BAFFIN FISHERIES | Société Makivik / Makivik Corporation | QIKIQTAALUK CORPORATION

May 5, 2017

Daniel Shewchuk
A/Chairperson
Nunavut Wildlife Management Board
P.O. Box 1379
Iqaluit, NU
X0A 0H0

Josepi Padlayat
Chairperson
Nunavik Marine Region Wildlife Board
P.O. Box 433
Inukjuak, QC
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Dear Messrs. Shewchuk and Padlayat:

Re: NWMB-NMRWB joint written public hearing to consider the 2017/18 and 2018/19 total allowable catch (TAC) levels for Northern and Striped shrimp

The following letter and attachments provide the joint written submission from the quota holders for Northern and Striped shrimp from Nunavut and Nunavik. These quota holders are limiting their submission to the issue of total allowable catch levels for Northern and Striped shrimp in the Eastern and Western Assessment Zones. The issue of sharing arrangements for shrimp between management units in the Nunavut Settlement Area and the Nunavik Marine Region is a matter for consultation between the relevant land claims organizations; although the quota holders do feel that the current arrangements on sharing and access are reasonable.

In its Proposal for Decision to the Boards, Fisheries and Oceans Canada (DFO) has recommended a rollover of existing TAC levels in the Eastern Assessment Zone (EAZ), while outlining the following options for TAC levels in the Western Assessment Zone (WAZ):

> Option 1: Maintain both TACs at current levels, resulting in an ER of 15.9% for borealis and 19.3% for montagui. Should precipitous declines continue next year, reductions could then be considered.
>
> Option 2: Recommended: Reduce ERs to 15%, which would result in a TAC of 1,967t for borealis and 4,758t for montagui. Should precipitous declines reoccur next year, additional reductions could then be considered.

The quota holders, as well as other industry members and stakeholders in the northern fishery, were both surprised and concerned by DFO's preferred option on TAC levels for the WAZ. This recommendation is not consistent with the messages provided by DFO Science at the Shrimp assessment meetings (ZRP) in mid-February, or the science and risk factors outlined at this meeting and the resultant CSAS document, or at the subsequent Northern Shrimp Advisory Committee (NSAC) meeting in March. As a result, industry members have followed up with the primary shrimp research scientists at DFO Central and Arctic who confirmed that discussions with industry did not discuss TAC reductions and that they were not aware of the recommendations that had been provided to the Boards in this respect.

As a result, the quota holders from Nunavut and Nunavik are respectfully requesting that the Boards recommend Option 1 for the WAZ, as follows: Maintain both TACs at current levels, resulting in an ER of 15.9% for borealis and 19.3% for montagui. Should precipitous declines continue next year, reductions could then be considered. This would result in a rollover of TACs for 2017 for both the EAZ and WAZ, consistent with DFO Science and the discussions at the ZRP. Industry agrees that if declines continue in the WAZ through 2017, a further examination would be required which could lead to reductions.

The attached CSAS document and highlighted sections outlines the several sources of uncertainty in the 2016 survey results that support a rollover of TACs for this coming year. These results were identified as being uncertain due to movement in the shrimp biomass which is seen to naturally occur between the WAZ and EAZ due to factors that include high tidal flows in the area and a tendency of the shrimp to follow temperature gradients which did show a year over year change in the WAZ. Under Sources of Uncertainty, the CSAS report states the following:

> Hudson Strait is a highly dynamic system with strong tidal currents and mixing. Shrimp could be transported great distances in a relatively short period of time in and out of the WAZ, EAZ, and SFA 4 to the south. This is the most likely cause in the wide fluctuations in biomass seen in these areas. Assessing only a subset of a larger population is a source of uncertainty in determining the true status of a resource.
>
> Experimental work done by DFO in 2007 in the Resolution Island area suggests that survey results may be affected by the tidal cycle. Surveys from 2006–2008 were all conducted at the height of the spring tide, while the 2009–2014 surveys were conducted at neap tides to minimize the tidal effect. Regardless, the survey is conducted over a 24-hour period so strong tidal currents would still be present and may result in either an over- or underestimate of biomass.

On the issue of temperature, the document states:

> In 2016, the near-bottom average water temperature (-0.4 °C) in the WAZ was the lowest in the survey time series.
>
> Large confidence intervals most likely resulted from the patchy distribution of the resource in the area. The patchiness in resource distribution may have been influenced by the exceptionally cold water in the area.

To address these areas of uncertainty, DFO C&A recently announced at a Science meeting in Ottawa sponsored by the Government of Nunavut that it would be undertaking research in both the EAZ and WAZ in 2017 to evaluate changes in shrimp distribution within a season in relation to physical and biological oceanographic conditions.

In addition, the scientists clearly outlined that it will take at least another two years of survey results before a trend can be determined for this shrimp area. The CSAS document states:

> It will require at least an additional two years of data in this time series to assess the status of the whole population for the purpose of the PA framework.

Due to the reasons outlined above, a consensus was reached at the ZRP and NSAC meetings that a rollover of TACs was reasonable for 2017. The fact that DFO will be undertaking research in 2017 to address the aforementioned areas of uncertainly would also support maintaining the status quo until these results are known.

Based on the inconsistency between the recommendation provided by DFO Ecosystems and Fisheries Management and DFO Science, quota holders are requesting that the Boards move forward with a recommendation of a rollover in TACs for the EAZ and WAZ for 2017, with a further review based on the results of the 2017 scientific survey.

Thank you in advance for your consideration of this request.

Regards,

_____	_____	_____
Jacopie Maniapik	Olayuk Akesuk	Jobie Tukkiapik
President and Chairperson	Chairperson	President
Baffin Fisheries	Qikiqtaaluk Corporation	Makivik Corporation

Attacment

cc: Honourable Dominic LeBlanc, Minister of Fisheries and Oceans, Government of Canada
Honourable Joe Savikataaq, Minister of Environment, Government of Nunavut
Ms. Aluki Kotierk, President, Nunavut Tunngavik Incorporated
Mr. James Qillaq, Chairperson, Qikiqtaaluk Wildlife Board
Honourable Darryl Shiwak, Minister of Lands and Natural Resources, Nunatsiavut Government
Mr. John Mercer, Chairperson, Torngat Joint Fisheries Board
Mr. Paulusi Novalinga, President, Regional Nunavimmi Umajulirjiit Katujiqatigininga
Mr. Lootie Toomasie, Chairperson, Arctic Fishery Alliance
Mr. Joopa Sowdlooapik, Chairperson, Cumberland Sound Fisheries/Pangnirtung Fisheries

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Science Advisory Report 2017/010
Highlighted Sections

SUMMARY (p. 2)

• In the Western Assessment Zone (WAZ), the 2014 survey began a new time series, not directly comparable with previous surveys because no trawl standardization between the DFO/Cosmos and Northern Shrimp Research Foundation (NSRF)-DFO/Campelen surveys has taken place. Because the time series is so short, trends cannot be inferred.

• In the WAZ, the resource is currently not assessed with an Integrated Fisheries Management Plan (IFMP) Precautionary Approach (PA) framework. At least two additional surveys are needed prior to establishing the PA framework.

