# VILLAGE OF GRAFTON

## JOINT COMMITTEE OF THE WHOLE BOARD / BOARD OF PUBLIC WORKS AND PARKS AND RECREATION BOARD MEETING

## MAY 19, 2010

The Joint meeting was called to order at 7:00 p.m. by Village President Jim Brunnquell.

Village Board members present: Jim Grant, Richard Rieck, Sue Meinecke, David Liss, Lisa Harbeck, Jim Brunnquell

Absent: Ron LaPean

Board of Public Works members present: Sue Meinecke, Richard Rieck, Ed Dietrich, Pat Murray

Absent: Ron LaPean

Parks and Recreation Board members present: Sue Meinecke, Lisa Harbeck, Jim Miller, Joseph Hildebrand, Fran Betz

Absent: Gigi Hafemann and Meg Canepa

> Motion by Trustee Harbeck, seconded by Jim Miller, to appoint Trustee Meinecke as Chair Pro-tem for this meeting due to the absence of Parks and Recreation Board Chair Canepa. Approved unanimously.
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> Motion by Trustee Meinecke, seconded by Pat Murray, to appoint Trustee Rieck as Chair Pro-tem for this meeting due to the absence of Board of Public Works Chair LaPean. Approved unanimously.

Staff/Officials present: Village Administrator Darrell Hofland, Village Clerk Teri Dylak, Director of Public Works/Village Engineer Dave Murphy, Parks and Recreation Director John Safstrom

Village President Jim Brunnquell stated that the purpose of this Joint Meeting is to review alternative design options for the fish ladder to be constructed in the Milwaukee River at the Bridge Street Dam. President Brunnquell stated that the hope is that the Village Board will receive enough information, at this meeting, to be able to take final action on the location of the structure at the June 7 Village Board meeting.

Andrew Struck, Ozaukee County Director of Planning and Parks, stated that in June, 2009, Ozaukee County received a $4.7 million grant from the National Oceanic and Atmospheric Administration (NOAA) as part of the American Recovery and Reinvestment Act (ARRA). The project is part of the Milwaukee Rivershed Fish

Passage program. The Ozaukee County project was the only project in Wisconsin to receive funding from NOAA and the ARRA.

Mr. Struck reviewed a tentative timeline for the project. In order for the project to move forward, the Village must determine which design concept and alternative design will be presented to NOAA. It is anticipated that if the design is approved, construction on the project could begin in late summer.

Mr. Struck stated that inspections of the dam structure found that it is structurally sound, except for the abutments. Repairs will occur on one of the abutments as part of the fish passage construction, which will be paid for as part of the NOAA grant funding. The Village of Grafton will be responsible for any repair to the other abutment structure.

David Cleary, Bonestroo Lead Project Engineer, made a presentation on the goals of the NOAA-funded fish passage projects. The fish passage is intended to allow native fish species, such as northern pike, walleye, bass, trout, salmon and eventually sturgeon, to travel upstream over the Bridge Street Dam. Mr. Cleary reviewed several types of fish ladder options including: weir and pool, vertical slot ladders and rock ramp.

Mr. Cleary reviewed design considerations for the fish passage. The design team must consider water depth, bedrock, the rock crib dam, the Bridge Street Dam, the inclusion of public viewing areas, private access to the impoundment area, construction access and safety, dewatering of the channel, and future maintenance needs and costs of the structure.

The pros and cons of the west shore fish ladder and the east shore fish ladder/fish way construction options were reviewed. The approximate cost for construction of the fish ladder structure on the west side of the Milwaukee River is $1,560,000. Two construction options were presented for east side construction. The approximate cost of the east shore fish ladder/fishway Option 1-Open Channel is $1,480,000 and Option 2-box culvert and open channel is $1,420,000. Each cost estimate includes a 20 percent contingency factor.

Andrew Struck indicated that Ozaukee County prefers the east shore construction option. Construction on the east side of the river is the lower cost option. In addition, the property owners along the east shore have agreed to provide the necessary construction easements, at no cost. Mr. Struck stated that the final design would likely be a hybrid of the open channel and box culvert-open channel options.

Following evaluation of all of the geotechnical data, the design and technical teams will begin the preliminary design of the structure. Mr. Struck commented that the cost estimates are at the high end of the project budget.

