



Newsletter of the Chippewa Ottawa Resource Authority, 'Conserving for Future Generations'

HANNAHVILLE PROPOSES 1,000 MW COAL PLANT AND ETHANOL PLANT

By Jennifer Dale

Hannahville Indian Community, near Escanaba, is considering a proposal for a 1,100-acre industrial park housing a 1,000 megawatt (MW) coal-fired power plant with an adjacent ethanol plant.

According to reports, the total construction cost is expected to be \$1.3 billion. The project calls for four separate 250 MW coal-fired electric plants and an ethanol fuel plant that could produce up to 40 million gallons of the alternative fuel each year.

Hannahville's community development director, Dave Anthony, confirmed that an engineering firm presented a proposal for a 1,000 MW plant one-and-a-half years ago, but studies could change that.

"It all boils down to engineering studies," he said.

He added that the original idea was use the thermal heat from the power generator as a fuel source to produce ethanol.

An economic feasibility study is pending. Anthony said he hoped for its completion last summer, but the design is delaying the process due to the technology.

"Each power plant has to be designed from scratch," he said. "... the tribal leadership wanted efficient, expensive technology that needed much more research. Clean technology was stipulated by tribe; the best technology used."

According to the Michigan Public Service Commission, the proposed Hannahville plant is one of two coal plants in the state planned for 2007 or later and is in the permitting stage.

A strong response to the proposal has been reported in the press. Groups interested in development and jobs have been described as supportive. In fact, the proposal was reported in the Federal Reserve Bank of Minneapolis website newsletter, the Building Tradesman website newsletter out of Detroit.

Estimated jobs range from 500 to 1,000 in reports.

Groups opposing the proposal, most notably the Citizens for Water and Clean Sky made up of nearby residents, have cited environmental concerns about mercury and other emissions as well as ground water use.

In public meeting reports and the local newspaper, the Daily Press (Escanaba), the proposal calls for use of circulated fluidized bed (CFB) technology. Doug Weinkauff, project manager and engineer, told the Daily Press that the plant will also fall under new limits for emissions of carbon dioxide and mercury due out in 2004.

According to the U.S. Dept. of Energy, in a CFB combustor, coal or other fuels, air, and crushed limestone or other sorbents are injected into the lower portion of the combustor for initial burning of the fuel.

"The combustion actually occurs in a bed of fuel, sorbent,

and ash particles that are fluidized by air nozzles in the bottom of the combustor. The air expands the bed, creates turbulence for enhanced mixing, and provides most of the oxygen necessary for combustion of the fuel. As the fuel particles decrease in size through combustion and breakage, they are transported higher in the combustor where additional air is injected. As the particles continue to decrease in size, unreacted fuel, ash, and fine limestone particles are swept out of the combustor, collected in a particle separator and recycled to the lower portion of the combustor. This is the "circulating" nature of the combustor."

According to the DOE, the limestone captures up to 98 percent of the sulfur impurities released from the fuel. "When heated in the CFB combustor, the limestone, consisting primarily of calcium carbonate (CaCO₃), converts to calcium oxide (CaO) and

CO₂. The CaO reacts with the SO₂ from the burning fuel to form calcium sulfate (CaSO₄), an inert material that is removed with the combustion ash.

"The combustion efficiency of the CFB combustor allows the fuel to be burned at a relatively low temperature of about 1,650° F, thus reducing NO_x formation by approximately 60 percent compared with conventional coal-fired technologies (DOE 1996). Greater than 99 percent of particulate emissions in the flue gas are removed downstream of the combustor by either an electrostatic precipitator or a fabric filter (bag-house)..."

Marcel Potvin, writing for the Upper Peninsula Environmental Coalition newsletter, cited a Mercury Study Report to Congress by the U.S. EPA stating that the boiling point of mercury is so low that it is vaporized (boiling point 303° C) before it can be

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Coal fired power plants a major source of pollution

By Mike Ripley, Environmental Coordinator, Inter-Tribal Fisheries and Assessment Program

Over the next 10 years, the Bush administration projects that as many as 1,900 new power plants will be needed to keep up with consumer and industrial energy demand – that's one new power plant per week and many of those plants are predicted to be coal fired.

While investments in energy efficiency could substantially reduce the number of new power plants needed to meet growing demand, there is no doubt that utilities will be investing billions of dollars in new generating facilities over the coming years.

These new power plants — likely to operate for 50 years or more — mean a future of either cleaner, healthier air or of worsening pollution.

The decisions public officials make now will determine whether air pollution improves or worsens over the next several decades.

A study was completed in 2000 for the Clean Air Task Force which John Spengler of the Harvard School of Public Health called "the most rigorous look to date at the contribution of air emissions from the nation's power plants to fine particle levels and the impact of those emissions on public health."