• In 2016, the near-bottom average water temperature (-0.4 °C) in the WAZ was the lowest in the survey time series.

ASSESSMENT (p. 4)

The WAZ (Figure 2) was surveyed biennially by DFO from 2007–2013. Because the WAZ was surveyed by a different ship, gear and time of year, it could not be combined with the survey results of the EAZ. This prevented a comprehensive evaluation of the distributions of shrimp and a more practical look at broader stock implications. In 2014, the NSRF was commissioned to take over the survey of the WAZ so that it is sampled in conjunction with the EAZ as a means to address these issues. This action started a new time series for the WAZ. In 2016, the WAZ was surveyed for the third year in the new time series. It will require at least an additional two years of data in this time series to assess the status of the whole population for the purpose of the PA framework.

Exploitation (p. 19)

The reported exploitation rate index for 2016/17 was 19.1% with 99% of the TAC taken (Figure 16a). Based on the 2016/17 TAC of 6,138 t, the potential exploitation rate index was 19.3% (Figure 16b). The decrease in biomass in 2016 combined with the TAC from 2015/16 maintained in 2016/17 resulted in a large increase in the exploitation rate. Large confidence intervals most likely resulted from the patchy distribution of the resource in the area. The patchiness in resource distribution may have been influenced by the exceptionally cold water in the area.

Current Outlook (p. 20)

The current outlook for the resource remains unknown. In the WAZ, the resource is currently not assessed under a PA framework. At least two additional surveys are needed prior to establishing the PA framework for *P. montagui* in this area.

Sources of Uncertainty (p.20)

Hudson Strait is a highly dynamic system with strong tidal currents and mixing. Shrimp could be transported great distances in a relatively short period of time in and out of the WAZ, EAZ, and SFA 4 to the south. This is the most likely cause in the wide fluctuations in biomass seen in these areas. Assessing only a subset of a larger population is a source of uncertainty in determining the true status of a resource.

Experimental work done by DFO in 2007 in the Resolution Island area suggests that survey results may be affected by the tidal cycle. Surveys from 2006–2008 were all conducted at the height of the spring tide, while the 2009–2014 surveys were conducted at neap tides to minimize the tidal effect. Regardless, the survey is conducted over a 24-hour period so strong

tidal currents would still be present and may result in either an over- or underestimate of biomass.
The survey in the WAZ represents a new data series beginning in 2014 and is now an annual survey. The WAZ is now being surveyed with the same ship and trawl, conducted at the same time of year as the survey of the EAZ thus removing issues identified previously about comparing populations in the two assessment zones.

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ᒪᐃ 5, 2017

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ᑐᕌᖅᑐᖅ ᒥᔅᑕ ᓯᐅᑦᓵᒃ ᐊᒻᒪ ᐸᑦᓚᔫᑦ:

ᐱᔾᔪᑎᖓ: NWMB-NMRWB ᑲᑐᑎᓪᓗᑎ ᑎᑎᕋᖅᓯᒪᔪᑎᒍᑦ ᐃᓄᓐᓂᑦ ᑐᓴᕐᕕᖕᖏᓐᓂᖅ ᐃᓱᒪᒋᔭᐅᓗᑎ 2017/18 ᐊᒻᒪ 2018/19 ᑲᑎᑦᑐᒋᑦ ᑭᖑᐸᑦᑕᐅᒍᓐᓇᖅᑐᑦ (TAC) ᖁᕝᕙᓯᓐᓂᖕᒋᑦ ᐅᑭᐅᑕᖅᑐᒥ ᑭᖑᐸᖕᒋᓐᓄᑦ

ᐅᓇ ᑎᑎᖅᑲᐅᔪᖅ ᐊᒻᒪ ᐱᖃᓯᐅᑎᓯᒪᔪᑦ ᑎᑎᕋᖅᓯᒪᔪᑎᒍᑦ ᑐᓂᔭᐅᔪᑦ ᑰᑕᓂᑦ ᑎᒍᒥᐊᖅᑎᓂᑦ ᐅᑭᐅᑕᖅᑐᒥ ᑭᖑᐸᖕᒋᓐᓄᑦ ᓄᓇᕗᒻᒥ ᐊᒻᒪ ᓄᓇᕕᒃᒥ. ᑖᒃᑯᐊ ᑰᑕᓂ ᑎᒍᒥᐊᖅᑏᑦ ᑭᓪᓕᖅᑲᑎᑕᖕᒋᑦ ᑐᓂᔭᖕᒋᑦ ᐱᔾᔪᑎᖅᑲᖅᑐᓂᑦ ᑲᑎᑦᑐᒋᑦ ᑭᖑᐸᑦᑕᐅᔪᓐᓇᖅᑐᓂᑦ ᑲᓇᓐᓇᖓᓂ ᐊᒻᒪ ᐱᖓᓐᓇᖓᓂ ᖃᐅᔨᓴᖅᑕᐅᔪᓂᑦ ᑭᓪᓕᖏᓐᓂᑦ. ᐱᔾᔪᑎᒋᔭᐅᔪᖅ ᐋᖅᑭᓯᒪᕐᑲᑎᒌᓐᓂᕐᒍᑦ ᑯᖑᐸᓄᑦ ᐊᐅᓚᑦᑎᕐᑲᑎᒌᑦᑐᓂᑦ ᓄᓇᕗᒻᒥ ᐊᒻᒪ ᓄᓇᕕᒃ ᐃᒪᕐᒋᓐᓂ ᐅᕐᑲᑎᒌᓐᓂᐅᔭᕆᐊᕐᑲᖅᑐᑦ ᐊᑦᑐᓂᓕᓐᓄᑦ ᓄᓇᑖᕈᑎᓕᓐᓄᑦ ᑲᑐᔾᔨᕐᑲᑎᒌᓄᑦ; ᑰᑕᕐᑲᖅᑎᐅᔪᑦ ᐃᑉᐱᒍᓱᒃᑲᓗᐊᖅᑐᑎ ᒫᓇᐅᔪᒥᑦ ᐋᖅᑭᔅᓯᓯᒪᕐᑲᑎᒌᓐᓂᖕᒋᑦ ᐊᒻᒪ ᐱᔭᕐᕆᐅᓂᖕᒋᓐᓄᑦ ᓈᒻᒪᑦᑐᑦ.

