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A Report on the 1997 Nunavik Beluga and Walrus Subsistence Harvest Study

Prepared for the Department of Fisheries and Oceans under the Aboriginal Fisheries Strategy

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ACKNOWLEDGMENTS

The Community Agents are responsible for the quality and reliability of the harvest data. They also provide information to the hunters and act as a liaison between the managers and community authorities. In 1997 the agents were:

Ken Jararuse Kangiqsualujjuaq Sandy N. Saunders Kuujjuaq Johnny Mosesiapik Tasiujaq Aupaluk Peter Akpahatak Edward Putulik/Lasa Kotaq Kangirsuk Willie Jararuse Quaqtaq Amama Jaaka Kangiqsuajuaq Paulossie Padlayat Salluit Peter Nalujukj Ivujivik Josephie Qakutuk Akulivik Johnny Qinuajuak Puvirnitug Daniel Epoo Inukjuaq Annie Kasudluak Umiujaq Moses Tooktoo Kuujjuarapik

The monitoring program is supported by the Department of Fisheries and Oceans (DFO) through its Aboriginal Fisheries Strategy (AFS). The Department also provides the support of its personnel from the Quebec city and Inukjuaq offices.

The Nunavimmi Umajulirijiit Katujiqatigininga (Nunavik Hunting, Fishing and Trapping Association), the Renewable Resource Development Department of Makivik Corporation, and more recently, the Kativik Regional Government continues to provide local and regional institutional support for the work.

Translation was provided by Paul Papigatuk of Salluit.

This report is part of a continuing series of annual reports intended to provide information on the harvests of beluga (*Delphinapterus leucas*) and walrus (*Odobenus rosmarus*) by Nunavik Inuit. Along with the harvest levels, locations and season of capture are included when available. This is a collaborative effort, begun in 1983 by the Department of Fisheries and Oceans and Nunavik Inuit in order to provide information for the co-management these species.

The co-mangement effort has gone through many stages and has evolved into a formal co-management arrangement. In May 1996, a 5-year management plan for northern Quebec beluga was finalized. This plan reflects the results of community and regional consultation sessions, culminating by each community finalizing local management plans in March 1996. The plan sets forth the roles, responsibilities and commitments of the partners in the co-management arrangement, along with the agreed upon quotas, management zones, sanctuaries, seasons and harvesting techniques.

All hunters are responsible for respecting the rules and regulations contained in the management plan. In conformity with the Fisheries Agreements signed under the Aboriginal Fisheries Strategy (AFS), DFO and the communities co-operate to monitor the activities of their hunters and by providing basic data. This is done through the combined efforts of the Fisheries Guardians, the Community Agents, the local Hunting, Fishing and Trapping Associations and DFO personnel both in Inukjuaq and Quebec City.

There is no specific management plan or global allocation for walrus for Nunavik hunters. The management of certain walrus populations is a topic, however, that has been discussed at the Nunavut Wildlife Management Board. Nunavik Inuit are represented by two members on that board when issues concerning the areas of equal use and occupancy, as defined in Article 40 of the Nunavut Final Agreement are discussed.

There is an interest in certain Nunavik communities to begin a sport hunt for walrus. In order for such a hunt to proceed, management controls will be necessary in order to ensure that the walrus stocks are not over harvested. The methods employed for the collection of information at the community and regional level continue as in past years. This continuity has lead to a marked improvement in the quality and consistency of the data. Each Municipal Corporation signs a Fisheries Agreement with the Department of Fisheries and Oceans. All Nunavik communities participated in the 1997 program. Community agents are then hired to collect harvesting information for beluga and walrus, to ensure that local management measures are respected and to provide information on the hunts. This information is recorded on a *Weekly Report Sheet* by each agent and transmitted, on a weekly basis, to the Inukjuaq office. This weekly compilation of information permits the managers to monitor the hunts. Throughout the season, the Quebec city office issues notices to those communities that had reached or exceeded their quotas.

At the end of the hunting season, the Community Agents prepare an Annual Summary Sheet along with a written annual report. The DFO office in Inukjuaq interacts with the Community Agents on a regular basis to ensure that the work is proceeding, to answer questions and to provide advice. Also included in their duties is assistance to the Fisheries Guardians in their patrols and to provide them with regular information on the progress of the hunts. The Community Agents are also responsible for providing information to the hunters concerning quotas and variation orders on the opening and closing of zones.

At year end, the data is all forwarded to the DFO personnel at the Inukjuaq office who, along with the Quebec city office, ensure its completeness. Summaries are prepared and any outstanding questions are forwarded directly to the community agents for review with the local hunters. Replies or clarification are sent back to Inukjuaq. A contract is then given by the Quebec city office to prepare an annual report, compile the written community reports, prepare summary tables and maps in English and Inuktituut for use by the partners in the co-management process.

Although the hunters of Sanikiluaq may harvest beluga and walrus from the same population(s) as the eastern Hudson Bay communities of Nunavik, their harvest levels are not included in this report. That responsibility lies with the Nunavut Wildlife Management Board and the Hunters' and Trappers' Association of Sanikiluaq.

1. Eastern Hudson Bay Area

The communities of Akulivik, Inukjuaq, Umiujaq, Kuujjuarapik and Puvirnituq are included in this area. The Eastern Hudson Bay summer beluga stock is listed as "Threatened" by the Committee on the Status of Endangered Species in Canada. This means that if the present level of hunting is maintained, over time, the population would decline and eventually become endangered. The Total Allowable Catch for this sub-area is 45 based on current scientific advice.

The 5-year management plan, provides for a harvest of 90 beluga from this area. However, no more than 45 animals may be harvested from June 15 to September 30 in the Eastern Hudson Bay Summer sub-area. In addition, the Nastapoka River and Little Whale River estuaries are closed to hunting from July 1-31. Each community is assigned a quota of 18.

The total catch for this area was 108, all landed. This represents an over harvest of 18 animals. All communities exceeded their quotas expect Kuujjuarapik. The limit of 45 was respected. One beluga was reported taken by Cree hunters from Wemindji, a community on the eastern coast of James Bay.

Hudson Strait Area

The communities of Ivujivik, Salluit, Kangiqsuajuaq and Quaqtaq are included in this area. These communities are likely to hunt animals from the Eastern Hudson Bay or the Ungava Bay summer stocks as they migrate through the area in the spring and fall. While there is no Total Allowable Catch assigned to this area, care has to be taken to manage the spring and fall hunts.

The 5-year management plan has assigned a quota of 100 to this area. This regional quota has been divided equally and each community has a

quota of 25. Of this amount, only 72 animals can be harvested in the spring and fall (prior to July 15 or after September 14).

The total harvest for this area was 124 (120 landed and 4 lost). This represents an over harvest of 24 animals. Salluit exceeded the harvest by 25 animals. Included in the Salluit harvest were 4 animals destined for the country food store in Kuujjuaq. The total harvest for Ivujivik is an estimate only and could, in fact, be higher. One female with a calf was taken by Ivujivik hunters.

3. Ungava Bay Area

The communities of Kangirsuq, Aupaluk Tasiujaq, Kuujjuaq and Kangiqsualujjuaq are included in this area. The Ungava Bay Summer beluga stock is listed as "Endangered" by the Committee on the Status of Endangered Species in Canada, meaning that this stock may face extinction if not well protected. Based on current scientific advice, the Total Allowable Catch is recommended at 0. Furthermore, the estuary of the Mucalic River is a sanctuary where no hunting and no disturbance is permitted at any time during the year.

The 5-year management plan does not provide a quota for the Ungava Bay area. Each community, however, has been assigned a quota of 10 for a total of 50. All efforts must be taken to harvest this quota outside of the Ungava Bay area. No hunting is permitted in the Ungava Bay area between August 1-31.

The total harvest for this area was 58 (57 landed and 1 lost). Kuujjuaq, Tasiujaq and Kangirsuk exceeded their quotas. 4 animals were taken inside Ungava Bay in August. One calf was taken in Aupaluk.

Table 1 provides information on the annual harvest of beluga since 1974. Table 2 presents the community and regional profile of the 1997 beluga harvest, and Table 3 provides information on the seasonal distribution of the 1997 harvest. Figure 1 illustrates the location of harvests.