President Brunnquell stated that he is looking for input from the Board of Public Works and the Parks and Recreation Board on this project. Because the project may impact

the canoe ramp area, the Parks and Recreation Board is being asked for their opinion on the project placement. The Board of Public Works reviews all construction projects.

Jerry Kiesow, 1690 Dellwood Court, commented that several fish species go upstream to spawn and then return downstream to survive. He questioned if or how the project will take this into consideration with the dam remaining in place.

Andrew Struck responded that this is clearly a concern. Several species spawn in wetland habitats and then need to return to Lake Michigan for survival. The project engineers will attempt to address this situation at the base of dam to try and make the transition over dam less impactful. There is the possibility of allowing the fish to traverse back through the fishway to open water

Dale Buser, Principal Hydrologist from Bonestroo, commented that many fish species are able to work their way over dams by using a side to side motion.

Jerry Kiesow commented that steel head sturgeon prefer colder water. He questioned if the warmer water temperature in the fish ladder area will affect this species. He also stated that it will be difficult for this species to get back downstream against the current. Unfortunately, there are several dams in the Milwaukee River that will hinder this species.

Dale Buser responded that fishery biologists will be part of the design process. He indicated that many fish species are only transient residents in this area. Rainbow trout have a natural instinct to go back downstream but are strong swimmers. Mr. Buser agreed that the sturgeon may have a problem with the large drop at the dam.

Harley Pals, 1211 15th Avenue, commented that while he realizes the east shore would be easier for construction purposed, he would prefer that the fish ladder be constructed on the west side of the river bank. His residence is located on the east side and he enjoys all of the wildlife that is present in this area. He is concerned that the fish ladder will disturb this tranquil area. Mr. Pals also indicated that there is a significant amount of bedrock along the east shore line.

Erin Ede, 1985 Port Washington Road, Town of Grafton, commented that she is concerned for the sturgeon. This species has very specific needs and she is not sure that the fish ladder will be designed to meet their needs. Even though the grant is for a fish passage, she hopes that the design will accommodate all species, including sturgeon. Ms. Ede also commented that the draft east side design appears very long and she is concerned that not enough light penetration will occur in the holding areas.

Bill Harbeck, 907 17th Avenue, questioned if the fish passage will have an impact on the impoundment area and the river in general.

Andrew Struck responded that any change will have an impact on the impoundment area. The fish ladder will be designed to have the least impact possible. Consideration will be taken to preserve and enhance this natural area as much as possible.

Dale Buser stated that it is hoped that the fish ladder hydraulics will increase conveyance capacity at higher flow and decrease duration of flooding. He also stated that two fish experts will be involved in the design of the structure. Sturgeon prefer rock channels and the east side is the best area to provide that habitat. We need to remember that fish will be transient through this area and not necessarily be in the ladder for an extended period of time.

Bill Harbeck questioned who would be responsible for and what type of maintenance will occur in the impoundment area and the dam. He also asked under what circumstances the Village would drawdown the impoundment area.

Director of Public Works/Village Engineer Dave Murphy responded that the Village will be required to inspect the dam structure every 3 years. Being able to drawdown the impoundment will allow a visual inspection without having to hire a diver. In addition, during high flows we could open the intake tube and provide the dam with more capacity to shorten the flood event water flows.

President Brunnquell stated that the drawdown option would not be used unless necessary.

Dale Buser stated that, as time goes, by concrete can fail and crumble causing decreased water flow. In addition, the accumulation of sediment in the reservoir causes decreased water flow. Being able to drawdown the impoundment area is a benefit. In some instances, dewatering the area and allowing the soft sediment to dry can decrease the sediment up to 90 percent.

Bill Harbeck commented that if the structure is built on the east side and the abutment repaired that would likely address some of the NR333 issues. He questioned if the remaining dam work needed to meet NR333 requirements will be completed at the same time as the fish ladder project.

Andrew Struck responded that NR333 repairs are not part of the NOAA grant funding. At this time, it is not known exactly what it will take to meet the NR333 requirements.

Bill Harbeck asked if the Village will be looking at NR333 requirements now.

Mr. Murphy responded that he is working with Brent Binder, WDNR Water Management Engineer, in an effort to determine what needs to be addressed to meet the NR333 requirements. Mr. Murphy also stated that no funds have been budgeted for review or design of any NR333 requirements. It is not likely that NR333 repairs will take place at the same time as the fish ladder project.

Bill Harbeck commented that the fish ladder project is anticipated to be completed late this year. He questioned if the restoration work will be completed this year or pushed to 2011.