The study found that fine particle pollution from these plants

shortens the lives of more than 30,000 Americans every year and causes hundreds of thousands of asthma attacks, cardiac problems, and upper and lower respiratory tract problems. In other words, pollution from dirty power plants kills more people every year than drunk drivers (16,000 deaths each year) or murderers (17,000 deaths per year).

The elderly, children, and those with respiratory diseases are most severely impacted by this pollution; people living in metropolitan areas near coal-fired plants are more at risk than those who live far from power plants. The study concluded that "approximately two-thirds (more than 18,000) of the deaths due to fine particle pollution from power plants could be avoided by implementing policies that cut power plant sulfur dioxide and nitrogen oxide pollution 75 percent below 1997 emission levels."

One of the main concerns of the tribal fisheries is contaminants in fish. According to the U.S. EPA's Mercury Report to Congress, coal-fired power plants are the single largest source of mercury pollution in the U.S. and, according to the National Wildlife Federation, a single 100 megawatt (MW) coal-fired power plant emits approximately 25 pounds of mercury per year. As little as 0.002 pounds of mercury a year can contaminate a 25-acre lake to the point where

the fish are above fish consumption advisory guidelines!

Although whitefish and lake trout commercially caught in the 1836 Treaty waters of the Great Lakes remain well below the guidelines, CORA is especially concerned with the proliferation of new coal-fired power plants and the weakening of clean air regulations by the Bush administration.

Recently, the Bush administration announced a plan that would punch dangerous new loopholes in the Clean Air Act. These loopholes, which seriously undercut the "New Source Review" (NSR) provision of the Clean Air Act, will result in more pollution and dirtier air from hundreds of power plants and oil refineries throughout the country — and will undermine ongoing attempts to enforce the law at facilities that have already been charged with illegally polluting.

New Source Review directly benefits public health by requiring the oldest and dirtiest industrial facilities to add state-of-the-art pollution controls whenever they make major modifications that significantly increase air pollution. According to a study by EPA's own consultants, Abt Associates, as many as 9,000 American lives are shortened each year due to exposure to pollution just from the plants that have already been charged with violating NSR. Up to 7,000 of these deaths could be avoided

Comparison of Bush Administration "Clear Skies" Power Plant Initiative with Existing Clean Air Act Programs

	Nitrogen Oxides (NO _x)	Sulfur Dioxide (SO ₂)	Mercury (Hg)
Clean Air Act (existing programs) ¹	1.25 million ton cap by 2010 ²	2 million ton cap by 2012 ³	5 tons per year by 2008 ⁴
Bush "Clear Skies Initiative" (two-step approach) ⁵	2.1 million ton cap by 2008 <i>Optional 2nd Step</i> 1.7 million ton cap by 2018	4.5 million ton cap by 2010 <i>Optional 2nd Step</i> 3 million ton cap by 2018	26 tons per year by 2010 <i>Optional 2nd Step</i> 15 tons per year by 2018
Increase allowed by Bush Plan over Clean Air Act existing programs ⁶	850,000 tons more NO_x <i>Optional 2nd Step</i> 450,000 tons more NO _x	2.5 million tons more SO₂ <i>Optional 2nd Step</i> 1 million tons more SO ₂	21 tons more mercury <i>Optional 2nd Step</i> 10 tons more mercury
% Increase allowed by Bush Plan over Clean Air Act existing programs.	68% more NO_x <i>Optional 2nd Step</i> 36% more NO _x	125% more SO₂ <i>Optional 2nd Step</i> 50% more SO ₂	420% more mercury <i>Optional 2nd Step</i> 200% more mercury
Delay allowed by Bush Plan over Clean Air Act existing programs	Up to 8 year delay	Up to 6 year delay	Up to 10 year delay

Source: Clear the Air Campaign
<<http://cta.policy.net/relatives/20340.pdf>>

just by complying with the existing law.

Dave Aftandilian of Conscious Choice, sums it up when he says "... of course, we need to stop subsidizing fossil fuels and start leveling the playing field for renewable energy instead. If the costs to public health, the environment, and crops from dirty fossil-fueled power plants were included in

the price of the power they generate, power from the much cleaner wind and solar sources would suddenly look much more affordable. Unless we begin to write the social and environmental costs of cheap power from dirty coal into the energy equation, we'll continue to squander our health and that of our children and our environment."

OCTOBER 2002 MEETING BRIEFS ...

GLRC meets

The Oct. 24 Great Lakes Resource Committee (GLRC) meeting took place at Grand Traverse Band's Williamsburg Annex, chaired by Sault Tribe Conservation Committee Chairman Vic Matson Sr.