The total harvest for 1997 was 76. The harvest for Eastern Hudson Bay was 22; for Hudson Strait 51; Ungava Bay 3. Table 4 presents the harvest levels for walrus since 1974 and Table 5 presents the seasonal distribution of the 1997 harvest, by community.

Beluga - Harvest Levels 1974-1997 Table 1

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(Data Sources N.H.R.C., Anguvigaq, D.F.O./Makivik, K.R.G.)

Community closed in 1978—residents relocated
New community inaugurated in 1986
Sanikiluaq reported harvests to the Nunavut Wildlife Management Board
One beluga reported by Wemindji in James Bay . : : E

Beluga - Community and Regional Profile 1997 Harvest

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Total Nunavik	240	205	
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There is no hunting permitted in the Ungava Bay Area in August: a quota of 10 is assigned to each community if efforts are made to hunt outside of the Ungava Bay summer distribution area (1996 Management Plan).
A maximum of 72 can be harvested prior to July 15 or after Sept 14. During this summer closure, a maximum of 28 can be harvested from the Hudson Strait summer stock
A maximum of 45 belugas can be taken between July 1 and Sept. 30 in the eastern Hudson Bay sub-area

Table 3

Beluga - Seasonal Distribution of the 1997 Harvest

Month	April	May	June	July	Aug	Sent	****	M
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Table 4

Walrus - Harvest Levels 1974 - 1997

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(Data Sources N.H.R.C., Anguvigaq, D.F.O./Makivik, K.R.G.)

Community closed in 1978—residents relocated

New community inaugurated in 1986 Sanikiluag reported harvests to the Nunavut Wildlife Management Board

Walrus - Seasonal Distribution of 1997 Harvest by Community

Month	ylul	Aug.	Sept.	Oct.	Nov.		
						Landed	Lost
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MANAGEMENT IMPLICATIONS

"On my recent patrols I have confronted the hunters about the management and regulations but since there were some violations, over harvests and we have overhead on HF that we are in the hunters way. I feel that we need more support from the organizations that brought up those mandate we try to implement. The hunters are likely to catch when they have an opportunity. I feel there should be more saying from the bodies involved in fisheries since we are working for them before the Fisheries Acts and Marine Mammal Regulations are to be used on the violators. (A Fisheries Guardian)

In 1997 the total harvest of beluga was 290 in relation to a total quota for Nunavik of 240. This represents an over harvest of 50 animals, an increase from 1996. All regions over harvested. There continue to be instances of violations to the seasonal restrictions as well as to limits in the summer subareas. The Mucalic and Nastapoka estuary closures appear to have been respected, and the prohibition against using nets continues to be generally respected. There were incidents of females with calves taken.

In reading the weekly and annual community reports, however, there appears to be an increasing resistance from the hunters to comply with the management plan. This should be discussed by the partners to determine if a problem is emerging.

The harvest of walrus continues to be in line with previous years. There were no large, single hunts and no wastage reported. Incidents of illness from tainted meat were reported.

"The comments made by hunters are always the same. The closed season is groundless if nothing has happened or will happen to people who kill on closed season and villages with over-kills. We had no immediate answer to this question.." (A Community Agent)

This was the second year of implementing the 5-year management. While the performance of the Community Agents continues to improve and the information obtained generally reliable, compliance with the plan deteriorated this year in some communities.

Partners are encouraged to read the community reports, prepared by the Community Agents, and attached as an Annex. Some include some very useful information on the attitude of hunters, and community members, insights into Inuit knowledge as well as concrete recommendations for improving compliance with the management plan. The statistics show an overall picture, but it is extremely important to study the community reports carefully for details on what is occurring in each community and in Nunavik as a whole.



COMMUNITY REPORTS

(not all communities provided annual reports)

General Comments

This year has been somewhat different from the last two years I worked as community agent. There were unfortunate changes in Quebec headquarters when Mr. Chatigny received a promotion to Ottawa office, and the overkilling of beluga in Nunavik communities is extreme, and the law breakers not being dealt with accordingly. Fortunately, Kangiqsualujjuaq did not over-kill and during closed season none were killed. If one had been killed it was not reported to me or Fishery Guardian Willie Annanack. The annual report sheet included a summary of the beluga/walrus catch.

Summary of beluga catch

In May 1997 one beluga was sunk and one saved at Upingivik Labrador. In September 1997 one small beluga was gotten up George River and sample taken. Wounded one beluga and this beluga I assume is dead since witnesses reported much blood was sprouting out each time the animal went for air.

In November 1997 2 hunters went to Quaqtaq by aircraft to catch beluga for Kangiqsualujjuaq and they got four. No sample was taken since only some parts of animals was taken back due to their weight. Speaking to both hunters they had not thought about saving jaws for sample and when they arrived home all of the "muktuks" was shared by all the people in the village. In around Bacon Island a hunter sunk one beluga. The total catch is nine.

Summary of walrus catch

In August 1997 M/V Iniqunnak went to Apatok Island to hunt walruses but only managed to sunk two animals and at the same week M/V Aivik went to Killiniq and the crew sunk one. Total 3.

Comments on the five year Beluga Management plan (1996 - 2000).

The five year plan is very well put together, and since all political involved has agreed upon it, it should be well implemented and put it to use.

Comments on Community respect for the Beluga Management plan

Fishery Guardian Willie Annanack, and myself do our best that all laws and variation orders be followed, and so far, the village has done just that. This being my third and final year as Community Agent, and knowing the hunters, there is always the possibility there would be over killing if beluga is abundant in our area. So I believe more management and patrols should be taken in the future.

Comments on the Quota, Protection of females and calves, Netting, Code of Conduct (No wastage), Hunt coordination, and split quotas between hunters and camps.

The quotas for Kangiqsualujjuaq is considered to be too low by hunters and people in general. They would like an increase up to 18 belugas as other villages. This would decrease the danger of over-killing. The protection of females and calves is well respected in Mucalic and other estuary areas but outside of estuary the hunters will kill anything that moves.

Although there is one person who relies on nets to catch belugas, he has not been lucky this year. Code of Conduct has not been charged to anyone just yet since I believe all kills is not being reported to me Fishery Guardian Willie Annanack during the closed season. The hunt coordination and split quotas between hunters and camps is not being practiced but hunt coordination's are very well conducted by hunters and leaders.

Your Point of view in order to facilitate the collection of beluga and harvest statistics.

The existing procedure is quite sufficient.

Fishery Guardian

Comments participation to patrol with Fisher Guardians (FG)

This year my patrol duties have been cut short each time due to weather and ice conditions. My medical problem did not help either before surgical operations in middle of October but by the time I come back from hospital it was too late to get back to work due to lack of work and weather conditions.

Comments on working relations and coordination of the FG during season: Understanding the role, collaboration between you and FG, etc.

FG Willie Annanack and I have always worked well together, and he does his job t best of his ability but again must comment that he needs training to navigate during 0-0 weather, and in need of patrol vessel all equipped if he is expected to do his job efficiently.

Sampling

How many samples were provided to Makivik by your community.

Again, this year only one sample was taken and sent to Makivik Research in Kuujjuaq. The rest of the kill was not taken due to hunters not thinking about it. I did, however, go on FM constantly reminding hunters if beluga/walrus is killed that samples should be taken for health and scientific purposes.

Provide your point of view and/or commendations in order to facilitate the collection of beluga/walrus samples in the following years.

The present procedure is quite sufficient but we need cooperation of hunters and increasing price for samples will help. I also recommend that seals, i.e., per square flipper, harps, rangers, and other sea animals and fish, especially the ranch food be taken and sent to Research before they are eaten. We had several food poisoning this year and luckily no deaths occurred this time. Not yet anyway. The death will occur if people keep eating rancid food without tests and approvals of scientists.

Enforcement

Comments on enforcement measures taken this year, helicopter, Fishery Guardian, land and sea patrols etc.

To my knowledge the enforcement this year is limited due to weather and other conditions. In estuary areas there should be constant surveillance and during closed seasons by vessel and air both. The land and sea patrols should be practiced since we have known small aircraft landing at lakes and poaching fish and caribou.

