax check-off are distributed to watershed protection organizations in Colorado through a competitive grant program. In 2003, six organizations across the state received funding for their water protection programs including restoration, rehabilitation, and water quality projects. Some of the watershed protection organizations that apply for the CWPF grants are members of CLRMA and NALMS and have boundaries which encompass lakes and reservoirs. By individually supporting the CWPF, we help Colorado's water resources throughout the state. For more information: <http://www.cowaterfund.org>.

Colorado Water Facts – Guaranteed to impress people at parties!!

1. 265 feet – Grand Lake's deepest depth (Colorado's deepest natural lake)
2. 89 – Percent of Colorado's naturally occurring lakes are above 9,000 ft.
3. 2,000 – Number of Colorado's lakes and reservoirs open to fishing
4. South Platte water is used in the following ways: 10% for cities/industries, 65% for irrigation, 3% for reservoir evaporation, and 22% leaves the state
5. 4 – # of quarts of oil that can cause an 8-acre oil slick if dumped down a storm drain
6. 10 – Number of days a water molecule spends in the air once evaporated
7. Blue Mesa - Colorado's largest reservoir
8. 1 – Percent of publicly treated water used for drinking and cooking
9. 10 Trillion tons– Weight of water stored in reservoirs on Earth that has slightly altered the natural rotation of the planet (source: NASA)
- 10.42 million – Price tag for Wolford Reservoir, 7 miles north of Kremmling, 5.5 mile long covering 1,440 acres with a capacity of 56,000 acre-feet



President's Dock - Gone Fishin -

It has been a busy three months since I became the CLRMA president. Most of my time has been spent *fishin, fishin* for membership renewals, new student members, presenters for our upcoming regional conference, and for more West Slope representation. All of my catches have been keepers so far. For example, I would like to welcome Jessica Lang to CLRMA. She is a student at University of Colorado. She has already joined the Conference Committee and is helping out with boosting student involvement with CLRMA.

I have also thrown a gillnet out to see what possibilities are out there to form a volunteer lake monitoring program in Colorado. I have spoken with the Department of Wildlife to see how we can incorporate volunteer lake monitoring into the successful Riverwatch program. The next toss of the gillnet will be to catch lake monitoring volunteers. So watch out!

The Big Fish that is still on the line is the upcoming **Rocky Mountain Regional Lake and Reservoir Management Conference**. When this baby is landed on May 12-14, we will have a trophy of a conference. The 2-day program has nicely filled out with great presentations, vendors, posters, and a workshop on M.S. Excel applications. I want to send out a special thanks to Coors Brewing Company for sponsoring a couple of social events with beverages. Make sure you sign up. This will be one for the record books!

Finally, I want to encourage all of you fish out there to migrate to bigger waters and see what the North American Lake Management Society has to offer, if you have not already. NALMS is a great parent organization that provides great services to folks in the lake and reservoir field (www.nalms.org).

I see my bobber is making ripples, so thank you and I look forward to seeing everyone in May.

Great North American Secchi Dip-In By Steve Lundt

I know it is early spring but it is that time of year to start planning ahead for your lake's summer monitoring. One thing that everyone who monitors a lake should be doing during the first week of July is participating in the Secchi Dip-In. In its tenth year, this North American annual event is a great way to take a "snapshot" of our nation's water quality. Over 6,222 lakes, ponds, reservoirs, streams, and rivers have been monitored, taking in more than 28,000 transparency records. It is time that Colorado gets involved! All you have to do is take a transparency reading, fill in the appropriate information about your waterbody, and send it in. This can be done electronically by going to: <http://dipin.kent.edu/>. Let us know if you plan on making this into a big event and we can help publicize it. CLRMA, again, will get the governor to declare the month of July as the official Lake Awareness Month for Colorado.