ᐃᓱᒪᓕᐅᕐᑯᔾᔭᓂᖕᒋᓐᓄᑦ ᑲᑎᒪᔨᓄᑦ, ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᑲᓇᑕᒥ (DFO) ᐊᑐᓕᕐᑯᔩᓯᒪᔪᑦ ᐊᕐᕌᒍᓘᖅᑕᐅᓗᑎ ᒫᓇᐅᔪᒥᑦ TAC ᖁᕝᕙᓯᓐᓂᖕᒋᑦ ᑲᓇᓐᓇᖓᓂ ᖃᐅᔨᓴᖅᑕᐅᔪᒥᑦ ᑭᓪᓕᖓᓂ (EAZ), ᓇᓗᓇᐃᔭᐃᓪᓗᑎ ᐅᑯᓂᖓ ᓇᓖᕌᕋᓴᓂᑦ TAC ᖁᕝᕙᓯᓐᓂᖕᒋᓐᓄᑦ ᐱᖓᓐᓇᓄᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᒥᑦ ᑭᓪᓕᖓᓂ (WAZ):

ᓇᓖᕌᕋᓴᖅ 1: ᐱᓯᒪᐃᓐᓇᕐᓗᒋᑦ ᑕᒪᒃᑭ ᒫᓇᐅᔪᒥᑦ TAC ᖁᕝᕙᓯᓐᓂᖕᒋᑦ, ᓴᖅᑮᓪᓗᑎ ER 15.9% borealis−ᓄᑦ ᐊᒻᒪ 19.3% montagui. ᖃᑦᑎᓐᓇᕈᑳᓪᓚᓐᓂᖕᒋᑦ ᑲᔪᓯᑉᐸᑕ ᐊᕐᕌᒍᒧᑦ, ᐃᓱᒪᒋᔭᐅᔭᓐᓇᖅᑐᖅ ᖃᑦᑎᓐᓇᕈᓇᐊᖅᑕᐅᓗᑎ.
ᓇᓖᕌᕋᓴᖅ 2: ᐊᑐᓕᕐᑯᔭᐅᔪᖅ: ᐊᑦᑎᓪᓕᒋᐊᕐᓗᒋ ER 15%, TAC−ᒋᒐᔭᓂᖅᑕᖕᒋᑦ 1,967t borealis ᐊᒻᒪ 4,758t montagui. ᖃᑦᑎᓐᓇᕈᑳᓪᓚᓐᓂᖕᒋᑦ ᑲᔪᓯᑉᐸᑕ ᐊᕐᕌᒍᒧᑦ, ᐃᓱᒪᒋᔭᐅᔭᓐᓇᖅᑐᑦ ᖃᑦᑎᓐᓇᕈᓇᐊᖅᑕᐅᓗᑎ.

ᑰᑕᓂᑦ ᑎᒍᒥᐊᖅᑎᐅᔪᑦ, ᐊᒻᒪᓗ ᐃᖅᑲᓗᓕᕆᖅᑕᐅᕙᒻᒥᔪᑦ ᐊᒻᒪ ᑎᒍᒥᐊᖅᑎᐅᖅᑕᐅᔪᑦ ᐅᑭᐅᑕᖅᑐᒥ ᐃᖅᑲᓗᓕᕆᓂᕐᒥᑦ, ᖁᐊᖅᓵᒐᓚᓚᐅᖅᑐᑦ ᐃᓱᒫᓗᑦᑐᑎᓪᓗ ᐃᒪᕐᒥᐅᑕᓕᕆᔩᒃᖁᑦ ᐊᑐᖅᑕᐅᖕᒎᖁᔭᖕᒐᓂ ᓇᓖᕌᕋᓴᒥᑦ TAC ᖁᕝᕙᓯᓐᓂᖕᒋᓐᓄᑦ WAZ−ᒧᑦ. ᑖᓐᓇ ᐊᑐᓕᕐᑯᔭᐅᔪᖅ ᒪᓕᓐᓂᖅᑲᖕᒋᑦᑐᖅ ᑐᓴᕋᓴᖁᑎᖕᒋᓐᓂᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᔩᒃᑯᑦ ᖃᐅᔨᓴᖅᑎᖕᒋᓐᓂᑦ ᑯᖑᐸᓂᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ ᑲᑎᒪᓂᐅᔪᓂᑦ (ZRP) ᕿᑎᐊᓂ ᕕᕝᕗᐊᕆ, ᖃᐅᔨᓴᖅᑎᓄᓪᓘᓐᓃᑦ ᐊᒻᒪ ᐊᑦᑕᓇᕈᑎᐅᔪᑦ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᔪᑦ ᑖᕝᕙᓂ ᑲᑎᒪᓂᐅᔪᒥ ᐊᒻᒪ ᖃᓄᐃᓐᓂᕆᔭᖕᒋᑦ CSAS ᑎᑎᕋᖅᓯᒪᔪᑦ, ᐅᕝᕙᓘᓐᓃᑦ ᐅᑭᐅᑕᖅᑐᒥ ᑭᖑᐸᓂ ᐅᖃᐅᔾᔨᒋᐊᖅᑏᑦ ᑲᑎᒪᔨᕋᓛᖕᒋᑦ ᑲᑎᒪᓂᕆᓚᐅᖅᑕᖓᓂᑦ (NSAC) ᒦᑦᓯᒥ. ᑕᐃᒪᐃᓐᓂᖓᓄᑦ, ᐃᖅᑲᓗᓕᕆᖅᑕᐅᕙᑦᑐᑦ ᖃᐅᔨᒋᐊᖅᓯᒪᔪᑦ ᑯᖑᐸᓂᑦ ᖃᐅᔨᓴᖅᑎᐅᑉᒋᐊᕐᖓᓚᐅᖅᑐᓂᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᔩᒃᑯᓐᓄᑦ ᕿᑎᐊᓄᑦ ᐅᑭᐅᑕᖅᑐᒧᓪᓗ ᓇᓗᓇᐃᖅᓯᓚᐅᖅᑐᑦ ᐃᖅᑲᓗᓕᕆᖅᑕᐅᕙᑦᑐᓂᑦ ᐅᖃᖅᑎᖅᑲᖅᓯᒪᓂᖕᒋᑦ ᐅᖃᐅᓯᖃᖅᓯᒪᖕᒋᑦᑐᑦ TAC ᐊᑦᑎᓪᓕᒋᐊᖅᑕᐅᓂᖕᒋᑦ ᐊᒻᒪ ᖃᐅᔨᒪᓚᐅᖕᒋᑦᑐᑦ ᐊᑐᓕᕐᑯᔭᐅᔪᓂᑦ ᑐᓂᔭᐅᓚᐅᖅᑐᓂᑦ ᑲᑎᒪᔨᓄᑦ ᑖᔅᓯᒥᖓ ᐱᔾᔪᑎᖅᑐᒥᑦ.