Your point of view; was it relevant, effective. How could it be improved for next year.

Yes it is relevant to patrol and enforce the law if we wish that our great and even greater grandchildren will be able to enjoy belugas as did our ancestors. Some patrols are effective since we have known some hunters intending to put nets in estuary and near it and stopped because of FG's pressure. To improve it we need more fishery guardians and coordinated by regular DFO officers, and more air and sea patrols, and that over-killing and killing during closed season be dealt with accordingly as our counter-parts down south. DFO, DFTD, and others immediately involved in management educate our people about the real danger of extinction of beluga whales.

Communications

Give summary of the information given to the members of your community on FM radio, including: date when you went on FM radio, what was talked about (for example discussion on zones opening or closures, local or zone management plan, conservation measures, etc.

As years before I was again mandated by DFO to go on FM on Tuesdays noon. This I did each time unless I'm out of town or there are absolutely no news to give out and when this is the case I usually talked about boating safety.

Suggestions and Recommendations

I believe Fishery Guardians and Community Agents should train together in order to understand the work and improve their relationships. There at least should be more Fishery Guardians especially in bigger communities. DFO officers should train and participate in Nunavik more often.

Mayors

The mayoress Maggie Emudluk was re-elected and familiar with DFO, communities, and 5 year plan.

Here are the results or comments

June 30 I start to work as community agent and it was good experience. I'll try to make comments on all the questions the best way I can.

June 9-30/99: No harvest or sightings

June 30-July 3/97: No harvest or sightings

July 4-5/97: 3 beluga whales were landed in Kangiqsujuaq. 2 white males and 1 light gray male. Lots of sightings.

July 6-14/97: 3 beluga whales landed at Imilik. 3 females, 1 white, 1 light gray and 1 calf and many sightings.

July 10-20/97: 3 white beluga whales landed in Kangiqsujuaq for two men by telephone.

July 14-25/97: 3 white beluga males were landed by two hunters. 3 sighted and landed.

July 27-Aug. 1/97: No harvests or sightings.

Aug. 2/97: 5 beluga whales were sighted and 1 light gray male was landed in Koksoak River.

Aug 3-23/97: one sighted and almost got by salmon nets at Mouth of Koksoak River.

Aug. 23-Nov. 16/97: No sighted at Koksoak River and no harvests.

5 year Beluga Management Plan (1996-2000) is available and it always explain by community agent. I went on FM every week except last 3 week of October. I don't agree with 5 year plan because I feel Inuits in Nunavik are turning criminals while some part of Canada other Inuits doesn't have 5 year plan. The animal always goes away for a short or long periods of time and they come back. Our traditional food and hunting area are effect. Mucalic Sanctuary should be open until we reach our quota. If you kill any kind of animals it always come back. We don't kill beluga whales anymore in Mucalic area they don't come back.

The people in Kuujjuaq always try to respect the beluga management measures if we don't respect we become criminal which nobody wants. The quota of 10 beluga whales is not enough to feed whole community which is largest Inuit community in Nunavik. I believe to protect females and calves if they are endangered species but I feel they are not because they were so many sighted in Hudson Strait and north part of Ungava Bay. Hopefully in future

the beluga whales will be back in Mucalic area. As Inuits we don't waste any meat we take what we need and feed leftover to animals and birds. When hunters hunt big animals they always share or split with the community except if they want to make money.

No comment on collecting beluga and walrus harvests statistics.

I went to patrols with Fishery Guardians two times and I enjoy it. On July 10-13 Willie Annanack, Etua Putulik and I went to Whale River and mouth of the river there was no sightings. We saw few canoes and boat hunting seals or fishing. We also saw Air Inuit flying below 1000 ft. on the mouth of Whale River. Second time I went with Willie Annanack to mouth of Koksoak River and between Koksoak River and False River no sightings. I work with Fishery Guardians well. I want to see them to have more power, more training and fully equips.

There were 6 samples taken by Makivik Research. The rest of 13 beluga were not sample because of sample kits were not available or they were got in other community. No comment or recommendation in order to facilitate the collect of beluga. The newly elect Mayor Michael Gordon is aware of agreement between DFO and the council

Have a good rest and have fun rest of the year until next season.

Tasiujuaq Johnny Mosesiapik

I do not have any comments on 5 year beluga management plan but I am sorry to say that my community went over our quota and I went over the FM to tell them not to go over our quotas but when the hunters sees the beluga they just cannot just see the beluga go by and leave it alone although that people are trying very hard to respect the management plan but some hunters just cannot watch the beluga go by. People know how much quota we have to harvest at least people are respecting not to harvest females and calves. I do not have any comments on the weekly harvest that I send out on beluga and walrus statistics.

Whenever, Fishery Guardians are in our town they try to help as much as they can but it is very hard to look for canoe and outboard to rent when they come to our community and I feel that DFO should have their own canoe and outboard in all communities had fishery guardians always contact me in advance before they come to my community.

This year, I did not use any samples because when the hunters go out beluga hunting they never tell me that they will go hunting but in the future I feel that hunters should be taught how to use the sample kits. The helicopter never come in to our town but in the passed years the airplane have tried to count the belugas by air and I don't think it worked very well and I feel that they should count the belugas every week in the future so it will work better.

Whenever there is a closure or opening I always goes through FM to consult with people and I always consult with individual people as well in our community. I do not have any comments how to improve the role of the CA or FG because I feel that everything is there to do the management plan.

We have a new elected mayor in our community and whenever I meet with him, he does not have any problem understanding on beluga issues and try to help me as much as he can and at least he never complains to me.

> Kangirsuk Lasa Kotak

It is time again to gather all information pertaining to annual report for DFO. This time I will not include summary sheets in this report but will include them as annexes plus the maps where beluga were caught.

Kangirsuk spring was very warm and weather was good for hunting, outing and snow melted early this year but of course Kangirsuk river didn't break up not until June 22, 1997. Actually there was partial ice break up in June 10, 1997 but the rest of ice stayed on. There were only three families who went to their summer camp before ice break up. Most people wait for their holidays which usually is in July and August.

In past some people use to catch belugas in May on flow edge and only three years ago some hunter caught some belugas on flow edge.

There were eight (8) beluga caught under the zone and two above zone. (see annexed data).

Yes five year management plan is available at CNV office but nobody ever really read it except secretary/treasurer and according to management plan, we should be able to get eight more above the zone. Since Ungava does not have quotas under zone any belugas caught should not be counted in quotas. That is understanding of Inuit, no quota means it should not be accounted as catch. Inuit understanding of the five year plan is that they can catch any number of belugas under the zone uncounted a catch and 10 quotas above zone counted for catch. As Inuit understands that a beluga sunk to bottom of the sea in not lost or wounded beluga does not count for catch so not quota under zone is considered not conclusive as catch and should not be put in a quota catch. Only beluga catch above zone are considered to be counted in quotas.

As for respecting beluga management plan for five years some people are beginning to be uncomfortable. The people of Kangirsuk know that Kangirsuk is also route for belugas going north especially when ice forms very intense in Hudson strait going south a lot of belugas make detour by Kangirsuk to Kangirsukmiut would like to receive consideration more belugas catch for the next belugas management plan and population is growing.

It's hard to split quotas between camp and Kangirsuk, but split catch for spring and fall is made for above the zone only. Usually six for spring and four for the fall or however the harvest turn out on previous hunt from past year. but always split belugas with Kangirsuk with all catches, providing the catch is close.

Fishery Guardian

Its not easy to patrol with fishery guardian when family is involve. He usually goes out when we are at the camp but easier when we are not camping. Lasa can be with him more days than he would if we were camping. Fishery Guardian has many responsibilities which does not only involve Kangirsuk on his patrol and he informs population of his duties and beluga management plan, his patrol plan.

Sampling

There were only two beluga sampled this year. No walrus catch this year for Kangirsuk. Walrus sampling can be hazardous if caught in forming ice particularly around Akpatuk Island. Boat or canoe can easily find themselves in dangerous ice formation if cutting walrus on ice so its very difficult taking time to take samples in cases like this. Walrus catch must be in very safe place to take sampling for Makivik.

