

# The Inland Koi Connection

THE OFFICIAL NEWSLETTER OF IKS • ISSUE 278 • AUGUST 2021



## IKS Meetings Are Set to Resume Sunday 22 August ~ 3 - 6 pm

The IKS Board has met several times — in May, June and July — to discuss plans to resume our General Meetings. We are determined to meet on Sunday, August 22, our first meeting since the March 2020 gathering was cancelled by the COVID-19 outbreak worldwide. While current increases in new hospitalizations threaten to have State and or Federal authorities re-impose a lock-down order, we plan to have the meeting as scheduled.

The original plan was to meet at the Norco High School pond, with a classroom and restrooms available, but it seems that cannot be approved and coordinated until school is back in session. As an alternative, **Nick & Peggy Milfeld** offered to host this first meeting: their patio and yard will allow ample space for *social distancing*, and most members are familiar with this Riverside location.

Common guidelines we have come to accept will prevail: if you are feeling well, please come and join us. Many of us are fully vaccinated and confident of our health; if you prefer to wear a mask, fine. We will not have a potluck meal in order to lower food-borne risks; rather, the club will provide box lunches for everyone, for which we will, of course, need an accurate count of how many will attend. If you get a call from a Board Member, let him or her know you plan to attend; alternatively, give a call to **Rob & Deanna Fales** to RSVP: **951.279.0181**.

There's street parking, with handicap parking in the driveway; enter by the gate to the left of the garage. There's a lot of seating available, but bring your chairs anyway — we'll make extra shade under EZ-Ups! Our "Panel of Experts" will answer pond- and club-related questions: we want members' input as we seek to rebuild the club after being 'closed down' for the last year and a half.

**Most of all, we want to see each other again! Please plan to attend!**

### *In Memoriam...*

#### **Phyllis Zehm ~ 17 December 2020**

Phyllis was a beloved member of IKS, married far too briefly to Scott Zehm. When Bob Walters became ill and had to quit doing pond maintenance with Scott, Phyllis became the new work partner. She enjoyed cleaning the skimmers and netting debris from the ponds, while Scott took care of the equipment, the koi, and the water.

Last Fall, Scott & Phyllis took a long road trip to visit some of her family in the Northwest. "*As long as we're that close, maybe we could see so-and-so too...*" became an oft-repeated refrain in the planning stages, and by the end of the trip they had visited all her relatives and childhood haunts.

They came back to a cancer diagnosis and only a few months left together. Scott and his daughter cared for her, allowing her to die quietly at home, and this Spring they spread her ashes in the Northwest. ☹️

*We miss you, sweet Friend!*



*Phyllis loved gardening, especially nurturing the myriad potted plants and succulents that filled the patio \ and pond area of their home.*

**WHAT'S BEEN GOING ON IN IKS IN RECENT MONTHS?**

• **The IKS Board met July 25.** Good to see Secretary Monica fully recovered from recent hip surgery. The Board appointed Brenda to fill the VP position for the rest of the year, and appointed Scott Zehm to take her place as a Director. The Board voted to elect the "IKS Koi Rescue Team" as "Koi Persons of the Year" and submitted it to the AKCA for recognition.

We are searching for a less expensive storage location; currently it costs \$370 every two months (\$2220 a year!!). If anyone has space and is willing to keep a storage POD on their property, please call one of the officers.

• **Koi Re-Homing Program:** In June, Ed reported sad news in his QT: after doing a clean-out of the tank, he failed to close completely one of the valves on the filter. The following morning her realized the tank had drained overnight and he had lost 25 of the rescued koi. On the bright side, he was able to revive and save 15 koi. He is adding some extra security features to shut down the pump if the water level gets too low. Since then several more rescues have taken place, so there are presently 25-30 koi, small to large, from 9" to 24".

**Members Note:** All koi in QT are available for purchase, \$50-\$200 depending on size and quality...less than retail. Contact Ed Kushner.

• **Membership Renewals** We will mail the preprinted Renewal Forms, as usual, in November.

• **Norco High School:** The pond made it through summer to reveal five new baby koi — already 5-6" —the result of three spawns in June, before it got too hot. Protected from predators by netting over a PVC frame, they are coming to the surface to feed. Maybe next year. . . .

• **AKCA Insurance:** AKCA leaders have finally made a deal for club insurance, so we renewed IKS's membership. Even with AKCA coverage, any claims would first go through the homeowner/host's insurance, and then to an IKS provider.