ᑕᐃᒪᐃᓐᓂᖓᓄᑦ, ᑰᑕᓂᑦ ᑎᑐᒥᐊᖅᑎᐅᔪᑦ ᓄᓇᕗᒻᒥ ᐊᒻᒪ ᓄᓇᕕᒃᒥ ᑐᔅᓯᕋᖅᑐᑦ ᑲᑎᒪᔾᑦ ᐊᑐᓕᕐᑯᔾᔪᑎ ᓇᓖᕋᕋᖕᒥ 1 WAZ–ᒧᑦ, ᐃᒪᐃᓕᖓᔪᑎ: ᐱᓯAs a result, ᐱᓯᒪᐃᓐᓇᕐᔪᒋᑦ ᑕᒪᒃᑭ ᒫᓐᓇᐅᔪᒥᑦ TAC ᖁᙱᓯᓐᓂᖏᑦ, ᓴᖅᑮᓪᔪᑎ ER 15.9% borealis–ᓄᑦ ᐊᒻᒪ 19.3% montagui. ᖃᑦᑏᓐᓇᕈᑳᓪᓚᓐᓂᖏᑦ ᑲᔪᓯᑉᐸᑕ ᐊᕐᕿᑐᒧᑦ, ᐃᓱᒪᒋᔮᐅᔪᓐᓇᖅᑐᖅ ᖃᑦᑏᓐᓇᕈᓇᐊᖅᑕᐅᔪᑎ. ᓴᖅᑮᒐᔭᖅᑐᖅ ᐊᕐᕿᑐᒨᖅᑐᓂᑦ TAC–ᓂᑦ ᑕᒪᒃᑭᓐᓄᑦ EAZ ᐊᒻᒪ WAZ, ᒪᓕᓐᓂᕐᑲᖅᑐᖅ ᐃᒪᕐᒥᐅᑕᓕᓇᔾᒃᑯᑦ ᖃᐅᔨᓴᖅᑎᖏᓐᓂᑦ ᐊᒻᒪ ᐅᕐᑲᐅᓯᕐᑲᑦᑕᖅᓯᒪᔪᓂᑦ ZRP. ᐱᓕᓇᓂᕐᑲᖅᑐᑦ ᐊᖏᖅᑐᑦ ᖃᑦᑏᓐᓇᕈᓇᐊᖅᐸᓪᓕᐊᖏᓐᓇᕈᑎ WAZ 2017–ᒥᑦ, ᖃᐅᔨᓴᖅᑕᐅᑲᓐᓂᓇᐊᕐᑲᕋᔭᖅᑐᑦ ᑭᓱᓄᑦ ᐱᔾᔪᑎᕐᑲᖅᑐᑎ ᖃᑦᑏᓐᓇᕈᖅᐸᓪᓕᐊᓂᖏᓐᓄᑦ.

ᐱᕐᑲᓯᐅᑎᓯᒪᔪᖅ CSAS ᑎᑎᕋᖅᓯᒪᔪᑦ ᐊᒻᒪ ᓇᓄᓇᐃᖅᑕᐅᓯᒪᔪᑦ ᐊᒥᓱᓚᐅᔪᑦ ᓇᓗᔾᔪᑎᕐᑲᖅᑐᑦ 2016–ᒥ ᖃᐅᔨᓴᕐᓂᐅᔪᒥᑦ ᐃᑲᔪᖅᑐᐃᔪᑦ ᐊᕐᕿᑐᒨᖅᓯᓂᕐᒧᑦ TAC–ᓂᑦ ᐊᕐᕿᒨᓂᐅᓴᔪᒧᑦ. ᑖᒃᑯᐊ ᓇᓄᓇᐃᖅᑕᐅᓚᐅᖅᑐᑦ ᓇᓴᕈᑎᐅᓪᔪᑎ ᓇᒧᖓᕐᑲᑦᑕᕐᓂᖏᓐᓄᑦ ᑭᖑᐸᐃᑦ ᐊᒥᓲᓂᖏᑦ ᐃᒻᒥᓂᒃ ᓴᖅᑭᕐᑲᑦᑕᖅᑐᕆᔭᐅᔪᖅ WAZ ᐊᒻᒪ EAZ ᐱᔾᔪᑎᕆᓪᔪᕆᑦ ᐱᕐᑲᓯᐅᔾᔨᔪᓂᑦ ᐅᓕᓐᓂᖏᓐᓄᑦ ᐊᒻᒪ ᑯᖑᐸᐃᑦ ᐃᒪᐅᑉ ᐆᓇᕐᓂᖓᓂ ᐊᑐᕐᑲᑦᑕᕐᓂᖏᓐᓄᑦ

ᐊᔾᔨᓴᐃᓐᓇᖓᓂ ᑕᑯᔅᓴᐅᑎᑦᑎᓚᐅᖅᑐᖅ ᐊᕐᕌᒍᒥᑦ ᐊᕐᕌᒍᒧᑦᐊᓯᔾᔨᖅᑐᓂᑦ WAZ. ᓇᓄᓇᕈᑎᒋᔭᖏᑦ ᐱᔾᔪᑎᒋᓪᓗᒋᑦ, CSAS ᐅᓂᒃᑳᖏᑦ ᐅᖃᖅᓯᒪᔪᑦ ᐃᒪᐃᓕᖓᔪᓂᑦ:

ᕿᑭᖅᑖᓘᑉ ᐃᑭᕋᓴᖓ ᐊᒥᓱᓂᑦ ᐊᔾᔨᒌᖏᑦᑐᓂᑦ ᐆᒪᔪᖃᖅᑐᖅ ᓴᖏᔫᑎᓂᑦ ᐅᓚᓐᓂᖓᓄᑦ ᐃᖏᕋᓂᐅᔪᓂᑦ ᐊᒻᒪ ᑲᑎᖅᓱᖅᑐᑎ. ᑯᖑᑉᐸᐃᑦ ᐅᖓᓯᑦᑐᒨᖅᑎᑕᐅᔪᓐᓇᖅᑐᑦ ᕿᓚᒥᐅᔪᒃᑯᑦ ᐊᒻᒪ WAZ–ᒦᒍᓐᓃᕐᓗᑎ WAZ, EAZ, ᐊᒻᒪ SFA 4 ᓂᒋᖓᓄᑦ. ᑕᒪᓐᓇ ᐱᔾᔪᑕᐅᖅᑰᖅᑐᖅ ᐊᔾᔨᒌᖏᑦᑐᓂᑦ ᐊᓯᔾᔨᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐊᒥᓲᓂᖏᓐᓄᑦ ᐆᒪᔪᐃᑦ ᑕᒫᓂ. ᖃᐅᔨᓴᑐᐃᓐᓇᕐᓂᐅᔪᖅ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᓂᑦ ᐊᒥᓲᓂᖅᓴᓂᑦ ᓇᓄᓇᕈᑎᒋᒻᒪᒍ ᓇᓄᓇᐃᖅᑕᐅᓂᖓᓄᑦ ᓯᓚᔪᒥᑦ ᖃᓄᐃᓕᖓᓂᕆᔭᖏᓐᓄᑦ.

ᖃᐅᔨᓴᕈᑎᐅᓯᒪᔪᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᓐᓄᑦ 2007–ᒥᑦ ᑐᔾᔮᓂᑦ ᖃᐅᔨᓴᕈᑎᒥᓃᑦ ᐊᑦᑐᖅᑕᐅᓯᒪᒍᓐᓇᖅᑐᑦ ᐅᓕᖅᑲᑦᑕᕐᓂᖓᓄᑦ. ᖃᐅᔨᓴᕈᑎᒦᑦ 2006–2008 ᐱᔭᕇᖅᑕᐅᓚᐅᖅᑐᑦ ᐅᐱᕐᖔᒃᑯᑦ ᐅᓚᓐᓂᖃᓂᖅᓴᐅᑎᓪᓗᒍ, 2009–2014 ᖃᐅᔨᓴᕈᑎᒥᓃᓪᓚ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ ᐅᓚᖏᓂᖅᓴᐅᖃᑦᑕᓚᖅᑎᓪᓗᒍ.

ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᖃᐅᔨᓴᕐᓂᐅᔪᑦ ᐃᑲᕋᓂᑦ 24–ᓂᑦ ᐃᓕᖅᑲᑦᑕᕐᓂᖓᓄᑦ ᐃᖏᕋᓂᖏᓐᓄᑦ ᐱᑕᖃᕈᓐᓇᖅᑐᑦ ᐅᑦᑐᒥ ᐊᒻᒪ ᓴᖅᑮᔪᓐᓇᖅᑐᑦ ᓇᑦᓕᐊᓂᑐᐃᓐᓇᖅᐅᖓᑕᐅᔾᔭᐅᑐᑎ- ᐅᕝᕙᓘᓐᓃᑦ ᒥᔅᓴᐅᓴᑦᑕᐅᖏᓗᐊᕐᓗᑎ.

ᐱᔾᔪᑎᐅᔪᒥ ᐆᓇᕐᓂᖓᓄᑦ, ᑎᑎᕋᖅᓯᒪᔪᑦ ᐅᖃᖅᓯᒪᔪᑦ:

2016–ᒥ, ᐊᑦᑎᓐᓂᖏᓐᓃᐸᑦᑐᑦ ᐃᒪᐅᑉ ᐆᓇᕐᓂᖓᓂᑦ (-0.4 °C) WAZ–ᒥ ᐊᑦᑎᓛᖑᓚᐅᖅᑐᖅ ᖃᐅᔨᓴᕐᓂᖃᖃᑦᑕᑎᓪᓗᒋᑦ.

ᐊᒥᓱᐃᓕᓇᓛᖑᓪᓗᑎ ᖃᐅᔨᔭᔭᐅᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᓴᖅᑭᑎᑦᑎᓯᒪᔪᑦ ᓇᓄᓇᕈᔪᑦᑐᓂᑦ ᓇᒧᖓᖃᑦᑕᕐᓂᖏᓐᓄᑦ.

> ᓇᓗᓇᕈᑎᒋᔭᖓ ᓇᒧᖓᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐃᒪᐅᑉ ᓂᓪᓕᓇᕐᓂᖓᓄᑦ ᐱᔾᔪᑎᖃᕈᓐᓇᖅᑐᖅ.

ᐱᓕᕆᐊᕆᓂᐊᕐᓗᒥᑦ ᑖᒃᑯᐊ ᓇᓗᓇᕈᑎᐅᔪᑦ, DFO C&A ᓇᓗᓇᐃᖅᓯᕋᑖᓚᐅᖅᑐᑦ ᖃᐅᔨᓴᖅᑏᑦ ᑲᑎᒪᓂᖓᓂᑦ ᐋᑐᕚᒥ ᑲᑎᒪᑎᑦᑎᓪᓗᑎ ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᑦ ᖃᐅᔨᓴᓂᐊᕐᓂᕋᖅᑐᑎ ᑕᒪᒃᑭᓐᓂ EAZ ᐊᒻᒪ WAZ 2017−ᒥᑦ ᖃᐅᔨᓴᕐᓗᑎ ᐊᓯᔾᔨᖅᑐᓂᑦ ᑭᖑᑉᐸᐃᑦ ᓇᒧᖓᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐊᕐᕌᒍ ᐃᓗᐊᓂ ᐱᔾᔪᑎᖃᖅᑐᓂᑦ ᐃᒪᐅᑉ ᖃᓄᐃᓐᓂᕆᔭᖓᓄᑦ.

ᐃᓚᒋᐊᕐᓗᒍ, ᖃᐅᔨᓴᖅᑏᑦ ᓇᓗᓇᐃᖅᓯᑦᑎᐊᓚᐅᖅᑐᑦ ᓱᓕ ᐊᕐᕌᒎᓐᓂᒃ ᒪᕐᕉᓐᓂᒃ ᖃᐅᔨᓴᕈᑎᒥᓂᕐᓂᑦ ᓇᓗᓇᐃᖅᑕᐅᔪᓐᓇᕐᓗᓂ ᐊᓯᔾᔨᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᑕᒪᑐᒧᖓ ᑭᖑᑉᐸᖏᓐᓄᑦ. CSAS ᑎᑎᕋᖅᓯᒪᔪᖏᑦ ᐅᖃᖅᓯᒪᔪᑦ:

> ᐱᔭᕆᐊᖃᓂᐊᖅᑐᑎ ᐊᕐᕌᒎᓐᓄᒃ ᒪᕐᕉᓐᓄᒃ ᖃᐅᔨᓴᕈᑎᒥᓂᕐᓂᑦ ᑕᒪᓂ ᖃᐅᔨᓴᖅᑕᐅᓂᖓᓄᑦ ᖃᓄᐃᓕᖓᓕᕐᓂᖏᓐᓄᑦ ᑭᖑᑉᐸᓕᒫᑦ ᐱᔾᔪᑎᖃᖅᑐᑎ PA ᐋᖅᑭᒃᓯᒪᓂᖓᓄᑦ.

ᐱᔾᔪᑎᒋᓪᓗᒋᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᔪᑦ ᖁᕝᕙᓯ, ᐊᖏᖃᑎᒌᓚᐅᕐᒪᑕ ZRP ᐊᒻᒪ NSAC ᑲᑎᒪᓂᖏᓐᓂᑦ ᐊᖏᖃᑎᒌᖅᑕᐅᓗᑎ TAC ᓈᒻᒪᑦᑐᓂ 2017−ᒧᑦ. ᐃᒪᕐᒥᐅᑕᓕᕆᔨᒃᑯᑦ ᖃᐅᔨᓴᕐᓂᐊᕐᓂᖏᓐᓄᑦ 2017−ᒥᑦ ᐱᓕᕆᐊᖑᓗᑎ ᐅᖃᐅᓯᐅᖅᑲᐅᔪᑦ ᓇᓗᓇᐃᔭᖅᓯᒪᔪᑦ ᐃᑲᔪᖅᑐᐃᒐᔭᕐᒥᔪᖅ ᐱᓯᒪᐃᓐᓇᕐᓗᑎ ᒫᓐᓇᐅᔪᒥᑦ ᖃᓄᐃᓕᖓᓂᖓᓂᑦ ᖃᐅᔨᔭᐅᓚᐅᖅᑎᓐᓇᒥᑦ ᖃᐅᔨᓴᕈᑎᒥᓂᑦ.

ᑐᵒᓂᖏᕆᐊᒃᓯᒃ ᐊᐱᔨᑎᓂᖅᖏᑦᑐᓂᒃ ᑐᓕᕐᔪᐊᔾᔨᒃ ᐃᒪᖃᐅᑕᓕᕆᔨᖅᑯᑦ ᐃᒪᐅᐳ ᐊᕿᑎᖏᓚᓂ ᐊᒪᒪ ᐃᖃᓗᓕᕆᓂᖃᑦ ᐊᐅᓪᓚᑎᓂᖃᑦ ᐊᒪᒪ ᐃᒪᖃᐅᑕᓕᕆᔨᖅᑯᑦ ᖃᐅᔨᔪᖅᑎᖏᑦ, ᑯᑕᖃᖅᑎᐅᖃᖅᑕᐅᔨᑦ ᑐᔨᓯᕐᖅᑐᑦ ᑲᑎᒪᔨᑦ ᑲᓇᓯᓕᕆᔨᐅᑎ ᐊᑐᓕᔪᔨᐊᒋᑦ ᐊᖏᕐᕋᔩᖅᑐᑦ TAC ᐅᑯᓂᖏᓚ EAZ ᐊᒪᒪ WAZ 2017–ᒧᑦ, ᖃᑎᖏᑭᐅᐅᖅᑲᓂᕐᓂᓂ ᑐᵒᖏᓂᖃᖅᖏᑐᓂ ᖃᐅᔨᔪᖅᑭᑎᑎᓂᕐᓂᑦ 2017–ᒧᑦ ᖃᐅᔨᔪᖅᓂᒧᑦ.