Enforcement

People felt helicopter patrol just make the belugas more scare. Have fishery guardian patrol in beginning of May. Some communities such as Quaqtaq and Kangirsuk combine observation on flow edge in some points where people feel there can be belugas in May. This can be done with KRG and DFO and community involvement.

Communication

This was in all case when receive notice from DFO pertaining to closures and opening of belugas hunt. Both the Mayor, community agent, fishery guardian all went on FM informing notice receives.

There should be a trainee with fishery guardian who is either on unemployment insurance or welfare recipient in order to save money needed. This way DFO or KRG has extra man training who will be available if and when fishery guardian quits (safety net). Since KRG is in contract with DFO for fishery guardian the KRG representative must be made aware of the role of fishery guardian and urge to help made their population understand fishery guardians role. Most fishery guardian are not made welcome when they go to communities because they worked for DFO while they are just

executing their jobs. They need support very much. Most communities don't agree with beluga management plan and they tend to take it out on our poor fishery guardian who merely worked for DFO. Since they represent quotas and closures other related DFO authority, they get harassment verbally, hard end of the stick because they represent DFO, so they quit.

Mayors

Yes, the newly elected mayor is familiar with fishery guardian role in community but does not have time voice his opinion on beluga management.

I hope the information given are helpful. Wishing you the best of New Year, Happy 1998.

Quaqtaq Willie Jararuse

In middle of June, I heard that the hunters got 6 whales in Naujat and Nairaqtuk. There were 3 white, 3 large gray. No lost. They saw over 200 whales only, because there was too much ice that time. I went there few times and it was bad. I saw only few whales.

In July 18 or 19 we went near Kangirsujjuaq to hunt whales. There was no more ice that day. It was very beautiful day. We left in Quaqtaq to Tupirvikalak close to Wakeham bay. The next day 20th of July by Tuvaalek we were hunting beluga. On radio we heard the campers saw lots of whales and we went there. We were 12 or 14 hunt and we got whales that day. There were 9 white, 5 large gray. Few lost.

In middle of October there were lots of whales uncountable in Quaqtaq. And in Nuvuk the hunters got only 6 whales because we had already 20 whales all year long. There were 4 white, 2 large gray. It was windy all that time in October. We took all the meat from belugas. The hunters respect the quota in Quaqtaq. That's all I have to say.

Comments on the implementation and respect of community management I think the 5 year plan is working great in Quaqtaq. The quota is respect very well to the hunter in Quaqtaq. The weekly summary report is good. Maybe it will continue that way.

Fishery Guardian

I understand my role.

Sampling

1 sample I send to Makivik research center. They didn't answer back to me. I think it should continue.

Enforcement

It should Improved next year.

Communication

I went 2 times on radio to inform the hunters. I was not discussion on zones, local or zone management.

Suggestion and recommendation
I will improve next year on CA. This is my first year as CA

Eva Deer the Mayoress, she's out of town.

Kangiqsujuaq Amaama Jaaka

In July, during the periods of June 30th to July 6th; approximately 300 beluga seen during the week at Itiviani. 5 beluga harvested, none lost; 2 light gray males and 3 white females. O lost or wounded whales. At Tupirvikallak, around 350 beluga sighted, one shot and landed with none lost or wounded. This one was an adult white female.

At Akulivik, some 350 beluga seen; four shot and landed none lost or wounded. These were two males and two females, the two males being adult

whites, and two light gray females. At Kangirsuapik, 25 beluga seen and one landed with no losses. This one was a light gray male.

These were the only reports made to me.

July 14, 1997

From the 7th to the 13th, at Itiviani; 70 beluga seen, none shot or lost. All week this camp did not pursue beluga, and chose to simply observe their movements. At Tupirvikallak, 150 beluga seen; two shot, both male, one white and one light gray. No lost or wounded whales. At Akulivik, 60 whales seen but none shot nor lost. At Kangirsujuaq, some 20 whales sighted, none shot nor lost. At Kangirsujuaq, some adult white female shot and landed.

July 21, 1997

From the 14th to the 20th, at Itiviani, 15 beluga sighted but not hunted. Also, at Tupirvikallak, 10 beluga sighted and not hunted - none lost. At Akulivik, 20 beluga sighted, and not hunted, no losses, and at Kangirsujuaq, 2 beluga seen, none harvested nor lost; and finally at Kangirsuapik, 6 beluga seen, none harvested or lost.

No walrus have been sighted by the community, and the weather has been poor, although it improved at the end of the week. We are sighting beluga regularly, but due to the respect shown towards our management plan we are not hunting them. During the month of June and the early part of July, many beluga have passed this way, but they are now becoming fewer and farther between.

July 28, 1997:

From the 21st to the 27th of July, at Itiviani, 10 beluga sighted, none harvested; at Tupirvikallak, 50 beluga sighted, one white male harvested; at Akulivik, no whales seen; at Kangirsujuaq, no whales seen; These places identified are seasonal camps, and the people have not seen any walrus either. It has been a full week since spring break-up, winds only from the north; weather always favourable.

July 28th to August 3rd:

at Itiviani, no beluga sighted, no losses; at Tupirvikallak, no beluga sighted, no losses; at Akulivik, no beluga sighted, no losses; at Kangirsuapik, no beluga sighted, no losses; There was nobody present at Kangirsuapik all week, so there is no report from that camp. None of these locations have seen any walrus all week, and the beluga seem pretty well passed through, although there will still be an occasional sighting from time to time.

August 4th to 10th:

at Itiviani, no beluga sighted; at Tupirvikallak, some beluga sighted on the 4th none shot nor lost; at Akulivik, no beluga sighted; at Kangirsuapik, some beluga sighted, none shot; Still no presence at Kangirsuapik. These locations have not seen walrus all week. The weather was fair all week with light winds from the north.

August 11th to 17th:

No more beluga sightings at Itiviani, and no walrus have been seen there either. No more beluga seen at Tupirvikallak. No beluga seen at Akulivik. No beluga seen at Kangirsujuaq. No beluga seen at Kangirsuapik. The two people at the camps are not seeing any more beluga and still no walrus have been sighted. When the infrequent sighting of a beluga is made, no effort is made to pursue them due to the summer quota having been reached.

August 18th to 24th:

1 beluga seen at Itiviani, none shot. No beluga seen at Tupirvikallak. 3 beluga seen at Akulivik, none shot. 4 beluga seen at Kangirsujuaq, none shot. No beluga seen at Kangirsuapik. No walrus sightings all week, perhaps from lack of active walrus hunting. It is presumable that if the hunters searched for walrus that they would find them, however. The weather has been excellent, with no winds. Good summer month this August.

August 25th to 31st (sent September 1st):

No beluga seen at Itiviani. No beluga seen at Tupirvikallak. No beluga seen at Akulivik. No beluga seen at Kangirsujuaq. No beluga seen at Kangirsuapik. None of these camps have seen walrus especially since they have not hunted

for walrus. Nevertheless, if walrus had been in the vicinity, these would have been seen. There have been stronger winds from the west on these days.

August 31st to September 7th:

No beluga, no walrus sighted at Itiviani No beluga, no walrus sighted at Tupirvikallak. No beluga, no walrus sighted at Akulivik. No beluga, no walrus sighted at Kangirsujuaq. No beluga, no walrus sighted at Kangirsuapik. These camps have not seen any walrus all week. these days the weather is not so good and winter is approaching. Beluga sightings are very rare now, although we can expect to see them again soon even if they don't always pass close by on their returning migrations.

September 8th to 14th:

No beluga, no walrus sighted at Itiviani No beluga, no walrus sighted at Tupirvikallak. No beluga, no walrus sighted at Akulivik. No beluga, no walrus sighted at Kangirsujuaq. No beluga, no walrus sighted at Kangirsuapik. These camps have not seen any walrus all week, perhaps mostly from lack of hunting them. The weather is getting harsher, with the occasional snow. The snow is beginning to appear.

September 15th to 21st:

No beluga around anymore, no walrus sighted at Itiviani No beluga around, no walrus sighted at Tupirvikallak. No beluga around, no walrus sighted at Akulivik. No beluga, no walrus sighted at Kangirsujuaq. 1 beluga sighted at Kangirsuapik. These camps have not seen any walrus all week. The snow is becoming more prevalent, winter is here.

