

## **Minutes from IN Aquatic Plants in Trade Working Group Meeting September 5<sup>th</sup>, 2007**

Attendees: Pat Charlebois (facilitator), Kristin TePas, Glenn and Patt Wuest, Sarah Peel, Cassie Hauswald, Nicki Henderson (am), Darren Yeo, Reuben Keller, Doug Keller, Ellen Jacquart (pm)

### **Welcome and Housekeeping**

Pat Charlebois welcomed everyone and then had each person introduce themselves. Darren Yeo was a new attendee. He is a Post Doc at University of Notre Dame. The group approved the minutes from the July 10<sup>th</sup> meeting.

### **Definition of Aquatic Plant – Doug Keller**

Currently the aquatic plant definition includes submerged plants, attached-floating plants, free-floating plants, sprawling marginal emergents, and erect marginal emergents. It is very important for people in trade to know to what extent the definition covers in order that they know whatever is white listed is okay to sell, and whatever is not covered on a list is not grey but just not in our purview.

Discussion on other potential groups to add followed, starting with definitions for each group.

Obligate Wetland Plants (OBL): Estimated to occur in wetlands >99% of the time.

Facultative Wetland Plants (FACW): Estimated to occur in wetlands ~67-99% of the time.

Facultative Plants (FAC): Estimated to occur in wetlands ~34-66% of the time. (D. Keller only

came up with 4 species in trade from list that fall in this category)

Facultative Upland Plants (FACU): Estimated to occur in wetlands ~1-33% of the time.

A question was asked about whom in DNR would terrestrial plants fall under so that plants we don't cover would be taken care of by them. D. Keller replied that no one would as this has not been set up in IN.

More discussion followed on where we should cut off the aquatic plant definition. It was narrowed to whether we should include obligate wetland plants and facultative wetland plants.

Comments that followed:

Typically in restoration, it depends on where you are; you may go with dryer plants because the rain level fluctuates.

Landscape planting can be 20 feet out from a pond.

Most ponds are part of a great landscape, integrated into the whole yard.

A good proportion of the 49 FACW on our list probably came from JFNew. Probably most nurseries who sell to water gardeners don't sell FACW.

Charlebois asked if everyone seemed to agree to include OBL and FACW.

A question was asked if the trade is asking to introduce a new species, how does one find out

what group the new species falls under—is there information out there about what % of the time the species is in wetlands? Someone selling plants could avoid the plant from being listed by saying it occurs in wetlands on 66% of the time and thus FAC. How does this get proved?

Another person noted that the risk assessment models are for aquatic plants so if we go into FAC we might be getting into characteristics that are beyond what the model is addressing. There are differences in what makes a plant invasive between terrestrial and aquatic.

Examples were given of categories certain well-known species fell into:

Phlaris (reed canary grass): FACW

Purple loosestrife: OBL

Everyone was okay with FAC not being addressed with our group.

FACW: Still remained a question as to whether to address plants in this category.

Charlebois decided to do Pros and Cons with the group regarding whether to include FACW species.

Pro:

Keep more invaders out

Con:

Increases # species to address

Includes those not in necessarily in “the trade” for water gardeners, but maybe used elsewhere such as restoration

Creates a more complex definition

Does NZWRA address characteristics for FACW? Current model is more geared towards OBL, potentially would have to change. This would make the model more complex and thus less powerful.

Wouldn't have to address reed canary grass

It's easier to figure out if new plants are OBL more so than FACW (occurs in wetlands 99% vs. 67-99% of the time).

After doing the pros and cons, the group decided to not include FACW, only OBL.

Discussion then turned to how to write the actual definition. As it stood, our definition was just plant characteristics (e.g., floating, submerged, emergent). What about herbaceous plants that live in a wetland? Classification can vary between regions for OBL; species may not necessarily always be obligate in different regions. If a species is in our region, then go with whether it is OBL. If not, take average of other regions. If information is not available (e.g., completely new species from Brazil), then how do we determine? Someone suggested just having a definition and not getting boxed in with the OBL listing. Use USFWS as a resource but not letting their definition box us in.

### **Water Hyacinth Update – Kristin TePas**

TePas sent out an inquiry about the little-known water hyacinth code (18 USC Section 46) to a USFWS employee who then forwarded it around. A representative from APHIS replied that she had tried unsuccessfully to determine who has jurisdiction. However it apparently is definitely not under APHIS. She added some insight into why water hyacinth (*Eichhornia crassipes*) was not on the Federal Noxious Weed list even though it already had this individual code. It was not listed because the plant was already widespread (by the time the species were considered for the list), whereas *E. azurea*, which was listed, was not known to occur in the U.S. yet.

Another person from U.S. Army Corps of Engineers said that their agency's legal people said that since USACE was not directly identified it would be the responsibility of the U.S. Marshals or the Justice Department. He commented that this "sounded off the wall" but as of yet no follow-up was done.

Thus this code is not enforced for at least one reason: it is unclear who is responsible for enforcing it.