• **Koi Auction:** 2021 should have been an Auction year but, of course, COVID-19 is the determining factor. We had hoped for an early October date, but realize that now it will have to be in the new year.

**LEFT BEHIND NOVEMBER 2019!  
ARE THEY YOURS?**

- Artic Zone ice chest (*the Nyrady's*)
- Corning casserole (*I borrowed this again on Christmas! Thank you.*)
- Rubbermaid container

We'll put them out for someone to claim at the August 22 meeting.



~ **RENEWALS** ~

Aker	Hoffman	Painter
Alexander	Howo	Parks
Atkiss	Hunter	Pollock
Blais	Hurley	Poyle
Broomfield	James	Rein
Chandler	Kushner	Rhodes
Coby	Leever	Richardson
Cover	Lei	Ross
Dirac	Leverett	Thompson
Fales	MacLaren	Walters
Fraday	Mall	Watson
Halterman	Marrin	Wright
Hamilton	McClain	Zoetemelk
Hanson	McHan	Zehm
Henry (Bob)	Milfeld	
Henry (Rich)	Nyrady	<b>Are you here?</b>

*New Address, effective September*

**Phil & Rachel Hunter**  
22303 Bear Creek Drive North  
Murrieta CA 92562

Email correction:  
rachunter46@gmail.com

**2021 OFFICERS & DIRECTORS**

*Officers*

- Ed Kushner**, President 951.520.0092  
*Koi Re-Homing ~ Web Liaison*
- Brenda Aker**, V.P. 951.316.0263  
*Meeting Sites & Speakers*
- Monica Dirac**, Secretary 909.887.7497
- Nick Milfeld**, Treasurer 951.780.7395  
*Membership*
- Peggy Milfeld**, Editor 951.780.7395

*Directors*

- Rob & Deanna Fales** 951.279.0181  
*Raffles ~ Koi Re-Homing*
- Larry Leverett** 951.781.3887  
*Properties Manager*
- Linda Kushner** 951.520.0092
- Alvin Watson** 951.764.6387
- Scott Zehm** 951.237.2508
- Theo Zoetemelk** 951.735.9896  
*Buffet & Banquet Supplies*

*We're finally meeting again!*

Landscaping and a pond were priorities when the Milfelds bought their home 33 years ago. They had a blank slate to work with and Nick had a good idea what he wanted: a pond & waterfalls, a pool & spa, patio, lots of green, and a forest.

Nick's pond is roughly 30'x15', a rebar and Gunite construction with an island in the middle and two waterfalls. One waterfall runs 24/7 as part of a filter return, while the larger falls can be turned on from the house. The pond ranges in depth from two to four feet, with two low walls dividing it into two sections that can be drained separately if the bottom drains need attention. The full system

holds 12,000 gallons and includes the original 3-chamber up-flow rock-gravel-silica-sand filter above and behind the pond, which polishes water after it passes through a UV light. By 2002, tree roots had cracked a corner of one of the chambers, so a combination of three gravity-fed vortexes and a 120watt *Aqua UV* were added by the garage. The dividing walls served to contain the koi near the deck while the larger section was drained and drilled through on the lawn-side wall; two bottom drains were added as a retro-fit, then the original filter was repaired.

Some 72 trees – pines and redwoods, gingkoes, Japanese maples, crape myrtles and liquid amber – were planted on Nick's half acre, all on drip irrigation, and every few years the yard gets a makeover with the trees laced to allow more light. A dozen of the redwoods have fallen victim to our hot, dry inland climate. The front yard has the best sunlight, so the roses and vegetables are there.

Our program this month will be a panel of experts answering pond questions and opening the discussion of how to bring the club back to life. Remember to bring your chairs. Handicap parking spaces are in the driveway; please enter through the gate to the left of the garage. See you soon!

←Corona

**The Milfelds' home**  
1644 Northampton Drive  
Riverside ~ 951.780.7395

Victoria Ave.