September 22nd to 28th:

No beluga yet, no walrus sighted at Itiviani No beluga yet, no walrus sighted at Tupirvikallak. No beluga yet, no walrus sighted at Akulivik. No beluga yet, no walrus sighted at Kangirsujuaq. No beluga yet, no walrus sighted at Kangirsuapik. There have been no beluga whales or walrus seen all week, although perhaps there will be some sightings soon. The weather has not improved, with a good deal of snowfall and winds from the north. This is normal weather for the fall, and is to be expected.

September 29th to October 5th:

No beluga, no walrus sighted at Itiviani No beluga, no walrus sighted at Tupirvikallak. No beluga, no walrus sighted at Akulivik. 1 beluga sighted at Kangirsujuaq, none shot. No walrus. No beluga around anymore, no walrus sighted at Kangirsuapik. On these days the weather has been very good but here has not been any beluga. We don't find this unusual, because the whales don't really pass close by in the fall on their return journey. Still, you never can tell what he future will bring, and whether there will be any in October or not remains to be seen. We'll see.

October 6th to 12th:

No beluga, no walrus sighted yet at Itiviani No beluga, no walrus sighted yet at Tupirvikallak. No beluga, no walrus sighted yet at Akulivik. No beluga, no walrus sighted yet at Kangirsujuaq. No beluga, no walrus sighted yet at Kangirsuapik. The weather has been very bad all week, blowing snow. There is now a lot of snow. There have been no beluga seen to date, however, we remain optimistic. We sometimes think the beluga fail to pass through here because of the extensive hunting of them on their way, causing them to stay away from areas that have noise from motorboats.

October 20th to 26th:

No beluga seen anymore, no walrus sighted at Itiviani No beluga, no walrus sighted at Tupirvikallak. No beluga, no walrus sighted at Akulivik. No beluga, no walrus sighted at Kangirsujuaq. No beluga, no walrus sighted at Kangirsuapik. The weather has not improved, with lots of snowfall all week. The visibility has finally improved a bit, but there is still occasional flurries and some wind from the west. The weather has been marginal during this period, due to fall conditions.

October 27th to November 2nd:

Approximately 100 beluga sighted at Itiviani. No walrus. No beluga yet, no walrus sighted at Tupirvikallak. No beluga yet, no walrus sighted at Akulivik. No beluga, no walrus sighted at Kangirsujuaq. No beluga yet, no walrus sighted at Kangirsuapik. There were around 100 beluga whales seen at Itiviani this week, but none of the other camps have seen any. Likewise, there have been no walrus sightings. The weather lately has been quite nice. There

is snow everywhere on the land now, but it has not yet gotten really cold. There were finally some beluga sightings, but there was no hunting due to the hunters' efforts to abide by measures within the management plan, even though the desire was there. However, we never can tell what will happen in the future. We are not hunting for beluga at all.

November 3rd to 9th:

No beluga, no walrus sighted at Itiviani No beluga, no walrus sighted at Tupirvikallak. No beluga, no walrus sighted at Akulivik. No beluga, no walrus sighted at Kangirsujuaq. No beluga, no walrus sighted at Kangirsuapik. The weather has been very windy, couldn't see whales even if we tried. We couldn't even go looking for beluga this week, never mind walrus. The land is now wintry, but there is still no ice on the bays since it hasn't been very cold, and the winds have been blowing in all directions. Not good for beluga sightings all week.

November 10th to 16th:

60 beluga sighted at Itiviani; none shot. No walrus. No beluga, no walrus sighted at Tupirvikallak. No beluga, no walrus sighted at Akulivik. No beluga, no walrus sighted at Kangirsujuaq. No beluga, no walrus sighted at Kangirsuapik. There were a total of 60 beluga seen at Itiviani this week, but none of the other camps sighted any, however. The weather has been fair this week although it's been a little windy at times, mostly from the west. However, as concerns beluga, they are not passing this way in great numbers, even if they were sighted at Itiviani. They were not hunted then, because we are not hungry. If we were going hungry, we would not simply watch them, knowing what the result would be. The tidal area most in the weather is starting to turn white, but is doesn't seem to be near freeze-up yet. The cooperation shown over the summer is the best ever, and no complaints on the local FM radio. I have kept the community informed about the need to good practices concerning wildlife. This has been the easiest summer for me as the community agent, with regards to beluga management. There have been absolutely no bad feelings expressed this year, and it's been very nice. I thank the members of my community for their good cooperation this summer.

December 4th, 1997.

The five-year management plan for the years 1996-2000, is well known in our community, and I have not heard lately if there were any particular dissatisfactory feelings within the community. I have kept the community up to date on the measures in effect, and the community has complied with these regulations this summer.

However, among the beluga harvested, there were more females than males, but in effect this couldn't be helped. The hunters will not knowingly kill a female with young, unless in the case of famine. It is difficult to distinguish males from females unless the female is accompanied by a calf, but if there is a female with a calf, the hunters will not kill these whales, unless there is absolutely no alternative but to do so.

In our community the quota is sub-divided as follows: Itiviani - 6; Tupirvikallak - 6; Akulivik - 3 and Kangirsujuaq - 5. Thus the hunters from any of these camps only harvest what is allotted to them from the community quota. This is how we manage in Kangirsujuaq. Also this year there was no netting, because there was no chance to do so, the quota having already been used up in July. The subdivision of the quota to these campsites has proven to be the best management method.

I am generally satisfied with the weekly reporting system we use, and I adjust myself accordingly when any modification to these are made.

As far as working with the fishery guardians goes, I have not had any problems of a serious nature. Basically our relationship this summer had mostly to do with dealing with the weekly reports. There was a slight problem having to do with paperwork, but that was addressed satisfactorily after a brief meeting on the matter. I, as the community Agent, am responsible for making reports, and I don't wish for someone not from this community to interfere with this.

The fishery guardians are respected by those who respect the law, but one wonders if this is true in their home communities, if people pay them heed. I personally would like to see them given distinct uniforms and additional

powers. I am grateful for their assistance but they need to be reinforced. When I work with them, since they are here to help me, they prove very useful. So long as they don't allow themselves to become intimidated, they're on the right track. However, they need to maintain a good presence - and not be welcomed by just myself but by other as well. I did not feel welcome at times myself during the early days of this business of beluga management, when it was resented that there was no recompense for consenting to interviews. This is not such a problem anymore, nowadays.

I did send out a few samples to be tested, how many I can't say - however Makivik could comment on how many samples they received from Kangirsujuaq. The local Anguvigaapik Secretary did not execute this aspect of the plan very well, keeping all the sample kits for himself when he went from Kangirsujuaq to Itiviani. Several kits were used for other purposes and were consequently lost, so this did not help. The fact that the kits he was supposed to bring from Itiviani back to Kangirsujuaq, having been packed in something, were left on the beach and lost in the incoming tide was also a contributing factor. Makivik should be able to specify how many samples came from Kangirsujuaq.

The sample kits were probably set out and earmarked for distribution to the camps, but they were all taken in one bunch, and so we couldn't locate them. This was done inadvertently.

The subject of patrols by helicopter seems to have not disturbed the people from Kangirsujuaq - I've never heard anyone say that the flights are causing problems - although there are those who won't come right out and object, even if they grumble privately about it. The helicopter is a tangible show of seriousness, and I feel that its flights around here has its uses, and also it is good for us to meet on these occasions.

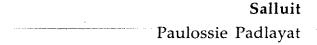
I keep the community well informed over the local FM radio about the current status of our quota, telling the public how many have been harvested, how many are left to harvest, about openings and closures of seasons, etc. However, even though the seasonal closing times serve a pertinent purpose,

these are irrelevant to the people of Kangirsujuaq, because the quota is always reached long before the closure of the hunting season for beluga.

These closing times are well known and understood, but it is those measures related to staying within quota limits that are really relevant and respected. If regulations related to quotas, or aimed at the conservation of a species are respected by all the communities this would be ideal, and there would be no dissatisfaction once we all became accustomed to them.

My recommendations are the same as usual, I think the fishery guardians should be given the powers of conservation officers, and not just given a meaningless badge - give them real duties and responsibilities.