In Conservation Reports, Bay Mills matters were mostly in-house and dealing with the lake trout issue. Little Traverse Bay Bands reported the same, also requesting that the Inland Land and Waters Resource Committee (ILWRC) begin meeting. Grand Traverse Band was all in-house, and Little River Band reported fall assessments and inland committee organization.

Matson said he thought a meeting with the state was being set up. CORA Secretary Bev Aikens said she had set up a tentative date but had not heard back from the federal agency as to who its representative would be, except that it would be a US Fish & Wildlife official.

In Biologists Reports, LTBB reported hiring a biologist, who couldn't be at the meeting. Other biologists reported working on modeling data, fall assessments and surveys, whitefish aging and sampling. In addition, GTB reported that round gobies were found in grid 616 for the first time.

ITFAP Director Tom Gorenflo had three items. First, he announced that the lowest contaminant results were obtained since the start of the monitoring program.

Gorenflo turned the report over to

Environmental Coordinator Mike Ripley, who reported that the Bush administration is calling for more power plants. There is a proposal for a coal plant in Hannahville Indian Community that would affect the 1836 treaty waters and lands. He drafted a letter to the Hannahville leadership pointing out the consequences of such a plant, such as raising mercury levels, and asked for approval of the letter. The committee ascertained that there will be airborne and water emissions.

Attorney Kathryn Tierney said the coal plant proposal is in the study stage. She said she does not see a permit happening. Ripley said public opinion has weight at this stage. GTB's Patty O'Donnell said Hannahville wouldn't necessarily be turned down for the permit. Companies have "maxed out" elsewhere are looking to northern Michigan where it is spacious.

After lengthy discussion on how to go about contacting Hannahville with environmental concerns, the committee decided Ripley's letter should be sent to CORA tribal chairs to let them take it from there. LTBB chairman Gerry Chingwa volunteered to speak to the Hannahville tribal chairman at an upcoming meeting.

Ripley reported getting nowhere on the Annex issue. The tribes were not involved in Annex 2001 and should have been.* O'Donnell added that excuses they have gotten include the idea that it

would not be fair because there are 37 tribes and eight states. She added that they are setting up a team to talk about how they can involve the tribes without consulting the tribes. They have not been taking or returning phone calls.

A GTB attorney suggested taking the matter out of the environmental purview and into legal. He is working with lawyers involved and will talk to them.

A Watershed Council petition came to CORA, said Ripley. The council is collecting signatures from organizations for a DEQ Citizen Oversight Committee. Before the split, the DNR had one, then DEQ was created without one. Ripley recommended signing the petition. The committee directed that CORA Executive Director Jeff Parker could sign it.

O'Donnell informed the committee of HB 6418 in the Michigan legislature, slated for lame duck session. The bill, introduced by Rep. Brian Palmer, in part calls for mechanical raking of the top four inches of soil along the shoreline of the Great Lakes.

Kevin Willis gave the Law Enforcement Report, reporting a new round of patrols in and around closures. The Law Enforcement Committee also discussed confidential matters, he said.

Dwight "Bucko" Teeple gave the Resource Developer Report. He said tribal mooring at Whitefish Point Harbor was still in excess of permitted number of vessels, and he is still looking for solutions.

Cross Village is still interested in development but has no funding. A joint submission to Great Lakes Fishery Trust may be possible. Doug Craven suggested looking at the USDA for funding. He also suggested looking for emergency assistance for commercial fishers in case of a collapse of the fisheries. It is done for coastal fisheries, and crops.

Teeple said he would be happy to help. Gorenflo said that fish is now considered a commodity in Michigan. "We pushed for it," he said. Matson said he would like to be informed.

In other access matters, the McKay Bay project was proceeding, working on sheet piling, electrical, launch, and so forth. They did not get the permit for Hammond Bay, so there will be no dock or dredging at that site.

Teeple reported on three grants: the ANA grant was denied; GLFT granted \$30,000 in supplemental funds for McKay Bay; a National Marine Fisheries grant is out.

The committee discussed the emergency orders issued. Gorenflo said he had a couple of phone calls on the orders, and added that it has to be taken care of before December. Dave Menominee, Bay Mills Conservation Committee chairman, and John Concannon, GTB Natural Resources Commission chairman, said they thought there was meeting scheduled.

Tierney said there was ambiguity on lake trout harvest in MH-1, and that they needed to meet with the state on interpretation. They have the biological interpretation but it hasn't gone any further — a consensus is needed.

Gorenflo said he did not try to interpret whether there should be a harvest limit; only confirmed the method was correct.

Jannetta said the meaning is clear; he has clear recollections and drafts on the

matter.

The GLRC meeting adjourned.

CORA meets

Chaired by GTB chairman Bob Kewaygoshkum, the CORA meeting was called to order Oct. 24 following the GLRC meeting.