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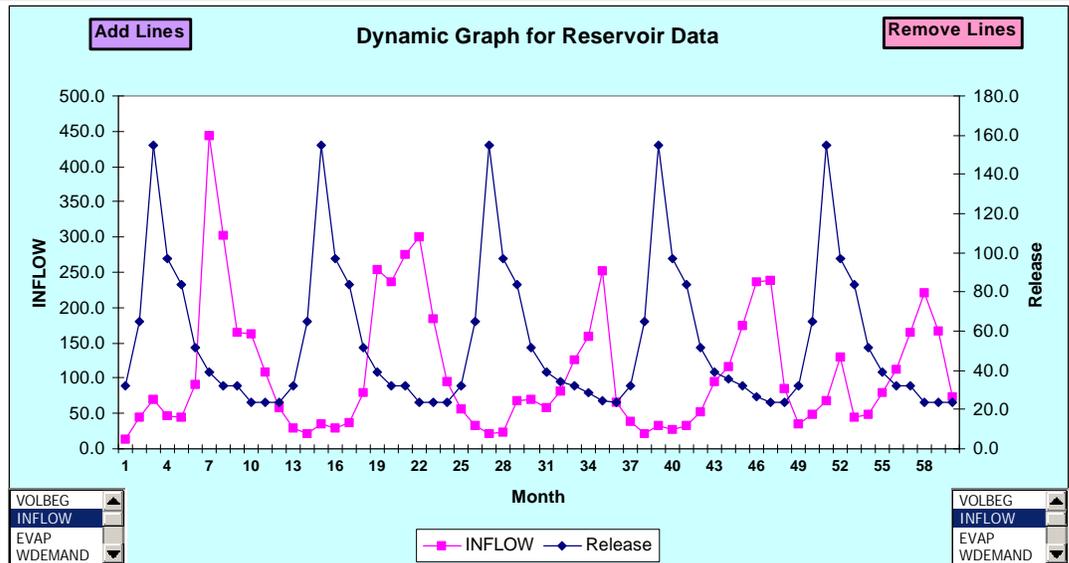
Workshop available at the Rocky Mountain regional Lake and Reservoir Management Conference. May 12-14, 2004 at the Sheraton Denver West Hotel

Title: EXCEL-LENT Training: Learn Enhanced Tips to super-charge your EXCEL applications.

The EXCEL spreadsheet software is one of the most used software packages in water resources organizations. Yet most engineers, scientists and managers use only a fraction of the spreadsheet's capabilities that are particularly useful in scientific analysis. I would make the analogy of buying a very expensive automobile and then only riding in the trunk!

This workshop is designed to teach you how to use some of the features of EXCEL that I believe are particularly relevant to analysis of water resources systems. This **4-hour** workshop will focus on enhanced graphs and the use of macros. In addition to the hands-on experience, you will be provided with notes and example applications of EXCEL that demonstrate the features presented in the workshop. Most of what you

**May 12, 2004
8 am to 12 pm
Denver,
Colorado**



The standard graphing tools in EXCEL are not designed to perform many of the types of graphical analysis that are useful for water resources management. Therefore the user must "trick" the spreadsheet into performing the desired activities. In many cases these "tricks" are very simple and they have the potential to transform the way the spreadsheet can be used. Additionally EXCEL provides many features that allow the user to develop input controls to make the spreadsheet and associated graphs easy to use while minimizing input errors. These features include a variety of buttons, list boxes, and slider controls which can be used in conjunction with table lookup functions, logical IF tests, and macros. EXCEL users can record macros or write their own custom functions and macros in Visual Basic for Applications that greatly extend the problem solving power of EXCEL. With a surprisingly small number of Visual Basic for Applications (VBA) commands, users can create their own powerful custom macros and custom scientific or engineering functions.

Learning Objectives:

- How to use List Boxes, Spinners and other controls combined with Table Lookup functions to automate and control user input.
- How to make dynamic graphs that can rapidly display different data sets (with corresponding axis labels) with the click of the mouse.
- How to make animated graphs that can display different portions of a data set by clicking on a spinner control.
- How to make other special purpose graphs useful for water management.
- How to record macros and run them with buttons or other graphical objects.
- How to create your own custom macros and functions including looping, logical tests, and pop-up boxes for user input and messages.

Outline:

The workshop format is hands-on with sessions using specific water resources examples. All required files will be provided. In a typical session, the instructor will first demonstrate the completed spreadsheet. Then the participants will add the desired functionality to a basic worksheet to understand how to develop the complete version. The instructor will demonstrate the required steps and participants then perform the steps under the instructor's supervision. Participants must have their own computer with EXCEL (version 97 or later) installed.

Instructor:

Dr. Darrell G. Fontane is Director of the International School for Water Resources and Professor of Civil Engineering at Colorado State University. He has been developing civil engineering models in spreadsheets and teaching civil engineering students to develop spreadsheet applications since 1989. He has conducted numerous training sessions on water resources systems analysis, decision support systems and computing technologies worldwide for the past 15 years. He has presented the EXCEL-LEnT workshop to groups in the USGS and the USBR, at the 2002 Federal Interagency Modeling Conference, and internationally in Sao Paulo, Brazil, and in Taejon, South Korea.