ᖃᑯᵒᓇᒋᒃ ᑕᒪᵒᓇ ᐃᓱᒪᒋᔪᵒᓇᕋᐃᐅᒃ ᑐᔨᓯᕋᐅᑎᐅᔨᖅᖏᒃ.

ᑎᑎᕋᖅᑐᖅ,

_____	_____	_____
ᓴᐃᑯᐱ ᒪᵒᓂᐊᐱᒃ	ᐅᓪᓚᔪᒃ ᐊᑭᓱᒃ	ᔨᒧᐱ ᑐᒃᑭᐊᐱᒃ
ᐊᖏᕆᔪᖅᑲᓐᖅ ᐃᔨᓯᐅᑕᐅᑦᓗᓂᓗ	ᐃᔨᓯᐅᑕᖅ	ᐊᖏᕆᔪᖅᑲᓐᖅ
ᖃᑭᖅᑕᓗᓕᒥ ᐃᕆᑲᓪᓚᕆᐅᑯᑦ	ᖃᑭᖅᑕᓗᒃ ᑯᐊᐳᓱᓴᓐ	ᒪᑭᕐᒃ ᑯᐊᐳᓱᓴᓐ

ᐱᕆᑲᓱᐅᑎᓱᒪᔪᖅ

cc: ᒪᓕᑦᒐᓕᐅᑎᕋᐊᖅ ᑕᒥᓂᒃ ᓪᓚᓵᓐᒃ, ᒥᓂᔨᑕ ᐃᒪᖏᐅᑕᓕᕆᔨᖅᑯᑦ, ᑲᓇᑕᐅᔨ ᑲᖏᒪᓵᓐᖅᑕ
ᒪᓕᑦᒐᓕᐅᖅᑎ ᔪᐟ ᓴᙵᑲᑕᖅ, ᒥᓂᔨᑕ ᐊᖏᑎᓕᓚᔨᖅᑯᑦ, ᓄᓇᕗᑦ ᑲᖏᒪᑯᑦ
ᒥᔨ ᐊᓗᑭ ᑯᑦᑎᐅᖅ, ᐊᓐᕆᔪᖅᑲᖅ, ᓄᓇᕗᑦ ᑐᓐᓴᑲᙵᒃ ᑎᒥᓐᑲᑦ
ᒥᔨᑕ ᓴᐃᓱᔨ ᖃᑭᓪ, ᐃᔨᓯᖏᐅᑕᖅ, ᖃᑭᖅᑕᓗᓕᒥ ᐅᒪᒪᓪᓚᕆᔨᖅᑯᑦ ᑲᑎᒪᔨᓐᕆᑦ
ᒪᓕᑦᒐᓕᐅᖅᑎ ᑎᐅᕈ ᓯᖏᒃ, ᒥᓂᔨᑕ ᓄᓇᒥᐅᑕᓕᕆᔨᖅᑯᑦ, ᓄᓇᕋᓯᐊᕈᑦ ᑲᖏᒪᑯᓐᕆᑦ
ᒥᔨᑕ ᓴᓐ ᒧᔨᓯ, ᐃᔨᓯᖏᐅᑕᖅ, ᑐᖏᕆᔨᖅᑐᑎᑦ ᐃᓴᖃᓕᓚᓐᓂᑦᓯᒪᔨᑦ ᑲᑎᒪᔨᓐᕆᑦ
ᒥᔨᑕ <ᐅᓗᓯ ᓄᓇᑕᓐᓄᑦ, ᐊᓐᕆᔪᖅᑲᖅ, ᓄᓇᙵᓚᒥ ᐅᒪᒪᓵᓂᑦ ᑲᑎᒪᔨᓐᑦ
ᒥᔨᑕ ᓴᑎᑎ ᑐᒪᓯ, ᐃᔨᓯᖏᐅᑕᖅ, ᐅᑭᐅᑕᖅᑐᒥ ᐃᖃᓗᓕᕆᓚᓵᓂ ᑲᑎᒪᔨᓐᖅᑐᑦ
ᒥᔨᑕ ᔨᐸ ᓴᐅᔨᓕᐊᐱᒃ, ᐃᔨᓯᖏᐅᑕᖅ <ᵒᓂᖅᑐᒥ ᐃᖃᓗᓕᕆᔨᑐᖅᑲᑎᒃᑯᑦ

ᖃᐅᔨᓴᖅᑎᓄᑦ ᐅᖃᐅᔾᔨᒋᐊᓂᕐᒧᑦ ᐅᓂᒃᑳᑦ 2017/010

ᑕᑯᓯᐅᑎᑕᐅᓂᖏᑦ

ᓇᓗᓇᐃᔭᖅᓯᒪᓂᖏᑦ (p. 2)

- ᐱᖓᓐᓇᓂ ᖃᐅᔨᓴᖅᑕᐅᔪᒥᑦ ᑭᓪᓕᖓᓂ (WAZ), 2014–ᒥ ᖃᐅᔨᓴᖃᑦᑕᓂᕐᒥᑦ ᐱᒋᐊᖅᑎᑕᐅᓚᐅᖅᑐᖅ, ᐊᔾᔨᒌᓐᖑᐊᖅᑎᒐᓴᐅᖏᑦᑐᑦ ᖃᐅᔨᓴᕐᓂᐅᖃᑦᑕᖅᓯᒪᔪᓄᑦ ᑲᓪᓕᐊᓪᓈᓄᑦ ᒪᓪᑦᑕᐅᔭᕆᐊᓪᓈᓄᑦ DFO/Cosmos ᐊᒻᒪ ᐅᑭᐅᑕᖅᑐᒥ ᑮᖑᑉᐸᓄᑦ ᖃᐅᔨᓴᓂᕐᒧᑦ ᑎᒥᖓᑦ (NSRF)-DFO/Campelen ᖃᐅᔨᓴᖅᓯᒪᔪᑦ. ᖃᖓᒃᑰᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᕿᓚᒥᐅᓗᐊᕐᓂᖏᓐᓄᑦ, ᐊᓯᔾᔨᖃᑦᑕᕐᓂᖏᑦ ᖃᓄᐃᔾᔪᑎᒋᔪᓇᖏᑕ.
- WAZ–ᒥᑦ, ᑐᑭᓯᒋᐊᕈᑏᑦ ᒫᓐᓇᐅᔪᒥᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᖏᑦᑐᑦ ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᐊᐅᓚᑦᑎᖃᑎᒌᑦᑐᓄᑦ ᐸᕐᓇᐅᒻᒥᑦ (IFMP) ᐅᔾᔨᕈᓯᑦᑎᐊᓂᕐᒥᑦ ᐊᑐᓂᕐᒥᑦ (PA) ᓴᓇᓯᒪᓂᖓ. ᐊᕐᕌᒍᓐᓂᒃ ᒪᕐᕉᓐᓂ ᖃᐅᔨᓴᕈᑎᓂᑦ ᐱᔭᕆᐊᖃᖅᑐᑦ ᓴᖅᑭᑎᑦᑎᐸᐅᖅᑎᓐᓇᒋᑦ PA ᓴᓇᓯᒪᓂᖓᓄᑦ.
- 2016–ᒥ, ᐃᖅᑲᖓᓃᐸᓗᑦᑐᓄᑦ ᐃᒪᐅᑉ ᐆᓇᕐᓂᕆᖓᔪᑦᑕᖓ (-0.4 °C) WAZ–ᒥᑦ ᐊᑦᑎᓖᖑᓚᐅᖅᑐᑦ ᖃᐅᔨᓴᕐᓂᐅᔪᓂᑦ.