Lastly, a new Mayor is in office, the one we used to have before, and this is the person I deal with the most concerning these matters. He is well versed in the agreements in effect regarding fishery management, and is in agreement with them generally. I have just spoken with our Mayor as he commences the duties of office, and want to mention that he has dealt with these issues before.



These are 1997 belugas and walruses harvested and sighted at the closed months but not all the sex are written because I can only put down whats given to me by hunters. I have enclosed everything I know on belugas and walruses so I want you to know this is a best I can do on this situation. I have consulted people through FM when beluga hunting was open on June 11 and I also posted them to northern store and Co-op and I also consulted people through FM when hunting season was closed on beginning of November. For more information you contact me anytime.

On June 6, 1997, man hunters announce through FM Station that a beluga whale hunting started. They announce through FM Radio station, how many beluga whale is to killed and how many that are already killed.

The people from Akulivik, had a limit of 18 belugas, every beluga that has been killed went to the community. In autumn, the caught beluga by a net and it was count by the limit.

And we announced how many walrus killed, through the FM Radio station.

Comments: We would like to keep in touch with every community in Nunavik regarding beluga, because it is better for the people in the community especially the hunters.

5 year beluga management plan. If the hunters have seen the whales and tell the community agent how many they have seen the community would make its weekly reports complete in five years. In our community the hunters ask more to understand from community agent. By the FM telling the hunters how many whales they had to get in year and how many males and females.

For weekly reports for whales and walrus is just fine to me.

If the community agent have more work with FG and talk with him what they had in there work it would be nice to the community agent. Never work with FG and never talk with him.

No samples were not collected because of no bag and cooler. For sample collecting we should have coolers and bag for hunters.

For community agent it would be better to make patrol with FG by helicopter.

Yes the mayors were elected on November 5 I still about now very much about him what he think all about this.

That other question I don't answer I just agree with them.

Puvirnituq Johnny Qinuajuak

Comments on the implementation and respect of the 1997 community management measures.

5 year Beluga Management plan

The community of Puvirnituq is well aware of the 5 year plan and has participated in the plan but it feels the five years plan is a little too long. Since the appointed directors (HFTA) usually have their annual meeting to make matters better within the 5 year management plan and could always at that time do a more respectable plan for the hunters every year.

Respect for the beluga management measures

The community respects the management measures but disagrees with the aspects inside the 5 year plan. Such as quotas given to communities the community of Puvirnituq feels the designated Quota 18 beluga is not enough for the whole community and been the reason for over harvesting for the larger communities.

Quotas

The community of Puvirnituq disagrees to the given Quota 18 beluga every year. The community feels the designated 18 beluga are not enough to cover the population. The community urges all Nunavik communities should get equal quotas and enough according to their populations.

Protection of females and calves

The Community favors the Protection of Females and Calves. But Inuit have been harvesting them in the past, they are a delicacy too. But we will still do our best to protect females and calves as always.

Recommendation

It is always best to sample the walrus for trichinosis and health welfare reasons. Collect beluga samples at higher fee rate and have proper sampling kits available.

Enforcement

No comments because there was no enforcement activity near the community and it is also unacceptable traditionally in Nunavik.

Communication

As of June 16, 1997 the variation orders were put up in the Northern Store, Co-Op Store, Inuulitsivik Hospital and Municipal Office and was also broadcasted through the FM Radio Station.

Regarding: 5 year beluga management plan

The outcome of previous summer and the coming summer of 97

Sub-Zone

Sampling beluga summer 1997

Protection of females and calves

All variation orders were posted and broadcasted through the radio as all other variation orders upon arrival, also with help from the local HFTA representative. On June 30, 1997 post broadcast was done. Regarding: Closure of the Nastapoka Estuary July 1, 1997 - July 31, 1997.

Recommendation

The community of Puvirntuq suggests that all the communities in Nunavik should get equal Quotas regarding beluga and also enough according to their population.

Netting

The community of Puvirnituq has no comment on netting. Nobody does any netting around or near the Community.

Code of Conduct (no wastage)

The community favors cleanliness in harvest areas. Since everybody hunts in mostly same areas. The harvest taken in the fiscal year 1997 was all brought back to the community of Puvirnituq.

Hunter coordination and split quota

The harvest is shared between the hunters that took part and Hunters Support Program also this way everybody in the community gets a share of the harvest.

Facilitate the collection of beluga & walrus statistics

The hunters should report their harvests to the community agents as before or increase the amount given for each sample thereby giving more interest to the hunters in the sampling program.

Fishery Guardian

The Community understands the roles of the fishery guardians. Unfortunately there was no fishery guardian working for the community this season. The only communication was through community agent, HFTA representative and municipal office in Puvirnituq.

Sampling

Samples of 5 walrus were sent to Makivik for trichinosis and health reasons. However there was no sampling beluga done this summer, also lack of sample kits and also the small reward given for sampling by DFO.

Reason: It seemed to the hunters that the \$30.00 fee for collecting sample is way too low and not worth the effort. Due to unpredictable weather during the hunt.

Here is a short report of the activities that took place this past season, summer 1997.

Our Quota was gone in one hunt. A memo (Report) is enclosed regarding the hunt, dated August 12, 1997. Annual Summary Sheet for Beluga and walrus are also enclosed.

I and the Mayor Johnny Epoo communicated with the people of Inukjuak about the management plan back in June 1997, we also talk about the opening and the closing dates. I also went on the FM. stations every week on Mondays after that to talk about who sighted whales and where, also as to how much was left in our quota.

Fishery Guardian worked only for half the summer. I went on one patrol trip with her only once north of Inukjuak, that went very well. Therefore, I can not give comments about working relations.

We were provided with eleven samples from hunters. I can't give you reasons why hunters did not provide us with samples.

I went on one helicopter patrol to Nastapoka River and Little Whale River but there was too much ice for hunters to be out there. At the same time we went to Umijaq to meet with the Mayor Noah Inukpuk and the community agent about the Management Plan.

Here are some suggestions for next season:

1) the community agent should call the shots as to when the patrols should take place when and where by canoe. They are the ones that know where and when hunters are out there. Not the people in the Kuujjuaq office. 2) Sample payment to hunters should be higher than it was this season. Sample containers should be provided to community agents. If there are any questions about the above call me at this number (819) 254-8614

The sexes of the month of August 1997 were not recorded, mainly due to the hunters were in a hurry because of the weather and samples were not taken due to the same. It is regrettable cause the next group of hunters tried to retrieve them, but the remains of the belugas were already devoured by the waters.

On the last day of October a group of hunters in one (1) canoe saw remains of one dead beluga on the western shore of Black Whale harbour. The death of that beluga was never determined, which could put the Kuujjuarapik quota to twelve (12) if it was wounded by any other hunters. In this case, no beluga(s) were ever sighted or wounded by any hunters approached by community agent.

On two occasions the community agent went on the FM radio 103.5. The first was when this 1997 program started, mainly to inform the population of the DFO's goals set for 1996 to 2000. And to set what the southeastern part of Hudson Bay, namely Inukjuak, Umiujaq and Kuujjuarapik agreed upon 1997's quotas. Of which Johnassie Ningiuk and respective CA's are fully aware of.

The walrus hunt of which I feel was with the blessing of the people of Sanikiluaq NT. went very well, but the captain and the crew had problems with their vehicle but the hunt went well, despite their mechanical problems.

Last, but not least, the only complaint I have, with no harm intended to any individual, is that the FG's did not inform the CA of Kuujjuarapik, that they were going to Kuujjuarapik previous of their arrival.