D. Keller would like to send water hyacinth thru the model and see how it turns up. If it comes up clean, then it can go on the white list. Since the Feds don't seem to know who is meant to enforce the U.S. code, he's comfortable white listing it. If it does not show up clean, then black list it.

### **Brainstorming on Outreach to Consumers – Pat Charlebois**

Charlebois held a brainstorming session on outreach. She led off the session with the following question:

What outreach/education strategies are most helpful for consumers?

Printed bags, all sizes

Master Gardeners

Plant tags, for those species you need to be careful where you plant b/c of weedy tendencies, but that are not black listed (or could use hog rings to affix as tags come out more easily).  
Should not include a lot of info, just a reminder.

In-store handouts-flyer (easy to copy by store) or brochure, include info such as how to properly dispose of plants

Poster (laminated, Write-in-Rain)—have alternatives to marginally bad or banned species, explain invasives, steer to web site

Web site for information on alternatives: get associations, clubs, companies to link to our site

Magazines (Koi USA, Country Gardener)

Radio

Newspaper

Books

Neighbors

TV, gardening segments and pet talk

Schools

Pond and Aquarium Clubs, *Nursery Associations (IPLA, INLA, Southern Nursery Association)*

Trade Shows: Home Show, Flower and Patio Show (booth specifically on this subject would help)

Signs at popular water bodies where you might get people dumping aquarium, pond plants

Recruit other associations who talk or distribute info out to homeowners such as IN Wildlife Federation, county extensions, botanic gardens  
News release / article (contact garden columnist or other relevant reporter)  
Farmers market booth (sometimes Master Gardeners have booths)  
Packet to garden centers with all the materials (reproducible) to distribute, not only for consumers but also for employees--who then can educate consumers (Send before spring rush, maybe make a note "DNR regulation" or some such wording on the envelope to get their attention to read the mail.)  
Garden Centers – lots of nurseries dabbling but few specializing in aquatics (Seasons, 130 and Cumberland)  
Dive In— Florida stores to educate how to care for aquarium pets & plants, training program online, get certification  
Positive message—  
window cling saying "good environmental store",  
invasive web site with directory of stores that are "certified"  
List of alternative species (book?)

Additional comments about what people need to know:

Proper disposal, people become attached to fish more so than plants  
Need to understand what the problems are and then would willing choose responsibly  
Background information needed  
Give alternatives to bad players  
Tags or information that is more positive (this species is a good player)—"non-invasive"/"good alternative" green tag (or native)

There will be plants on the edge of black vs. white list so will want information about not releasing, be careful where you plant, etc.

Indiana Lakes Management Society has small grants, could apply for outreach (Feb. 1<sup>st</sup> deadline).

**Listing Process (Model) and Zone Map – Pat Charlebois**

(Zone Map - Arbor Day vs. USDA; Tropical species - defined by zones and which zones; classify Winterton's "non-weedy" species)

Process model:

Charlebois led this discussion by proposing to move the "Black List species look-alike" question further to the top of the process model.

Comments followed:

Does that mean you would ban natives? Northern watermilfoil? Are they even being sold by the industry?

Functionally one needs look at the black list to then determine look-alikes to be banned, not the other way around.

Would like to keep as many alternatives out there and especially natives. Only black list those that are truly difficult to i.d., no characteristics that can be used to help people out.

Primary group to train on i.d. would be retailers as they are the gatekeepers to keeping black listed species from being sold. So if they know how to i.d. and thus don't see, won't have to worry about whether consumers can differentiate.

One idea, is to take it out and that it should be addressed when anything gets black listed in the written text of the rule.

Hopefully it will not be invoked that often because it will have to be very difficult to differentiate in order to be banned.

Or add to the white list after "Native to IN" something that says "Does it look like a black listed species?"

Concern is that having it so high up in the process and not having a full black list that you will be putting the cart before the horse because you will be basing its look-alike chance on a list that is not complete.

R. Keller then came up with a revision which would refine the model even further (*see process model PowerPoint slide for revised flow chart*). Start with saying the RA System is for non-native non-woody aquatic plants (this would take out question as to whether it is herbaceous and aquatic, and whether it is native). Then go on to Fed Nox, Hardy zones (low risk or white list), Established as NIS in Zones  $\leq 6$ , Impacts or RA. Change "white list" to low risk so then evaluate low risk list. Anything that is considered low risk is then evaluated to make sure it is not a look-alike to a black list/high risk species, if so then education or black list depending on how close it looks alike.)

When using zones, how does that play out when you are bringing new plants from other countries that don't use our zones? Need to say something to the extent that "it survives in a region similar to IN's region."

Are the questions "Hardy in Zone 6 & N" and "Established in Zone 6 & N" redundant? If we change what boundaries we are considering when saying "Established", may be redundant. Not just IN and neighboring states, but established in like-climates throughout the world.

What about combining Hardy and Established? "Hardy" is easy to use because we can use already-determined zones given to plants. Where as "Established" would require getting more information and some subjectivity--not a standard resource.

The discussion moved on to talking about zone maps.

Are we okay working with USDA map as our official zone source? But also keeping in mind that climate change may change the tip of IN to be in Zone 7 from Zone 6?