ᖃᐅᔨᓴᐃᓂᖅ (p. 4)

WAZ (ᐊᔾᔨᓐᖑᐊᖅ 2) ᖃᐅᔨᓴᖅᑕᐅᖃᑦᑕᓚᐅᖅᑐᖅ ᐊᕐᕌᒍᓐᓂᒻᒪᕐᕉᓐᓂᑕᒫᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᔮᒃᑯᓐᓄᑦ 2007–2013. WAZ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᕐᓂᖓᓄᑦ ᐊᔾᔨᒋᖏᑕᖓᓄᑦ ᐅᒥᐊᕐᔪᐊᒧᑦ ᐊᒻᒪ ᖃᖓᒃᑰᓂᖓ ᐊᕐᕌᒍᒥ, ᐃᓚᓕᐅᔾᔭᐅᒍᓐᓇᓚᐅᖏᑦᑐᖅ ᖃᐅᔨᓴᕈᑎᒥᓂᕐᓄᑦ EAZ. ᑕᒪᓐᓇ ᓇᓗᓇᐃᖅᓯᒪᑦᑎᐊᖅᑐᓂᑦ ᖃᐅᔨᓴᐃᒍᓐᓇᑎᑦᑎᓚᐅᖏᑦᑐᖅ ᓇᓗᓐᖓᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᑮᖑᑉᐸᐃᑦ ᐊᒻᒪ ᑕᑯᓐᓇᖓᓛᖅᑐᒋᑦ ᐊᑕᖏᑦᑐᒋᑦ ᐊᒥᓲᓂᖏᓐᓄᑦ. 2014–ᒥ, NSRF ᑲᒪᒋᔭᖃᖓᓖᓪᓚᐅᖅᑐᑦ ᖃᐅᔨᓴᕐᓂᐅᓗᒥᑦ WAZ ᖃᐅᔨᓴᖃᓯᐅᔾᔭᐅᓂᐊᕐᖓᑦ EAZ ᑕᒪᓐᓇ ᐱᓕᕆᐊᖑᓗᓂ. ᑕᒪᓐᓇ ᖃᓄᓕᒋᐊᕐᓂᐅᔪᖅ ᐱᒋᐊᖅᑎᑦᑎᔪᖅ ᓄᑖᓂᑦ ᖃᐅᔨᓴᖃᑦᑕᕐᓂᐅᔪᓂᑦ WAZ–ᒧᑦ. 2016–ᒥ, WAZ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᖅᑐᖅ ᐱᖓᔪᖓᓐᓂ ᐊᕐᕌᒍᖓᓂ ᓄᑖᓂᑦ ᖃᐅᔨᓴᕐᓂᐅᖃᑦᑕᓂᐊᖅᑐᓂᑦ. ᐱᒃᑲᓐᓂᕆᐊᖃᓂᐊᖅᑐᑦ ᐊᕐᕌᒍᓐᓂᒃ ᒪᕐᕉᓐᓂᒃ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᓂᑦ ᑖᒃᑯᓂᖓ ᖃᐅᔨᓴᕐᓂᐅᖃᑦᑕᓂᐊᖅᑐᓂᑦ ᖃᐅᔨᓴᕐᓂᐅᕐᓗᒋᑦ ᖃᓄᐃᓪᓕᖓᓕᕐᓂᖏᑦ ᐊᑕᖏᖅᑐᒋᑦ ᐊᒥᓲᓂᖏᑦ ᐱᔾᔪᑎᖃᖅᑐᑎ PA ᓴᓇᓯᒪᓂᖓᓄᑦ.

ᐊᑐᒃᒪᖃᑦᑕᖅᑐᑦ (p. 19)

ᐅᑐᓴᖅᑎᑦᑎᒍᑕᐅᓯᒪᔪᑦ ᐊᑐᒃᒪᖃᑦᑕᖅᑐᓂ ᖁᕝᕙᓯᓐᓂᖏᓐᓄᑦ 2016/17 ᐅᓇᐅᓚᐅᖅᑐᖅ 19.1% ᐃᓚᒋᓪᓗᓂᐅᒃ 99% TAC ᐱᔭᐅᔪᓂᑦ (ᐊᔾᔨᓐᖑᐊᖅ 16a). ᑐᓐᖓᕕᒋᓪᓗᒋᑦ 2016/17 TAC of 6,138 t, ᐊᑐᒃᒪᑦᑕᐅᖃᑦᑕᕈᓐᓇᖅᑐᑦ ᖁᕝᕙᓯᓐᓂᓇᓚᐅᖅᑕᖓ 19.3% (ᐊᔾᔨᓐᖑᐊᖅ 16b). ᖃᑦᑏᓐᓇᕈᓇᐊᕐᓂᖏᑦ ᐊᔾᔨᒌᖏᑦᑐᑦ ᐊᒥᓲᓂᖏᑦ ᐆᒪᔪᐃᑦ 2016 ᐱᖃᓯᐅᑎᓯᒪᓪᓗᓂ TAC 2015/16 ᐊᓯᔾᔨᖏᑦᑐᖅ 2016/17 ᓴᖅᑭᑎᑦᑎᔪᖅ ᖁᕝᕙᓯᒋᐊᖅᑐᓂᑦ ᐊᑐᒃᒪᑦᑕᐅᕙᑦᑐᑦ ᖁᕝᕙᓯᓐᓂᖏᑦ. ᐅᖓᓯᒌᑦᑑᑎᐅᓂᖏᓐᓄᑦ ᑐᓴᖅᑎᑦᑎᒍᑎᐅᔪᑦ ᓇᓗᓇᕈᑎᐅᔪᑦ ᓇᓗᓐᖓᖃᑦᑕᕐᓂᖏᓐᓄᑦ. ᓇᓗᓇᕈᑎᐅᔪᑦ ᓇᓗᖓᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐊᔭᐅᖅᑕᐅᓯᒪᒍᓐᓇᑐᐃᓐᓇᓇᐊᓕ ᓂᓪᓕᓇᖅᑐᒪᓇᐅᓂᖓᓄᑦ.