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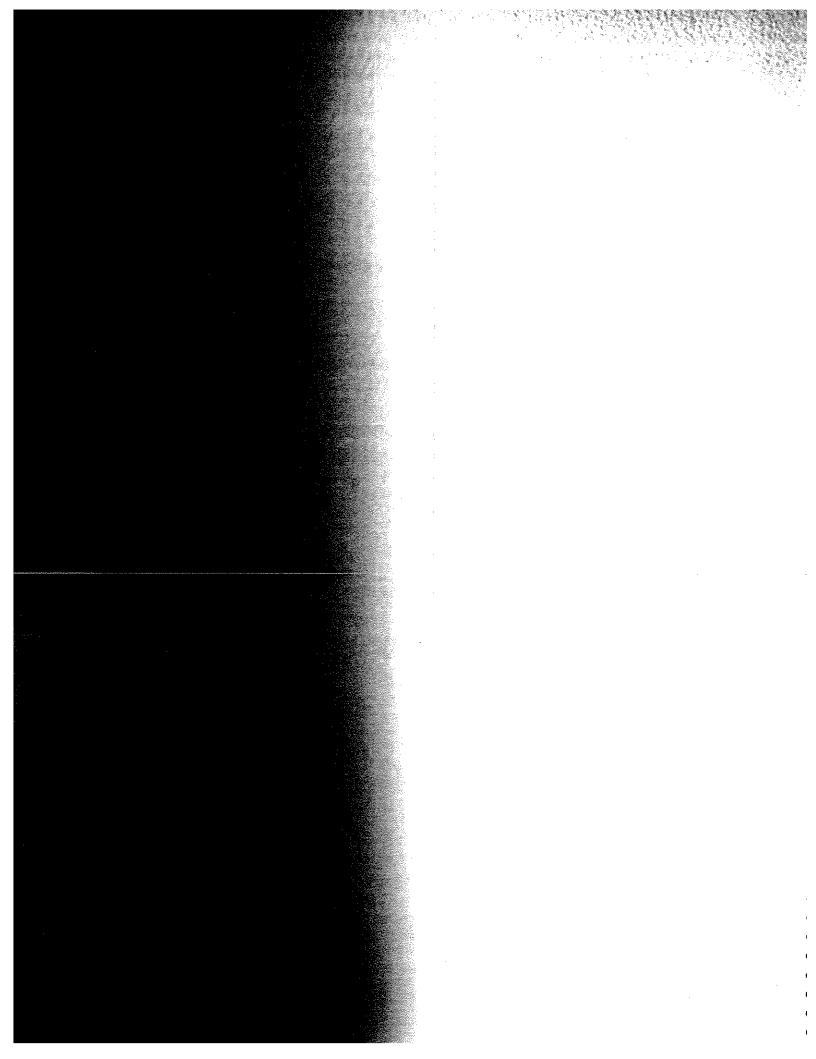
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CL'64 46LÅ' α 'C'Y'-56' 40A'Y-CPGC'Y')' 40A'G-457'Y'-5 765'CCC Cdby'CAG5-4Y'. 40AG'Y-5'C'T-4'' 404'G-F' C'64 α P'-56.

4ρ°J°η 31-Γ° 7°Π°Λ~ 7-J°, 1997

Υςυιως Δάξω (45ρςρ°°Γ)ς Δηασσ

Υςυιως Δάξω (45ρςρ°°Γ)ς ΑσσαιΓ

Υςυιως Δάξω (45ρςρ°°Γ)ς ΔσσαιΓ

Υςυιως Δάξω (45ρςρ°°Γ)ς 6°Γ°744Γ

Υςυιως Δάξω (45ρςρ°°Γ)ς 6°Γ°744Γ

ረ≺ቦ⊦ላ√ 8-፫_የ 14-፫_የ:

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 $^{\circ}$ $^{\circ}$

CL'64 ΔD 'EZLÁ' $\Delta \Delta \Delta$ 'F' CGUE''P)' $\Delta \Delta \Delta$ Z'P'E', $\Delta \Delta \Delta$ Z'P'E' $\Delta \Delta$ C'B'CE'Z'. $\Delta \Delta$ D''BF Δ C'B'CE'Z'.

ረ'ባ¹ለ_∿ 15-Г⁵ 21-⅃ՙ:

ረ ነበ ነ ላ 22 − Γ° 28 − J°:

ምረጋሀሪና $_{\Delta}$ ርንነግንና, $_{\Delta}$ $_{\Delta}$

የረጋሀልና ላልልና ኃትና ርժኑኮርኮ ነጥጋና ለፈላባዖተርቪቱ, ርժኑኮናላቦበር ነንላኮር የተሀጋላና ተረ ለኮተኮተርነት ነናነጋቱ, ቴት ተስት ፈሀርና ተመ ላው ሲኖና ተመ መተነበቱ ርዜት ፈላር ተረኮና ለኮተጋልት ፌት ኮዮላፐ, ላላሀልና ኃት ነናነጋቱ.

 γ'ՈՒΛ
 29-Γ°
 Þ°ÞΛ
 5-Ј':

 Ψ
 JLΔ'
 ΔΔά'
 Cd>PC
 ΔΛά
 Δλά

ϰÒ∧⊾ 6-Γ° 12-J':

 $^{\circ}$ $^{\circ}$

hoር ተርግላህነነገር ነት ለፈተላየተር ኮ, ለየተር ቴናር ተታጋ. hoን በላይ ርንነን የርይ ሁልና hoን በላይ ርንነን (hoን ርዕታውናር ነን የነር ለፈተላ ነር አል ተመመመው የተመቀመው የተመመው የተመቀመው የተመመመው የተመመመው የተመቀመው የተመቀመው የተመቀመው የተመቀመው የተመመመው የተመመ የተመቀመው የተመቀመው የተመቀመው የተመ

▶⁵ኃ∧_~ 20-Γ⁵ 26-⅃ʻ:

hoር hoር hoር hoር hoር hoር ho0, % ho0 h

ቅንስሊ 27- Γ° ውልትለሊ 2- J° :

100 Γ° ነት ነን ምርጋሀል ርዛታ የ ልበል ላፊ. ላልል ቴ ነጉጋ ነ የርጋሀል ውልናር ነጉጋ ነ ላልል ነ ርዛታ የርጋዛት ጋለ ነል ቱ ርዛታ የርጋዛት ነገር ውልናር ነጉጋ ነ ላልል ነ ርዛታ የርጋዛት ላል ተጠናቸው ነው ለተጠናቸው ለል ነ ርዛታ የርጋዛት ለመጠናቸው ለል ነ ርዛታ የርጋዛት ለመጠናቸው ለል ነ ርዛታ የርጋዛት አስነገር ነን ነገር ነው ነጉ ነገር ነው ነጉ ነገር ነው ነር ነው

100 Γ' $\frac{1}{1}$ σ $\frac{1}{1}$ 9 Γ' $\frac{1}{1}$ 5 $\frac{1}{1}$ 6 $\frac{1}{1}$ 7 $\frac{1}{1}$

-Δ6^LΛ₁ 3-Γ^b 9-J^c:

 φΕΔΙΔ΄
 CΥΥΘΟΚΗΟ
 CΥΥΘΟΚΗΟ
 CΗΥΡΟΚΑΤΟ
 CHYPOLO
 CHY

 $^{\circ}$ COLY, $^{\circ}$

በረ ላሌ 4, 1997:

C'CLD' d'SJD' 1996- Γ^b 2000- J^c $\Delta C^b U U'$ $\Delta C^c U U'$ $\Delta C^c U U'$ $\Delta C^c U$

ΔΠ&Δ° - 6

Δd-&° - 3 **b** ነገኝ ታረላ - 5

 $C\Delta L\Delta^{L}C$ $\Delta^{V}C$ $\Delta^{V}C$

 $\Delta^L L_{S}^{\circ} C^{\circ} C^{\circ} C^{\circ} A^{\circ} A^{\circ} C^{\circ} A^{\circ} A^{\circ} C^{\circ} A^{\circ} A^$

 Δ 656 σ 086 σ 0 $<<< <math>\wedge$ 004, \wedge 002 \wedge 107 \wedge 100 \wedge 100