Brian Postma, from CORA's auditor Rehman Robson, made a presentation on the audit. He said the audit was clean or unqualified, which means findings were in conformance, he said, and there were no concerns in any of the mentioned sections. Revenue was \$427,000 expenditures were \$429,000 for a net loss of \$1,584. He added that CORA's Jane TenEyck does a great job. The audit was approved.

Action on Biological Services Division was tabled for the attorneys' final document, as was the Memorandum of Agreement. Matson said he wanted the document before the next meeting.

The committee next focused on funding and appropriations in Congress. There is no lobbyist for CORA's funding. Two lobbyists were recommended. After a lengthy discussion, the committee voted to direct CORA Executive Director Jeff Parker to look at lobbyists, make recommendation via a conference call. The committee voted to pay for the lobbyist using CORA's \$72,000 building fund.

The committee turned to how any appropriations would be divided. They agreed they should try for the \$1 million proposed in the House. Some thought it should be split between the two tribes with no base funding — LTBB and LRB. Sault Tribe thought it ought to be prorated.

Gerry Chingwa motioned that the \$1 million be split between LTBB and LRB. With support from Terry Carrick, representing Bay Mills, the motion passed with Matson opposing for Sault Tribe.

In New Business, inland litigation update was presented. Attorneys said they were working with expert witnesses and readying their case. A meeting was scheduled for the next day.

The state was asked about harassment of tribal hunters, and said there had been no official change in policy. LTBB wrote the state a letter asking them to reign in their officers.

The board voted to make Kewaygoshkum the chair of Inland Lands and Waters Resource Committee (ILWRC) and LRB Chairman Johnny Sams vice chair. The committee will begin meeting as a forum for discussion and information.

* What is Annex 2001?

Annex 2001 is an amendment to the Great Lakes Charter of 1985 signed by the Great Lakes Governors and two Canadian premiers in 2001.

Under Annex 2001, the governors made an agreement to manage the Great Lakes waters; create a new standard requiring an improvement to the water and water-dependent natural resources of the Great Lakes before allowing new or increased water withdrawals; obtain better information so that the water is managed rationally; and include the premiers in reviewing and consulting on all new proposed diversions subject to the U.S. Water Resources Development Act (WRDA).

The Great Lakes tribes were not included.

Chippewa Ottawa Resource Authority

CORA Board, Officers and Committee officers

Bay Mills Indian Community (BMIC or Bay Mills)

L. John Lufkins, tribal chairman, CORA chairman
Dave Menominee, Conservation Committee chairman

Grand Traverse Band of Ottawa and Chippewa Indians (GTB)

Robert Kewaygoshkum, tribal chairman, ILWRC chairman
John Concannon, Natural Resource Committee chairman

Little River Band of Ottawa Indians (LRB)

Johnny Sams, tribal chairman, ILWRC** vice chairman
John Koon, Natural Resource Commission chairman

Little Traverse Bay Bands of Odawa Indians (LTBB)

Gerry Chingwa, tribal chairman, GLRC* vice chairman
John Keshick Jr., Natural Resource Commission chairman

Sault Ste. Marie Tribe of Chippewa Indians (Sault Tribe or SSMTCI)

Bernard Bouschor, tribal chairman;
Alternate: Fred Paquin, Tribal Unit 3 director, Chief of Police, Law Enforcement Committee, and CORA vice chairman.

Vic Matson Sr., Conservation Committee chairman, GLRC chairman

* "Great Lakes Resource Committee," which serves as the inter-tribal management body for the treaty fishery in 1836 treaty waters.

** "Inland Land and Waters Committee," which oversees inland resource matters.

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Deanna Bowen, secretary

INTER TRIBAL FISHERY ASSESSMENT PROGRAM WORK EXTENSIVE, LONG TERM

By CORA Public Information & Education

Performing biological and environmental activities throughout most of the 1836 Treaty ceded waters of the Great Lakes, the Inter Tribal Fisheries Assessment Program (ITFAP) covers an enormous area, generating an enormous amount of work each year. The program engages in a wide variety of activities — including research, assessment, environmental, inter-governmental, fisheries enhancement and any other special projects that come up during the year.

Although the variety and extent of ITFAP's duties have increased greatly since the implementation of the 2000 Consent Decree, ITFAP staffing has remained almost the same over the past decade. The program is also largely operating on "old dollars" — funding levels that used to be adequate to the task a decade ago, but are now inadequate in terms of workload and the cost of doing business in 2003.

ASSESSMENT

ITFAP covers a lot of ground, said ITFAP Director Tom Gorenflo, both geographically and by species, conducting such field activities as; commercial fishery assessments, specialized lake trout assessments, and specialized whitefish assessments.