Andrew Struck responded that it depends on weather and which side the fish ladder is placed. It is very likely that some vegetation will need to be planted in spring.

Ed Mulloy, 1110 Riverview Court, questioned if the boat ramp will be impacted if the fish ladder is placed on the east side of the river. Mr. Struck responded that the fish ladder would stop before the canoe ramp.

Les Blum, 1108 Sunset Court, questioned if the concrete wall proposed for the east side option will be visible from the west side shoreline. Mr. Struck responded that the concrete sea wall is necessary because of the bedrock in this area and will be designed to be aesthetically pleasing. The wall will not be visible over the entire length of the fish ladder,

Mr. Blum commented that the flow of the river is currently on the west side. The fish ladder will not be in the main flow area if placed on the east side shoreline. Mr. Struck stated that water flow will be diverted to meet flow requirements in this area.

Dave Cleary also commented that the elevation of the water entering the structure upstream will be controlled with hydraulic gates to maintain adequate flow.

Mr. Blum questioned if the DNR will accept any additional water capacity over the Bridge Street Dam. Mr. Cleary responded that will not be known until the final design is determined and reviewed.

Bill Hass, 1226 Water Terrace, questioned the dewatering process. If the west side option is constructed, the structure would include a series of wood slats that would be lowered to draw down the water level. On the east side option, a gate structure would be used to draw down water from the top of the river area.

Rex Borgenhagen, 1985 Port Washington Road, Town of Grafton, expressed concern that both design options include a tube for fish passage which will also allow debris to enter the tube possibly causing decreased water flow and obstructing fish passage. He questioned how this will be addressed

Dave Cleary responded that there will be access into the tube from above the 8 foot x 10 foot tube to remove debris. This situation has been considered and will be addressed during the design process.

Mr. Borgenhagen commented that Spring is the main time of year when debris can be a problem due to melting snow and ice increasing flow and bringing additional debris downstream.

Dale Buser stated that the project will include a deflector at the upstream end of the structure to assist in stopping some of the debris from entering the tube.

Dave Cleary commented that the structure needs to be able to pass fish in low flow and lessen the debris impact. The east shore design options are the best option to meet this requirement.

John Baer, 915 17th Avenue, questioned why the east side design option is so much longer than the west side option.

Andrew Struck responded that there are a number of restrictions on the west side of the river. It is preferable to make the structure longer in order to have less slope for the fish passage.

Harley Pals commented that one advantage for the west side is that people will be able walk up and down the public Riverwalk and view the fish passage.

Bill Harbeck commented that he assumes the ongoing maintenance of the structure will the responsibility of the Village of Grafton. He questioned if there are any significant maintenance cost differences between the east and west side placement.

Andrew Struck responded that the east side option will allow for easier debris maintenance. Overall the maintenance costs will be fairly similar. There will be a need for additional concrete on the west side which could create additional maintenance costs in the future.

Trustee Richard Rieck questioned if the removal and replacement of the existing Riverwalk are included in the $1.5 million cost estimate for west side construction. Mr. Struck responded yes.

George Hollrith,1511 JoDee Lane, Town of Grafton, questioned if the fish ladder would be behind a large concrete wall if placed on the east side.

Mr. Struck stated that the concrete wall visibility would be minimal, especially during high flow when it would likely be submerged. During normal or moderate water flow, only portions of the wall will be visible.

Mr. Hollrith questioned which of the design options will better handle high water flow situations. Mr. Struck stated that this will be looked at during the design phase. Both options would be designed to address high water flow situations.

Mr. Hollrith also questioned if trout will have a problem with going through the passage because of water flow and if the structure will trap invasive species. Mr. Struck responded that trout are very strong swimmers. The fish passage is designed to accommodate the weakest swimmer species and those that are not able to jump each

step in the ladder. The structure will be designed to pass the most variety of fish species possible.

Mr. Struck indicated that a benefit of east side construction is the ability to locate a trap and sort facility, in a very accessible location, to control invasive species. Both design options will include some type of invasive species control.

Mr. Mulloy questioned who is responsible for monitoring invasive species. According to Andrew Struck, State and Federal agencies will review the design and be responsible for monitoring invasive species in the watershed.

Mr. Hollrith questioned if freezing temperatures will have an impact on the fish ladder structure. Mr. Struck stated that the structure design will include provisions for freezing temperatures and ice-out situations.