Overlook Pkwy

Van Buren

Washington

White Haven

Northampton

Alton

Central

Adams

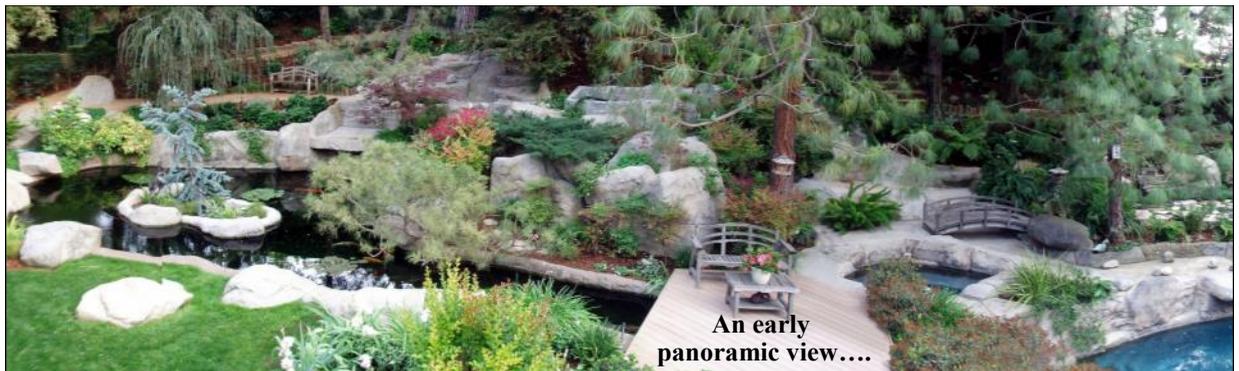
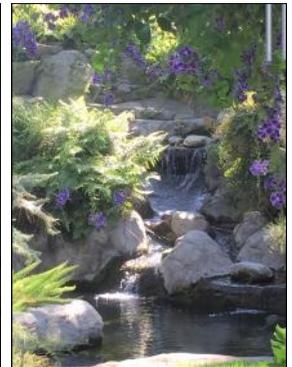
Madison

91

215

Fwy 60

Moreno Valley,



## Mechanical Filtration and Bioconverters: Both Are Needed

by Nancy Moore, CKK, KHA, *Washington Koi & Water Garden Society*  
Submitted to K.O.I. for publication

Some people, enthralled by beautiful fish, think that to have a Koi pond you just need a big hole, some liner, a little waterfall filter, and a bunch of fish. Then they can sit back and enjoy. Well, that works for a while.

After having seen numerous ponds that are overloaded with fish and have filter systems the size of a shoe box, I thought it might be useful to discuss what it is that filters do. First of all, there are filters and then there are *bio-filters* or *bioconverters*. A “filter” removes solids (fish poop, leaves, cedar bubs, gnats, dust, pollen, flowers, algae clumps) from the pond. This is referred to as mechanical filtration. A biofilter/bioconverter hosts the beneficial bacteria needed to convert ammonia and nitrite to nitrate.

A **filter** removes solids from the pond...  
...a **bio-filter** or **bioconverter** hosts beneficial bacteria needed  
to convert ammonia and nitrite to nitrate

The bioconverter, as noted Koi expert Chris Neaves says, “is the place in the pond/filter system where we provide a media for the nitrifying bacteria to grow on.”

If the shoe box filter has Japanese matting or bioballs or other media, it will work unless it is so clogged there isn't enough oxygen to keep the good bacteria (those that convert) alive and well. In the long run, it may not be big enough to handle the fish load, but it works for a while on some level. However, if it is brand new and not “seasoned,” it won't be able to convert the chemicals, and the pondeer will see ammonia when he/she tests the pond water. Or nitrite. If the biofilter is sized to the actual pond and number of inhabitants, it will be more effective and healthier as it recycles the water back into the pond.

The **mechanical filter** removes solids (commonly called crud at my pond) so they aren't recirculated back into the pond. The solids are trapped, and eventually removed from the filter. So when I backwash my bead filter, or drain and rinse my Japanese matting tanks, the water that shoots out at first is brown and smelly, the now liquid solids that have been trapped.

On the other hand, the **bioconverter** involves converting one toxic chemical to another toxic chemical to a much less toxic chemical. Remember the Nitrogen Cycle? Ammonia, from the gills primarily and from urine, is changed into nitrite by certain bacteria. Then other bacteria in the bioconverter transform the nitrite into the less harmful nitrate, which can be removed via water changes (or in some hybrid ponds, taken up by plants). These bacteria need oxygen to thrive, and oxygen is in the water, and ponds get additional oxygen from the splashing of a waterfall or air domes or air stones. As Chris Neaves says, “These beneficial bacteria do a vital job in nature and in the pond of chemically changing toxic fish waste to less toxic substances.”