Whether it can survive in a small part of the state but not in the northern part seems limiting. How can we make decisions on the climate when things may change?

How are hardiness zones determined? Can a Hardiness Zone 7 plant also survive in 6 but just not really well (be straggly). There was speculation that a zone is assigned when a plant is able to complete its life cycle. But there was not an answer as to how well/poorly a Zone 7 plant would do in Zone 6.

How about Zone 8? Should that be the buffer?

Someone said they thought 7 would be very safe. It goes pretty far south.

The group agreed that Zone 7 should be the buffer between IN's zones and tropical zones. Thus only species hardy in Zone 7 and N would be considered for their invasiveness.

"Zone 7 and N" should include an asterisk that explains what that really means in terms of temperatures so that when looking at world data one can compare.

Now, with having the zones determined, we can put anything that is 8 and above (south) onto the white list. We just need to make sure that the source which assigns the zones to plants is reliable/credible.

Discussion then turned toward Shaun Winterton's "non-weedy" listing on his USDA CD.

He doesn't used zones on his CD. But D. Keller is wondering if we can put species on the white list if Winterton lists them as non-weedy?

What is Winterton's background?

Dr. Shaun L. Winterton was a Senior Insect Biosystematist with the California Department of Food and Agriculture, Plant Pest Diagnostics Branch when he developed the CD with USDA (APHIS). He now is currently in Brisbane, Australia with the Queensland Department of Primary Industries and Fisheries.

Do we want to consider how much is being produced (related to species)? How much is getting out there? Is it commercially produced? Do we worry about the ones that aren't in commercial production?

People can look at it online to see what he has listed as non-weedy.

If we were in a hurry, using Winterton would be a good start. However, if we aren't, it may be worthwhile to run the plants through the full process.

D. Keller suggested to first lop off by zone and then to return to idea about Winterton. Perhaps once the zones are determined, those that Winterton calls "non-weedy" will fall out anyway.

### **New Zealand Risk Assessment and Needs for Statistical Model – Reuben Keller**

R. Keller discussed his needs for moving further along with assessing the NZWRA and creating his statistical model.

He needs to take known non-native invasive species and non-invasive species for models.

NZWRA will give scores but need to have well-known non-invasive and invasive species to plug in so that we can see how they score in order to determine threshold. So he needs to come up with the best examples to calibrate RA.

Two handouts:

Appendix E and parts of a chapter from *Invasive Plants of the Upper Midwest*, by Elizabeth Czarapata.

R. Keller needs a definition of "invasive" related to species in Zone 7 or N in order for him to pick the appropriate examples for his model.

Discussion on what deems a species to be invasive followed (some suggestions are crossed out as they were either removed or folded into other suggestions):

~~Alters (negatively which can be subjective) native biodiversity/habitat~~

Controlled by natural resource professionals somewhere (chemically, manually) in Zone 7 or N

Alters hydrology

Reduces navigation

Reduces recreation

~~Changes community structure~~

~~Monotypic (or near) stands~~

~~Crowds, reduces~~

Demonstrated ability to dominate/displace natives in waterways

~~Alters water chemistry~~

Jacquart said in IPSAWG that they got more specific in their determination of “altering native biodiversity/habitat.” They had a factor in there regarding to what extent it was established-- 10% area or impacted rare plant. Is there some rule of thumb used in assessing lake health, in which above or below a problem is determined?

We need to specify negative impact, not just “alter.” It can be subjective. We would need to show the extent of its negativity. Or can you just report out its behavior without associating a value to the behavior?

Indices used in IN for lakes are diversity and density/frequency of species. LARE uses it to determine what to control/treat (e.g., If 25% or more of the lake with exotics, then treating the lake in large-scale is okay.).

Does it have to meet all five of the criteria (in bold above)? Or just one?

It will have to be one or more. It is not likely that it will be just one anyway. Example, if find on the web that something is being controlled, one may be able to assume that it is being done so because of some of the other factors.

R. Keller then moved on to NZWRA adaptations needed to make it IN-friendly.

In general, he should check to see if they weighted things differently than we would.

Row 1: pull out Salinity; Range of Habitat—brief discussion on how to determine if something is OBL or FACW, etc. Will be difficult to get data on it if we don’t have it yet in our country.

How broadly are we gathering the information—just for IN or elsewhere? Looking at its biological characteristics and behavior everywhere.

Row 4: Propagule dispersal

May want to upscale, give it a higher score because of the high rate of boaters moving around in the US as opposed to NZ.

Row 5: Maturation rate

Reuben looked to find out how NZ determined but couldn’t find it. IPSAWG also went through

the same question-Jacquart never felt good about that measure. This information is not readily available. It might come out of the model if we can't determine how to measure it/quantify it.

Row 11: Extent of suitable habitat

In other words, how much worse can it get? If there are more places it can and would likely spread, then would get a higher number.

Row 12: Resistance to management.....

*Cut short as it was nearing closing time.*

R. Keller will work on the NZWRA changes and get back to us at the next meeting.

### **Next Meeting**

Tentative next dates chosen were October 3, 10, 30, and 31.