"The crew is gone just about every day — from ice out to season closure," he said. Mark Ebener, ITFAP's Assessment Biologist, oversees field activities. The assessment program is extensive and the staff has accumulated a substantial amount of data over the years. For example, in 2002, ITFAP collected well over 10,000 samples.

ITFAP staff conducts commercial assessments in all intertribal zones, and they help analyze and summarize data from the tribal exclusive zones. They also conduct assessments using their own vessel when it's not feasible to use a commercial fisher. These "fishery-independent" assessments provide another source of data for calculation of harvest limits in a computer model. Biologists need a consistent long term view of fish stocks in a given season in order to make year-to-year comparisons. By collecting samples from both the commercial fishery and from the biological programs, a consistent long-term data set can be obtained.

ITFAP samples the commercial harvest by species and management unit. Sampling is accomplished differently for each species, and proportional to the commercial fisheries. For example, in the Naubinway management unit, ITFAP samples the most when whitefish fishing is at its peak. Sampling for lake trout or chubs may occur at a different time. The idea is to have the samples accurately reflect the whitefish population in that management unit.

Last year, sampling necessitated over 70 field trips, and over 11,600

miles. "I don't think most people understand how much area we cover," said Gorenflo.

BACK TO THE LAB

Collection is only part of the job. Samples must be analyzed after collection. In 2001, for example, ITFAP worked with 9,119 collected samples, 7,000 of which were whitefish, the remainder lake trout, chubs and other species like walleye. In order to understand the health of a fish population, samples must be aged. Scales are used to age whitefish and chubs, while otoliths (ear bones) are used to age lake trout and burbot, and fin spines are used to age walleye.

Ageing fish is time consuming and tedious, but a necessary part of fisheries management. A trained person can get through 100 to 150 whitefish samples a day.

"Some scales are more clear than others," said Gorenflo. Ageing otoliths is more difficult, since they require extra preparation and are so small. Staff use the "crack and burn" method, splitting the otolith in half and burning it to highlight the rings for aging. The otolith is so small it must be aged through a microscope.

Ageing is necessary to determine the population structure and mortality rate. Biologists can also determine important information such as growth rate based on fish ages.

"Virtually all fishery management requires fish ageing," said Gorenflo. "It best tells status of populations."

ITFAP staff also conducts fish diet assessments by collecting and analyzing fish stomachs. Samples are also examined for such items as lamprey wounds, lengths and weights, fin clips, and coded-wire tags that must be sought by metal detector. When a tag is found, they cut off the snout, which contains the tag with all its information related to the stocking of that fish.

In field sampling, the staff collects a lot of information. The next step in the assessment process is entering the information on to data sheets and computer files.

Finally, the data is transferred to the computer models, where the information is used to determine harvest limits and help resolve other management issues.

Analysis of stomachs yields information on fish community status. For example, if zebra mussels are present in the whitefish diet, it means the whitefish diet is shifting — which is probably not good and might account for slow whitefish growth and lower fish harvests, said Gorenflo.

SEA LAMPREY CONTROL

ITFAP is also cooperative in sea lamprey control. In 2002, staff accrued 48 days and over 5,500 miles working on lamprey control, capturing 138 spawning lamprey, 108 of which were marked and released. The U.S. Fish and

Wildlife provides the traps that ITFAP used to cover three months of spawning.

Acting as a pass through for USFWS, ITFAP staff collect live and dead lamprey from fishers, who save lamprey for a reward. This activity, part of a study to estimate the number of lamprey in northern Lake Huron, was conducted three times a week at three to four pick up stations. Fishers could place the lamprey in aerated buckets. If the lamprey died, the fishers still received their reward. The live lamprey are taken to Nunns Creek for pick up by the USFWS.

"Lamprey control is very important to us," said Gorenflo. "USFWS reimburses us for our work, which helps with the budget."

SPECIAL PROJECTS and RESEARCH

ITFAP also addresses unexpected issues that arise during the year. For example, last year onboard monitoring was called for in Lake Huron, to evaluate the number of lake trout discarded from gill nets when the fisher exceeded the daily possession limit. Monitoring was conducted by ITFAP staff.

The St. Mary's River assessment is another new activity resulting from Lake Huron committee work. Ontario, Michigan and the tribes developed a comprehensive joint plan to survey fish populations in the St. Mary's River, something that's never been done before.

Gorenflo thinks the assessment will probably become an annual activity that they will have to somehow squeeze in to an already tight schedule.

"It's an important river. The fishing is very heavy and we don't know much about it," he said, citing a sport fishery, subsistence fishery and Canadian commercial fishery in the river.

ITFAP also assists or conducts specific research. The lake trout astroturf project is an example. (The astroturf project is an effort to imprint lake trout eggs on Lake Huron's Spectacle Reef and other locations that are traditional lake trout spawning reefs.) ITFAP did not have to participate, but because lake trout rehabilitation is an important issue, it was an appropriate research project, said Gorenflo. But, it's hard to find the time and money.