Tara Wisdorf, 1232 Water Terrace, questioned if the three residents on the east side have been contacted regarding placement of the fish ladder on the east shoreline. Mr. Struck responded yes, and stated that both design options have been reviewed by the property owners.

Erin Ede, commented that a number of questions this evening are related to the 500 year flood flow of the Milwaukee River and the use of grant funds for projects other than the fish ladder. A number of people worked really hard to save the dam, and not use the grant funds to remove it, yet have no problem spending the available funds for the structure in addition to the fish ladder.

Jim Grant indicated that Jessica Barber, Fish Biologist- US Fish and Wildlife, was present. Mrs. Barber stated that she is primarily involved in sea lamprey control; however, US Fish and Wildlife wants to be sure that the fish passage design includes trap and sort options for invasive species. Another concern would be if a significant amount of water goes over the dam allowing invasive species to flow downstream.

Trustee Lisa Harbeck questioned how wide the fish passage would be if constructed on the east side. Mr. Struck stated that the maximum width would be 20 feet and approximately 8 feet wide at the narrowest point. It is likely that the final design will be something between a natural fishway and a fish ladder.

Trustee Harbeck commented that sturgeon prefer colder water temperatures. Since the east side area is not as deep as the west side, will the water temperature be the same as the rest of the impoundment area.

Mr. Struck commented that the water temperature will remain fairly constant throughout the river. Water temperature is not critical for sturgeon during travel through the fish passage. The time the fish are in the passage is very short and water temperature has minimal impact.

Trustee Harbeck referred to an earlier comment that stated allowing soft sediment to dry out will compact the sediment base down to 10 percent. She questioned how long this process takes. Mr. Struck responded that complete dewatering of the impoundment area is not needed for the fishway project.

Dale Buser indicated that sediment compaction depends on the type of material in the riverbed. If it is a muck type soil, it could compact up to 90 percent in a summer; however, this project is slated for fall construction so there would need to be a summer season to have an effect on the impoundment area.

Trustee Harbeck questioned if easements have been obtained from property owners on either side of the river for this project. Mr. Struck stated that the eastside property owners have agreed to provide easements.

Parks and Recreation Board member Jim Miller stated that he does not think he has been provided with enough information on this project to make a recommendation to the Village Board on this matter. He is concerned with the vagueness of the answers from the consultants on the design of the structure and the unknowns of the project.

Trustee Meinecke, member of the Parks and Recreation Board, commented that she thinks the information presented has provided a good overview of the project and the design concepts are adequate for this stage in the process.

President Brunnquell agreed and stated that he is looking for a recommendation from the Board of Public Works and the Parks and Recreation Board on which side of the river they think the fish ladder structure should be placed.

Jerry Kiesow questioned if the final design plans will be available at the June 7, Village Board meeting.

Andrew Struck stated that the preliminary design will be available in June, but final engineering and final design will not be completed until late July.

President Brunnquell stated that this meeting is being recorded and will be televised on Time Warner cable channel 14.

Trustee Harbeck questioned if there will be a problem with completion of this project in 2011. Mr. Struck indicated that NOAA is aware of the timeline for completion and it is not a problem. Substantial completion will be done in 2010. This project is part of the larger Milwaukee River watershed project.

**BOARD OF PUBLIC WORKS RECOMMENDATION ON FISH PASSAGE LOCATION**

Director Dave Murphy stated that future maintenance on the fish passage structure will be easier if the structure is built on the east shoreline.

Motion by Pat Murray, seconded by Ed Dietrich, to recommend that the Village Board approve the placement of the fish ladder along the east shoreline of the Milwaukee River. Approved unanimously.

**PARKS AND RECREATION BOARD RECOMMENDATION ON FISH PASSAGE LOCATION**

Motion by Trustee Meinecke, to recommend that the Village Board approve the placement of the fish ladder along the east shoreline of the Milwaukee River. The motion died due to the lack of a second.

The Parks and Recreation Board did not to take a position on this matter.

President Brunnquell clarified that this meeting will be televised on Friday, Saturday and Sunday, on Channel 14, at 1:00 p.m. and 6:00 p.m.

**ADJOURN**

Motion by Trustee Grant, seconded by Trustee Liss, to adjourn at 8:41 p.m. Approved unanimously.

A copy of the power point slide presentation is attached for reference purposes.