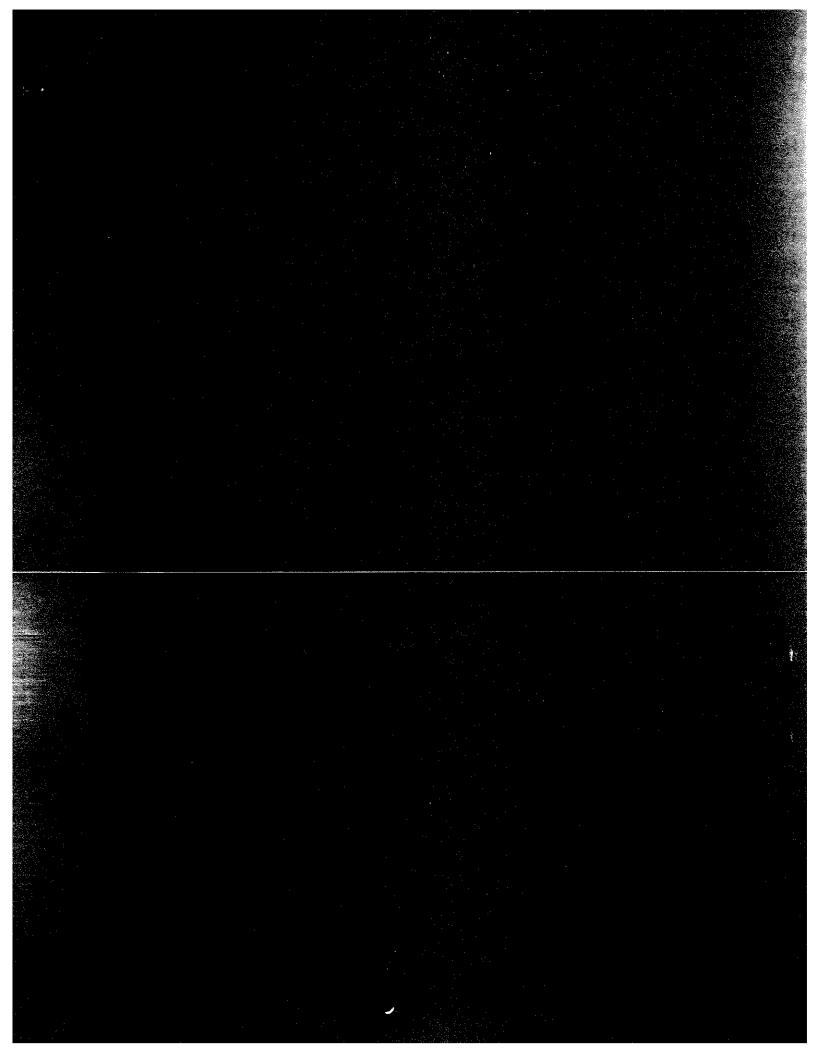
 Δ 6 - α 6 -

ቴኦኦኒናኒታሪ፣ ፭፡۴/፡‹Lcኦረኒኒኦላ፡ $^{\circ}$ $^{\circ}$ ራ፡፡
ላኦ፡፡ $^{\circ}$ ራ፡፡
ላኦ፡፡ $^{\circ}$ ራ፡፡
ላኦ፡፡ $^{\circ}$ ራ፡፡
ላኦ፡፡ $^{\circ}$ ራ፡፡ $^{\circ}$

 6° Pi-of 10° Cor $10^$

 $\Delta = C^{\dagger} - C^{\dagger} + C^{\dagger} +$

 $CL^{6}dQ$ $D^{6}dQ$ $C^{6}dQ$ $C^{6}dQ$ $C^{6}dQ$ $C^{6}dQ$ $D^{6}dQ$ $D^$



\`ωΔ` <▷ৣ৸ <`ċ;`

49CV.

454 P28

ひもとひせせ コトロのもは ちらとら やとっしってひとがし あらとっ とと やとっしってひりゅんかっといして

ひゃっていっていたい、 やししいつかしりせんが あってか ぐってっ やんむらんいっしんにしゅい

 $\mathsf{DGCD4LL4JC} \quad \mathsf{GCAB} \quad \mathsf{ADCGLVCC}, \quad \mathsf{DGCDC} \quad \mathsf{DSDNUNJC}.$

 $\Delta^{\dagger} \nabla^{\dagger} \nabla^{$

5-0° PPD')) "PCJU'0" $\Delta DC'POP'$ $COLUNN. <math>\Delta NaP'$ "PCJU'PC'CC D'' A'' A

בפריחה, סשפאיחי שפרסי בפרסי פינישיי.

 ∇G_{σ} , $\sigma_{\Gamma} \nabla G_{\sigma}$

ቴኦትኒናናኒርር አላንጥጋንሀ >ናኒቴንጥLС σ ናርሥበታሀበናኒቴናበና $_{-}$. ቴኦትኒናናኒ σ የ $_{-}$ ወናታ σ ናር σ ናር የበታሀበቴሊ ላቴናጋሪ >ናኒቴና $_{-}$ ር Δ ናለላላላ የ σ የ ላህ σ ታናስና ላጋናናኒንዮና σ የ.

44 /3-10 0741000044 28-10 5-1 Prad 6074-9000 626 CL6do 6074-60 07-10 626

 $\Delta \Lambda$ 'Find Δ 'Find Δ

>A'0-D%

ት ም **ወ**ላላ

 $5-\omega^c$ $\mathsf{DPD}\omega^c$ $\mathsf{DC}^*\mathsf{V}\mathcal{A}^*$ $\mathsf{PCJ}\mathsf{V}\Delta^c$ $\mathsf{DPD}\omega^c$ $\mathsf{DC}^*\mathsf{DP}\omega^c$ $\mathsf{DC}^*\mathsf{V}\mathcal{A}^*$ $\mathsf{CCDL}\mathcal{A}^*$ $\mathsf{DPD}\omega^c$ $\mathsf{DC}^*\mathsf{V}\mathcal{A}^*$ $\mathsf{CCDL}\mathcal{A}^*$ $\mathsf{DC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{V}\mathcal{A}^*$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{CC}^*\mathsf{CC}^*\mathsf{CD}\omega^c$ $\mathsf{DC}^*\mathsf{C$

 Λ'' Λ''

ውደር >%'סטר סיף ירישיורט ף የירישיורט 18-סי שפרט איף שליטרני Δ יף איף איף שפרט בפרט לישטי שפרט בפרט בישטי שפרט סיף שפרט בפרט 18-סי סיף שפרט בפרט בישטי שפרט בישטי שפרט בישטי שפרט איף בישטי שפרט בישטי שפרט בישטי בישטי שפרט בישטי בישטי

JUC4RDJ⊃∇σg,

LC'CDU'LG"

 $P^bP'^cV^b'^aC^s$ LccCP6 $\Delta\sigma^b$ Λ_a 7 d^c 9 b^c 9 d^c 9 $d^$

つ∖⊳L∩۲۲σ%

ういてくなりしつひゅん

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Δ 65° σ 48° σ 6 σ 72

 Δ° Δ°

 6 DPLSSLACS C'CLOB 6 6 DPLSSLACS C'CLOB 6 DPLSSLACS 6 DPD-doc.

 Λ^{c} ላበኄ: ላህ Φ^{c} ባ Φ^{c} Φ^{c} \$30.00 ላቦ Φ ቦ ቴኦኦኒናኒታ Φ^{c} Φ^{c}

Co-4'c \(\Delta > \)

۵۲۵۱۰۵۱۵٬۵۲۲ مدر۱۵۲۵۲ مدرکن ۱۵۲۵۲ ۱۵۲۵ که ۱۵۲۵ اوساماد ۱۵۲ اوساماد اوساماد ۱۵۲ اوساماد ۱۵۲ اوساماد اوساماد اوساماد اوساماد ۱۵۲ اوساماد اوساما

 $\Delta^6 - \sigma d \delta^6 - \langle \langle \langle \rangle \rangle \rangle = \langle \langle \rangle \rangle - \langle \langle$

 $4c^2 = 4c^3 + 5c^4 +$

 Δ /L Γ 5'\/ Ld Δ Δ '\(\hat{A}\) Δ \/\(\text{D}\) Δ '\(\text{C}':

ላለ°ፆስ%ን%'< CL°dላ Γ°፟ኒው° ▷%፫Lል▷፫∿ ▷ኖራ የዖ°ረበ୮ (819) 254-8614

ፅ^ፍፈ**ሳ**ፍለት

J44 2,5

 $\Delta^{\circ}\Delta^{\circ}$ Δ° Δ°

PUTCOPTION TRATES DESCRIPTION DESCRIPTION OF A SHORT PLANTS PUTCH PLANTS PLANT