The fish stocked by the astroturf project will soon become mature, and biologists need to sample the reef to determine the success or failure of the Astroturf project. But, due to budget problems, ITFAP has not yet been able to survey the reef.

The individual tribes also make requests to ITFAP staff for special information, said Gorenflo. For example, the tribes may require a specific map, chart, or table to show something they are interested in. Sometimes it becomes perma-

nent request.

"Over the years we have received quite a few special requests, some which are quite time consuming," said Gorenflo.

CATCH REPORTS and STATISTICS

ITFAP staff has been compiling commercial catch statistics for all the five tribes since 1981. They collect, interpret, enter catch data on computer files, and distribute specified catch information to the individual tribes, state, and federal government.

A requirement under the 2000 Consent Decree requires a wholesale report be produced for all fish sales in the State of Michigan. To better account for all fish harvested by tribal fishers, ITFAP staff compare commercial catch reports to wholesale reports. If there is a significant discrepancy between the two reports, ITFAP staff will contact the tribal fisher to verify his report. In order to make such comparisons for all tribal fishers, ITFAP must sort thousands of wholesale reports by tribe and fisher.

Gorenflo said this comparison process make take a long time, but it "helps ensure the credibility of our catch reporting."

Harvest reporting accuracy is also vital in the modeling process. Under reporting could tell the model that there is less fish, which could result in a lower harvest limit for the next year. Gorenflo added that the harvest limit calculation is also related to effort, so a large reduction in effort wouldn't by itself result in a lower harvest limit. On the other hand, if the effort is up and the catch is down, that tells us there's less fish, he said.

Compiling all the reports is a big job. Catch report information is summarized put into a variety of views, by month, by grid and so forth. The database with catch and dates (names are confidential) goes back to the tribes, which also get the state's catch information, as required by the Decree.

Organizing tribal catch information is more than a full time job, and ITFAP has one staff completely dedicated to the task, Fishery Biologist Karen Wright. Wright has been taking in and interpreting catch reports of individual fishers for over 10 years. Before Wright came onboard, it was Gorenflo's job, which he well remembers.

"You have to get used to each fisher's report," he said. "Then, you can spot a mistake ... follow a fisher for many years and you can catch an error such as writing down the wrong grid."

INTERAGENCY ACTIVITIES

Interagency activities take up a big portion of ITFAP time, and staff takes extra steps to provide the Great Lakes agencies with their expertise and leadership.

Much work is required for the Technical Review Committee

under the Consent Decree. "A lot of new duties came with the decree," said Gorenflo, citing the multitude of tasks including modeling, which require more assessments to collect data.

Much more analysis is necessary than under the 1985 Consent Order. "It's twice the work, easily, producing models, harvest limits, and harvest guidelines," said Gorenflo.

Under the auspices of the Great Lakes Fisheries Commission, ITFAP takes its place with all the other Great Lakes agencies on the Lake Committees. The Lake Committees are composed of all management agencies on each Great Lakes, including Ontario. Those who participate are agencies who have designated management authority over the Great Lakes, and have signed on to the Joint Strategic Plan.

According to the Strategic Plan, membership on Lake committees is provided to governments that have management authority. Since CORA tribes vested that authority in CORA, CORA is the recognized management authority. ITFAP represents CORA on the Lake Committees for Lakes Huron, Michigan, and Superior, and currently chairs Lakes Huron and Michigan. Each Lake Committee also has a Technical Subcommittee that addresses the technical issues. ITFAP, along with the individual tribe's biologist, participates in Technical Committee activities.

In the Strategic Management Plan, all management agencies agree to cooperate in fisheries management.

"It's a consultation process for a consensus group," said Gorenflo. "Theoretically, we could stop an action we can't agree with."

Lake trout stocking has historically fallen under purview of Lake Committees, which determine what to do with federally-reared lake trout. This related directly to the Consent Decree, said Gorenflo.

"We can't become isolationists," he said. "As signatories to Strategic Plan, tribes are equal partners on the Great Lakes. Participation in this realm is very important. It goes toward self-sufficiency and sovereignty. Activities will go on without us, so it is better to be involved and try to lead."

Gorenflo said he and his staff do "whatever we can to take a lead position on Lake Committees and technical subcommittees." And, they all volunteer.

Fishery Assessment Biologist Mark Ebener, has chaired the Lake Huron Technical Committee and now Superior Technical Committee for six years. Fish Enhancement Coordinator Greg Wright, chairs the Great Lakes Fish Health Committee, a rapidly growing concern.