ᒫᓐᓇᐅᔪᒥᑦ ᑕᑯᓐᓇᖅᑕᐅᔪᑦ (p. 20)

ᒫᓐᓇᐅᔪᒥᑦ ᑕᑯᓐᓇᖅᑕᐅᔪᑦ ᓱᓕ ᖃᐅᔨᒪᔭᐅᖏᑦᑐᑦ. WAZ–ᒥ, ᑮᖑᑉᐸᖏᑦ ᖃᐅᔨᓴᖅᑕᐅᖏᑦᑐᑦ ᐊᑖᓂ PA ᓴᓇᓯᒪᓂᖓᓂᑦ. ᐊᕐᕌᒍᓐᓂᒃ ᒪᕐᕉᓐᓂᒃ ᖃᐅᔨᓴᕈᑎᒥᓂᕐᓂᑦ ᐱᒃᑲᓐᓂᕆᐊᖃᖅᑐᑦ ᓴᖅᑭᖅᑎᑕᐅᓚᐅᖅᑎᓐᓇᒍ PA ᓴᓇᓯᒪᓂᖓ *P. montagui*–ᒥ.

ᓇᓗᓇᕈᑎᒋᔭᖏᑦ (p.20)

ᕿᑭᖅᑖᓘᑉ ᑕᕆᐅᖓᓂ ᐊᒥᓲᔪᑦ ᐊᔾᔨᒌᖏᑦᑐᑦ ᐆᒪᔪᐃᑦ ᓴᖏᔫᓪᓗᑎ ᐃᖏᕋᓂᖏᑦ ᐅᓪᓐᓂᕆᖃᑦᑕᖅᑕᖏᓐᓄᑦ ᐊᒻᒪ ᑲᑎᖅᓱᖅᑐᑎ. ᕿᑭᖅᑖᓘᑉ ᐃᑭᕋᓴᖓ ᐊᒥᓲᓂᑦ ᐊᔾᔨᒌᖏᑦᑐᓂᑦ ᐆᒪᔪᖃᖅᑐᖅ ᓴᖏᔫᑎᓂᑦ ᐅᓪᓐᓂᖓᓄᑦ ᐃᖏᕋᓂᐅᔪᓂᑦ ᐊᒻᒪ ᑲᑎᖅᓱᖅᑐᑎ. ᑯᖑᑉᐸᐃᑦ ᐅᖓᓯᑦᑐᒨᖅᑎᑕᐅᔪᓐᓇᖅᑐᑦ ᕿᓚᒥᐅᔫᒃᑯᑦ ᐊᒻᒪ WAZ–ᒦᒍᓐᓃᕐᓗᑎ WAZ, EAZ, ᐊᒻᒪ SFA 4 ᓂᒋᖓᓄᑦ. ᑕᒪᓐᓇ ᐱᔾᔪᑕᐅᖅᑰᖅᑐᖅ ᐊᔾᔨᒌᖏᑦᑐᓂᑦ ᐊᓯᔾᔨᖃᑦᑕᕐᓂᖏᓐᓄᑦ ᐊᒥᓲᓂᖏᓐᓄᑦ ᐆᒪᔪᐃᑦ ᑕᒫᓂ. ᖃᐅᔨᓴᑐᐃᓐᓇᕐᓂᐅᔪᖅ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᓂᑦ ᐊᒥᓲᓂᖅᓴᓂᑦ ᓇᓗᓇᕈᑎᒋᒪᒍ ᓇᓗᓇᐃᖅᑕᐅᓂᖓᓄᑦ ᓱᓕᔪᒥᑦ ᖃᓄᐃᓕᖓᓂᓇᔭᖏᓐᓄᑦ.

ᖃᐅᔨᓴᕈᑎᐅᓯᒪᔪᑦ ᐃᒪᕐᒥᐅᑕᓕᕆᔮᒃᑯᓐᓄᑦ 2007–ᒥᑦ ᑐᔾᔭᓂᑦ ᖃᐅᔨᓴᕈᑎᒥᓃᑦ ᐊᑦᑐᖅᑕᐅᓯᒪᒍᓐᓇᖅᑐᑦ ᐅᓕᖃᑦᑕᕐᓂᖓᓄᑦ. ᖃᐅᔨᓴᕈᑎᒦᑦ 2006–2008 ᐱᔭᕇᖅᑕᐅᓚᐅᖅᑐᑦ ᐅᐱᕐᓛᒃᑯᑦ ᐅᓪᓐᓂᖃᓂᖅᓴᐅᑎᓪᓗᒍ, 2009–2014 ᖃᐅᔨᓴᕈᑎᒥᓃᓪᓕ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ ᐅᓪᓕᕆᓂᖅᓴᐅᖃᑦᑕᓕᖅᑎᓪᓗᒍ. ᑕᐃᒪᐃᒃᑲᓗᐊᖅᑎᓪᓗᒍ, ᖃᐅᔨᓴᕐᓂᐅᔪᑦ ᐃᑲᕋᓂᑦ 24–ᓂᑦ

ᐃᓕᖅᑐᑦᓂᔪᓐᓇᓄᑦ ᐃᖏᕐᕋᓂᖏᓐᓄᑦ ᐱᑕᖅᑭᓐᓇᖅᑐᑦ ᐅᑦᓗᒥ ᐊᓱᒪ ᓴᖅᑭᔪᓐᓇᖅᑐᑦ ᓇᑦᓕᐊᓂᑐᐃᓐᓇᖅᐅᖅᓯᒪᓕᐅᕐᓴᐅᓗᑎᒃ-ᐅᕐᖓᓗᓐᓂᑦ ᒥᔪᕆᐅᑦᓕᐅᖏᓕᓗᐊᖅᓗᑎᒃ.

ᖃᐅᐅᔨᖅᓂᐅᕐᔪᖅ WAZ 2014–ᒥ ᖃᐅᐅᔨᖅᑲᓕᓂᖅᒥᑦ ᐱᑎᐊᖅᑎᑕᐅᓕᐅᖅᑐᖅᓴᖅ ᐊᓱᒪ ᐊᖅᖁᔭᑎᒪᑦ ᖃᐅᐅᔨᖅᑕᐅᓕᖅᑐᖅᓴᖅ ᐊᖅᐅᓂᓚᓄᑦ ᐅᒥᐊᖅᔪᐊᒧᑦ ᐊᓱᒪ ᑲᓕᖅᑕᐅᔪᓂ, ᖃᐅᐅᔨᕿᑎᐅᓕᐅᖅᑐᖅᓴᖅ ᐊᖅᖁᔭᒍ ᐃᓗᐊᓂ ᑕᒪᑐᒪᓂᔨᖅᓴᐃᓐᓇᖅ EAZ–ᒥ ᑕᐃᒪᐃᓂᓂᓚᓄᑦ ᐋᓴᖅᑕᐅᔪᓂ ᓄᓗᓇᐃᕿᑎᐅᓕᐅᖅᑐᖅᓴᖅᑐᑦ ᐊᒥᐅᑲᓂᓚᓂᑐᑦ ᐊᒥᓱᑲᓐᓂᑎᑦᑐᑦ ᒪᖅᑲᓂᓂᑦ ᖃᐅᐅᔨᖅᑕᐅᔪᓐᓂᑦ.