RESPONSE TO HARLAND KLAGOS QUESTIONS
(NOVEMBER 17, 2003 AND JUNE 20, 2004)

Questions November 17 e-mail

1. What waters drain in to the Rest Lake Dam Reservoir?
   The Manitowish and Trout Rivers are the main river systems that feed the chain. Papoose Creek drains into Rest Lake. Rice Creek flows into Island Lake.

2. Do these waters flowing into the Rest Lake Chain have dams?
   On the Manitowish River there are dams on Boulder and Fishtrap lakes. The dam on the outlet of Boulder Lake really is not a traditional dam but more of a rock riprap sill without any kind of water control structure. There is also a small dam on Whitney Flowage.

3. What information does DNR have relative to sturgeon population below the dam currently, 50 years ago and 30 years ago, the age and size?
   At the present time the department has 107 sturgeon marked. We have no population estimates. We are dealing with low numbers and an aging population. We have no historical population estimates. We have historical information that indicates sturgeon were found in the river and chain. We know that sturgeon will move into the spawning grounds in some years.

4. Do flows into the MW Rest Lake Reservoir in the spring, need to be evaluated for fish species spawning if the minimum flow of 50 cfs is to be increased?
   Not sure if I fully understand your question, so I will answer it two ways. Unfortunately there are no permanent gauging stations in the Manitowish River above or below the dam that would provide an instantaneous reading of flow conditions entering the chain. About the only thing that can be done is a prediction of what kind of recharge or runoff that can be expected each spring.

   In terms of fish spawning, do you mean above or below the dam? I'm assuming you mean in the chain. The work that Jordan Weeks is doing should give us an idea of where fish spawn in the chain and if water levels play a role. For example, is it important to fill the chain, as quick as possible (to gain access to spawning sites) or maybe it doesn't make a difference?

5. What research does the DNR have in flow forecasting into the Rest Lake Dam reservoir in the spring and how successful has the forecasting been? Does DNR have flow forecasting experience in other reservoirs?
   The department does not conduct any flow forecasting. Wisconsin Valley Improvement Company (WVIC) does monitor snow pack, precipitation, evaporation and groundwater levels in the Wisconsin River Basin. This provides them with information on what recharge or runoff they can expect each spring. What we can't predict is the amount of spring rains or how the snow pack will melt in association with the above variables (ground frost, overnight low temperatures). In many years, an accurate prediction can be made of the quantity of water that will be available for the spring season. There will also be some years where water availability forecasts will be inaccurate (like weather forecasts), and operations at the dam would need to be modified accordingly. Gathering the above data is not a guarantee of accurate predictions but it's better than operating without the data. I believe Xcel does some flow forecasting for the Chippewa River Basin.

6. After 60 plus years of winter draw down, ice damage is a very valid concern to MW chain residences. Does DNR know precisely if there is no flood control benefit?
   Because the Manitowish River watershed is small compared to the land area in the Chippewa River Basin it does not provide much flood control. The winter draw down does provide some flow augmentation to downstream hydropower facilities but this is also minor.

7. Why doesn't DNR build a new fishway for the Rest Lake Dam?
   It is the responsibility of the dam owner to provide fish passage if it was required.

8. Does DNR research know for sure that the Turtle Flambeau Dam is not the major reason for less sturgeon in the Manitowish River downstream from the Rest Lake Dam and not the flow in spring?
   The Turtle Flambeau Dam was constructed in 1926. I'm sure it has played a role in preventing sturgeon movement. This should not prevent us form reviewing flow conditions in the Manitowish River.

9. Why would DNR not build fish passage structures first before changing flow levels from the Rest Lake Dam and disturbing lake residences? Even if there were fish passage we would still need to determine flow requirements for this fish to navigate the river and spawn.

10. Will working groups be allowed to attend CFIC discussions?
    CFIC has been present at all of our work group meetings. What kind of meetings would you like to be present at?

<u>Questions June 20 e-mail.</u>

1. I am concerned about the level of drawdown. I have heard DNR mention a 30" compared to 42". Is 30" too much for the 1st time? Would 36" be a starting point and still be of value in the spring for the sturgeon spawning area downstream?
   A 30" draw down would leave an additional 12" of water in the chain over winter. A 36" draw down would leave an additional 6" of water in the chain. An additional foot of storage would give us an additional 70-cfs on a monthly average to work with. For example this would give us an additional 70 cfs on top of the 50 (120cfs). An additional 6" would provide about 35 cfs or 85cfs. This may be too low.

2. Is it possible to show on maps, flow charts, etc. the impact of water drawdowns in the fall. It would be real helpful in educating our membership. In other words, what would 6" or 12" less drawdown mean for property owners and potential ice damage?
   This would be difficult to show on a map because (we tried this) because many of the lakes have steep contours and not much shows up on the map. The only place where you would see a noticeable change is in areas that are very shallow.

3. What is the impact of releasing water before the ice is out in Rest Lake? Other chain lakes?
   They do release water before the ice is out. That is one of the issues. In many years a significant amount of runoff is passed before the ice is 75 % off of Rest Lake. It would be nice to see if we could fill sooner and capture some of that water that is passed.

4. Has any thought been given to dry seasons and filling the chain? Consideration in new orders about dryness, time lengths, various draw downs?
   Yes, we would set target flows to shoot for. Depending on the water year we may not be able to meet those and fill the chain in a reasonable length of time. Additional storage in the chain would help us out in dry years. We could also delay the chain target fill date (normally Memorial Day). Chain residents have been living with a later fill date more than half the time over the last 32 years.

5. This is a blunt question but one that has to be asked. Is DNR concerned at all about ice damage to piers and boathouses on the chain? Upstream groups need to know in our efforts to work with you.
   Yes we are. We feel this is a very important issue we need information on. That's why we introduced a study proposal to evaluate drawdown levels in the fall and the potential impact on structures.