All of this depends upon having oxygen in the pond and filters. This requires circulation. The nitrifying bacteria occur naturally from a combination of fish waste and oxygen, and exist on pond walls and floors as well as in bioconverters. When starting a filter, it usually takes about 6 weeks naturally, or about 6 weeks if you buy alleged nitrifying bacteria. (There is a way to shorten this time by using ammonium chloride prior to adding fish to the pond, but that's another article.

Organic waste, trapped by mechanical filtration, has to be removed on a regular basis, i.e. water changes, backwashing filters, rinsing media, rinsing sieves, etc. If waste is not removed from the pond, we basically have our fish swimming in a toilet that never is flushed. Think about that. Imagine having other animals confined to a relatively small space, and never removing feces or urine. The crowded cats or dogs would die, over time, from stress and disease, just as will the fish.

~continued, pg 5

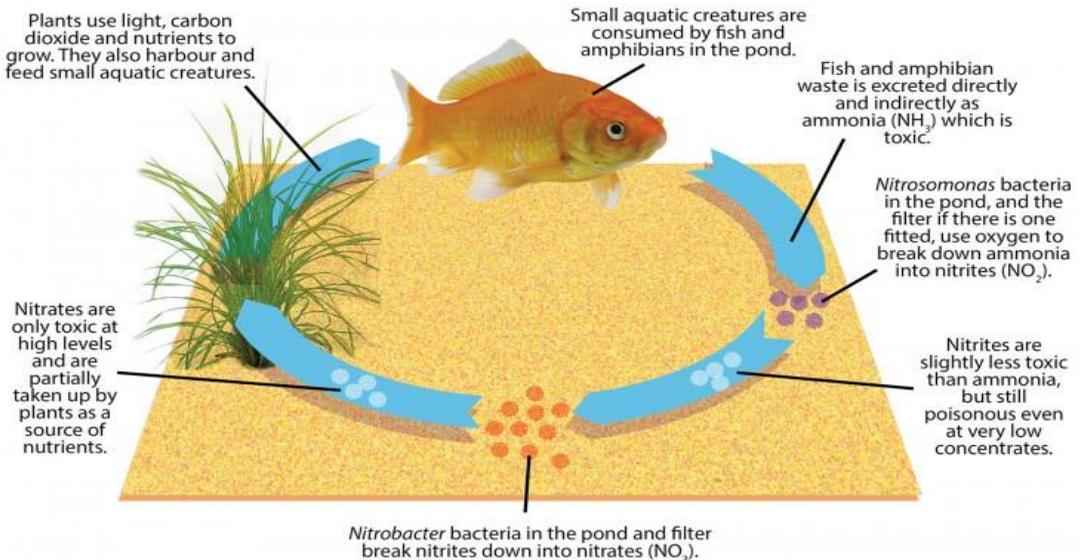
Years ago, I visited a local pond that was having major ammonia problems, a new symptom in an older pond. It turns out that the ponders seldom did water changes anymore, and his filtration system consisted of two barrels, one acting as a mechanical filter, and the other, theoretically as a bioconverter. The sludge in the matting prevented 99.9 % (my guess) of the bacteria from doing their jobs. When the matting was rolled out on the lawn, it looked like a very long chocolate brownie. With regular water changes, additional air, and a bioconverters that had space for bacteria, chemical conversion started taking place again, and it wasn't long before the pond was functioning. It did take CloramX to reduce the ammonia toxicity until the bioconverter could handle the ammonia load. Koi keeping requires regular maintenance, as this ponders re-discovered.

And fish do grow. We saw from the chart that Karen Pattist produced in a recent Zoom meeting just how much waste is produced by larger and growing Koi, both solid waste and chemical waste. Fish waste must be removed faster than it is added. And that is why we need to pay attention to how we handle the filtration, both mechanical and bioconversion, in our ponds.

And that is also why we recommend bottom drains, or faux bottom drains, as otherwise, the crud stays on the bottom of the pond and only is removed by a pond vacuum. People tend to vacuum once or twice a year, as opposed to flushing out a filter fed by a bottom drain every week. Which, do you think, has healthier water? As I said earlier, Koi keeping requires regular maintenance in order to have healthy filters, healthy water, and healthy fish.