Who Should Attend:

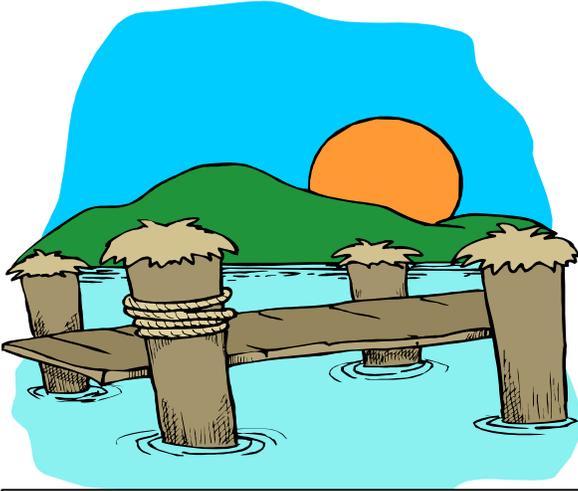
This workshop is designed for all scientists, engineers and managers that regularly use EXCEL. Participants should have a basic familiarity with EXCEL spreadsheets, including the ability to write formulas and create graphs. No prior experience with macros or Visual Basic for Applications programming is required.

Registration: \$65 per person. Participants should bring a laptop to the workshop with a CD drive. Register on the NALMS website (www.nalms.org) beginning in November, 2003. Workshop participants are limited to 20 individuals.

Other Workshops: A second workshop has been added for Friday afternoon, "Running a Successful Monitoring Program". In Part 1. of this workshop, participants will be asked about their monitoring objectives and will learn how to obtain cost-effective sampling strategies toward achieving monitoring objectives. In Part 2., methods of displaying and analysing lake and reservoir data using the program, LakeWatch will be demonstrated. In Part 3., results of trend analyses of some American lakes will be presented. The session will be lead by **Dr. Noel Burns** of Lakes Consulting. Auckland, New Zealand, former head of the Great Lakes Section of the Canada Centre for Inland Waters and publisher of seminal works on Lake Erie. Registration is \$50 per person. Register on the NALMS website (www.nalms.org). Workshop participants are limited to 20 individuals. This workshop will be held Friday May 14, 2004 from 1 – 5 pm at the Sheraton Denver West Hotel.

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Calender of Events:

Groundwater in the West June 16-18, 2004
More information at 303-492-1286

Urban Flood Channel Design May 20-21, 2004
More information at 303-556-4907

Riparian Ecosystems and Buffers June 28-30, 2004
Presented by AWRA in Olympic Valley, CA
More information at 540-687-8390

AWRA 40th annual conference November 1-4, 2004
Presented by AWRA in Orlando, FL
More information at 540-687-8390

Workshop available at the Rocky Mountain Regional Lake and Reservoir Management Conference. May 12-14, 2004 at the Sheraton Denver West Hotel

Running a Successful Monitoring Program

Running a successful monitoring program is expensive when the cost of vehicles, boats and chemical analyses are added to the cost of time of staff for sample collection, data entry, data analysis and report preparation. Thus a monitoring program needs to be well designed so that it will provide the information necessary to meet its desired objectives. Further, there is the necessity to have the computational ability to easily display changes in the water body with time, and for the analysis of data to quantitatively document the state of a water body when required. Too often, monitoring programs lack one of the essential planning steps, especially the data display and data analysis step, with the result that expensive data lies unanalyzed, buried in filing cabinets or sitting on large spreadsheets.

In Part 1. of this workshop, participants will be asked about their monitoring objectives and will learn how to obtain cost-effective sampling strategies toward achieving monitoring objectives. In Part 2., methods of displaying and analysing lake and reservoir data using the program, LakeWatch will be demonstrated. This program is easy to use and participants will be provided with a CD so that they can load the program onto their laptop computers in the workshop. If they wish, participants will then be able to simulate simultaneously on their own computers, the data analyses being demonstrated by the presenter. Data acquisition and management techniques will also be discussed. In Part 3., results of trend analyses of some American lakes will be presented.

The session will be lead by **Dr. Noel Burns** of Lakes Consulting. Auckland, New Zealand. Dr. Burns was head of the Great Lakes Section of the Canada Centre for Inland Waters and published seminal works on Lake Erie. After immigrating to New Zealand and working there, he was awarded a Bronze Medal by the Royal Society of New Zealand in 1998, for services to science. He has since produced a Protocol for the Assessment and Monitoring of New Zealand Lakes and Reservoirs for the NZ Ministry for the Environment. The systems outlined in this Protocol are designed into the software application, LakeWatch.

Registration

\$50 per person. Participants should bring a laptop to the workshop with a CD drive. Register on the NALMS website (www.nalms.org). Workshop participants are limited to 20 individuals. This workshop will be held Friday May 14, 2004 from 1 – 5 pm at the Sheraton Denver West Hotel.