ENVIRONMENTAL ARENA

ITFAP's responsibilities would

See "ITFAP's work," page 4

ITFAP work, from page 3

not be complete without its environmental program. Fish contaminant monitoring and fish consumption advisories are two issues addressed under this program.

ITFAP's crowning achievement in this realm was the creation of two fish advisories for fish consumption in Michigan. The EPA advisory was previously based on the weakest segment of population, which was children and women of child-bearing age.

"We saw markets hurt, because of these advisories, and we thought these advisories were far too restrictive for the general population group," said Gorenflo. ITFAP put forward a proposal to the Great Lakes Governors Fish Contaminant Advisory Board to separate the advisories, into two groups; children and women of childbearing age, versus the general population, said Gorenflo.

"Michigan jumped onboard with our proposal," he said. Now, there are two advisories, with the women and children group being the most restrictive.

ITFAP takes a proactive stance on fish consumption issues. An environmental group with an agenda of clean water was interested in publishing a pamphlet on Great Lakes fish. They were poised to do it and thought tribes would join in, recalled Gorenflo.

"If the group was sincerely interested in health, why not advise the public fairly and include all foods, rather than just fish," said Gorenflo. "We believe it was a cover for pollution control ... Clean water is valuable per se. But [the group] would get more political support for their clean water objectives if they could proclaim that fish were "unsafe" to eat. Meanwhile, our commercial fishery suffers."

Gorenflo said there are also a lot of doubts about how fish advisories are developed, lumping fish from all over the Great Lakes. For example, fish from Saginaw Bay and Lake Superior do not have the same contaminant levels. Species differ, too.

The long term contaminant study was a key element when ITFAP lobbied for an environmental position, Gorenflo said. But this program, too, is operating under "old dollars." Back in 1992, the program was funded at \$85,000, and that doesn't reach so far in 2002. Today, the work exceeds the funding.

Other issues addressed by the environmental program include the Great Lakes Panel on Aquatic Nuisance Species, which deals with what Gorenflo considers the Great Lakes number one threat — non-indigenous species. Water diversion is up and coming issue

that must also be addressed by the tribes. Speeches, letters, meetings, must all be prepared and attended.

"Environmental issues are becoming more and more important because there is so much perturbation to the Great Lakes ecosystem," said Gorenflo. "The [Great] Lakes are threatened far more now by environmental issues than by fishing."

In the old days, it was only a matter of how much fish were caught. "Now, threats include exotics species, water diversions, habitat destruction, contaminants, and more factors all impacting fish stocks far more than fishing pressure, which is under control," he said.

ITFAP has necessarily become involved in activities dealing with these and other environmental issues, including the International Joint Commission, the St. Mary's River Remedial Action Plan,

Lakewide Management Plans, the Lake Superior Binational Program, the Lake Huron Initiative, and the Great Lakes Commission.

STAFFING LEVELS

ITFAP staff address these issues — assessment and research, harvest reporting, Environmental, and interagency activities — and more. In 1992, staff numbered six full time and two part time. Two seasonal fishery aides were added since.

With current funding, there is no back up for ITFAP's experienced staff. Ebener has been with ITFAP since 1981-84 and 1991-present, Greg Wright since 1986, Karen Wright since 1991 and Environmental Coordinator Mike Ripley since 1996. Gorenflo finds any of his staff leaving to be an "unpleasant thought."

Michigan DNR looks at planting mosquito fish

DETROIT (AP) — Biologists are conducting a study to see if a particular kind of small fish should be planted in ponds and streams to help fight mosquitoes and the West Nile virus.

The Mosquito Fish, whose scientific name is *Gambusia affinis*, devours several hundred mosquito larvae a day and has been planted by other states for mosquito control.

The West Nile virus, which is carried by mosquitoes, killed 47 people last year in Michigan.

State Department of Natural Resources officials launched the study last month, and it is expected to be completed in a couple of months, The Detroit News reported Friday.

But the chief of the state's Great Lakes Research Station on Lake St. Clair said he is opposed to introducing mosquito fish into local waters because they would be a threat to other local creatures.

"There's a good chance they would have a negative impact on native organisms such as amphibians and insects," said Robert Haas, supervisor of the Michigan Department of Natural Resources station at the mouth of the Clinton River.

Haas said some reports blame the mosquito fish for wiping out

other native species of minnows or small fish.

But some fish farmers disagree.

"That's hogwash," said George Czeisperger of Mount Clemens, who operates a fish farm, Perch

Research International, in Standish.

Czeisperger said he is trying to get approval from Congress to have the mosquito fish stocked in Michigan.

Other fish and dragonflies also eat large volumes of mosquito larvae, but Czeisperger said the mosquito fish's big advantage is it can infiltrate shallow, stagnant pools that keep other fish out.

State fish biologist Todd Grischke acknowledged that some mosquito fish have been planted illegally in Michigan ponds, but doesn't see them as the answer to the problem.