*A detailed and lengthy article on filtration (several, actually), can be read in the Archive section of [www.koiorganisationinternational.org](http://www.koiorganisationinternational.org), authored by Chris Neaves, Koi keeper in South Africa and a regular contributor to K.O.I. And thanks to him for inspiring this! ~Nancy*

## THE NITROGEN CYCLE





# K.O.I. News!

Koi Organisation International

Current Accurate Useful

August 2021



PNKCA Joined as a Club Association

## Online "Pondside" Series

October 9, Noon EDT

Monte McQuade Presenting



"What's Going On In Your Pond?"  
How temperature affects your pond  
Join K.O.I. and come to the meeting!

More info on website:

<https://koiorganisationinternational.org/new-renewal-perks-2021>

K.O.I. 101 is FREE!

# K.O.I. 101

The Best Single Document about Koi Keeping!!

Over 30 International Authors, 43 Pages  
Understand the demands of a Koi Pond:

- Maintenance
- Water Testing
- Filtration
- Costs

Learn basic Koi health management

- Good Water Quality
- Managing Stress

Download, or copy and give to new Koi Keepers:

<https://koiorganisationinternational.org/koi-101>

## NEW Perk for K.O.I. Member CLUBS!

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- Students must complete courses in 1 yr.
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  - Students get CKK for FREE!
  - Clubs pay only upon graduation
  - Clubs get Certified Koi Keeper to help other members!



### What are SAFE Pond Limits?

It's in your **GUIDE** - Page entitled: "S.A.F.E.

Koi Pond Limits" by Ken Austin

**S** = Stocking Level

**A** = Aeration

**F** = Flow Rate thru Bioconverter

**E** = Emergency Capacity

Learn how to calculate each!

Become a member – get the Guide!

<https://koiorganisationinternational.org/koi-memberships>



## TIP OF THE MONTH

Use a Pipe Strainer



Many pipe sizes available. Slip or Pipe thread option. Cheap!

Get one to screw on the inside drain fitting of your show tank so small Koi are not washed out with the drain water!

If you're using any in-water pumps, a strainer will prevent debris clogging the pump inlet!

Several manufacturers to choose from.

### Water Testing

#### 4 Required and Why:

**1 & 2 - Ammonia and Nitrite** – tells you if your filter is working

**3 - KH** – (a.k.a. carbonate hardness, total alkalinity) tells you if there are enough carbonates to keep the pond stable and prevent a pH crash

**4 - pH** – tells you if the pond is heading for a pH crash



- Blog Posts!**  
**(Over 700 Available!)**
- [Fish Owners are the Happiest](#)
  - [Epic History of the Humble Goldfish](#)
  - [Pet Fish Can Recognize You!](#)
  - [Inside the Social Network of Fish](#)
  - [Fish Fins as Sensitive as Fingers](#)
  - [Dubai's Most Expensive Koi Pond](#)
  - [Aerodynamics of Fish Scales](#)



### Need Packing in a Gift for a Koi Keeper?

Instead of using packing peanuts, crumpled paper or other padding, use Manda Fu!

This treat looks like pink styrofoam packing peanuts – but is intended as a treat to hand-feed to Koi. Not a replacement for good balanced Koi food, but Koi love it as a treat! It's extruded with air to make it float and it looks – and cushions – like eatable packing peanuts! (protect in plastic bag) A gift for both Koi Keeper and Koi!  
Brilliant Idea by Mary Nielsen

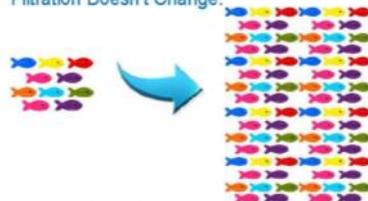
### Koi GROW!

2x Length = 8x Body Mass

- 8x Body Mass = 8x Need Oxygen
- 8x Body Mass = 8x More Ammonia

Water Volume Doesn't Change.

Filtration Doesn't Change.



You buy 10 Koi – would you have bought 80?

## VOLUNTEER



K.O.I. is an ALL VOLUNTEER Org!  
You Can Help! (email [pattist@snet.net](mailto:pattist@snet.net))  
While you're at home, Volunteer some Time!



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Thank you to Chien Lee of **NIJIKAWA USA** and to Sandy Caldwell of **ULTRA BALANCE** for so graciously supplying IKS with a supply of nutritional koi food for its **KOI REHOMING PROGRAM**



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