"To suggest they would control the statewide mosquito population with these fish is irrational," because the population of the mosquito fish would have to be high to have a true impact, Grischke said.

Mosquito fish: W. Australian exotic invader

By CORA Public Information & Education

The Government of Western Australia Dept. of Fisheries has this to say about the mosquito fish:

"Mosquito fish were introduced from Central America into WA in 1934 to control mosquitoes and ornamental fish.

However, it

was soon realised that mosquito fish are wrongly named as their diet contains very few mosquito larvae. In fact, mosquito fish will only eat mosquito larvae when all other food sources are depleted and many species of native fishes consume more mosquito larvae than do mosquito fish."

The Western Australia Dept. of Fisheries calls Mosquito fish a threat to native fishes. "They prey on a wide range of food sources, including the eggs of native fishes, and directly compete for food and habitat. Mosquito fish direct-

ly affect native fish species by fin-nipping and other antagonistic behaviours, resulting in fin damage, loss of fitness and reduced reproductive success of native fish. Mosquito fish are closely related to guppies and swordtails and are live-bearers; that is, they produce live young, not eggs. This means that juvenile mosquito fish often have a better chance of survival than native species which lay eggs."

The department instructs fishers who catch to mosquito fish to keep them and dispose of them.



Mosquito fish: Friend of foe?

From Coal Plant, page 1

captured in the boiler. "The report goes on to claim that there is no economically feasible method of removing mercury from emissions," he wrote.

According to the DOE, CFB technology allows the fuel to be burned at a relatively low temperature of about 1,650°F, or 899°C, a higher temperature than the boiling point for mercury.

According to the U.S. EPA's Mercury Report to Congress, coal-fired power plants are the single largest source of mercury pollution in the U.S. and, according to the National Wildlife Federation, a single 100 MW coal-fired power plant emits approximately 25 pounds of mercury per year. That means that a 1,000 MW plant would emit 250 pounds of mercury per year.

Right now, mercury is found in very low levels in Lake Superior fish. According to ITFAP Environmental Coordinator Mike Ripley, in the past 10 years, out of a total of 120 individual whitefish tested, the highest level of mercury detected was 0.14 parts per million with the average being 0.04 parts per million, almost 100 times less than the FDA action level.

Emissions of 250 pound of mercury each year could change that, since mercury bioaccumulates up the food chain and can reach high concentrations in some fish.

According to the U.S.

Department of Energy's final environmental impact statement for the Jacksonville, Fla., project, a coal burning using CFB technology that would generate 300 MW of electricity (less than a third of what the Hannahville plant would generate), contaminants emitted would be significant:

"Based on a 90 percent capacity factor, air emissions from the proposed project would include approximately 1,650 tons per year of SO₂, 990 tons per year of NO_x, 121 tons per year of particulate matter, 1,533 tons per year of carbon monoxide (CO), and 61 tons per year of VOCs. Emissions would be nearly independent of fuel type because emissions controls would be adjusted (i.e., tightened or relaxed) based on fuel type to achieve the same level of emissions. Trace emissions of other pollutants would include beryllium, sulfuric acid mist, mercury, hydrochloric acid, hydrofluoric acid, benzene, arsenic, and various heavy metals. The project also would emit about 2,293,100 tons per year of CO₂.

Although CO₂ is not considered an air pollutant, it is a contributor to the greenhouse effect that is suspected to cause global warming and climate change (Mitchell 1989)."

The Jacksonville plant's water requirements cited in the report were an average of 574,000 gallons per minute (gpm) for total

flow of once-through, non-contact cooling water required to operate all three units at full load. The report said that this "cooling water would be drawn from the back channel of the St. Johns River and then 815 Mgd (566,000 gpm) would be returned to the river after passing through the condensers."

According to these figures, that is a loss of 8,000 gallons per minute, that means a loss of 11.52 million gallons per day.

According to Potvin, the public was told at an informational meeting that the total demand placed on local aquifers and water resources for the Hannahville coal burning power plant is nearly 11 million gallons per day. There will also be a second system in which water would be recycled. However, in total, every day nearly 11,000,000 gallons of water will be turned into steam, he wrote.

Whether the plant will be built, or built as designed, is yet to be determined, depending on the feasibility study, permitting and the Hannahville tribal leadership.

"Tribal leaders aware of all issue involved corresponding to requirements and have all the necessary information," said Anthony. "I'm very confident whatever decision they make will be based on the good of the overall community. By overall, I mean county-wide."

See our new brochure at www.1836cora.org

"Tribal Fishing" is published by the Chippewa Ottawa Resource Authority (CORA) Public Information & Education program. The program is administered by the Bay Mills Indian Community Newspaper Department.

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