

## **Stakeholder Scoping Issues (concerns, problems, opportunities)**

The scoping process essentially defined what this Wetlands Management plan will address. During this process it became readily apparent that concerns for wetlands were often inseparable from concerns for other watershed resources. Through a series of detailed discussions and brainstorming sessions, stakeholders have identified issues, concerns, problems, and opportunities of natural resource and other development activities within the sub-watersheds.

The stakeholders' team identified both potential development activities and their potential impacts, both positive and negative. Once an activity and its likely impacts were identified, management strategies and alternatives were developed. The following summarizes the extensive list of issues, concerns, problems, and opportunities that emerged from the scoping process. Every item identified by the stakeholders as a concern, problem, or opportunity could be classified using one or more of the following categories:

- 1) Development activity, natural resource or otherwise
- 2) An impact resulting from a development activity
- 3) Employment/economic issue related to the impact of an activity
- 4) A management concern related to an impact and/or development activity
- 5) Concern about regulation or loss of property rights
- 6) A need for education to understand development activities, impacts, regulations, and management strategies as they pertain to wetlands and watershed resources

### **Natural Resource and Other Development Activities**

The following were identified as current or proposed development activities of interest and concern:

- Logging in the Port Graham/Nanwalek watersheds by village corporations
- Logging by allotment owners in both watersheds
- Proposed airport expansion in Port Graham. Possible new airport between Port Graham and Nanwalek
- New home sites in Port Graham/Nanwalek
- Cannery expansion in Port Graham
- Tourism
- Potential Land Sales

## **Impacts**

The following potential impacts have been identified as associated with current or proposed activities:

1. Washing of roads and flooding
2. Stream alterations due to roads and bridges
3. Degradation of riverine, slope, and estuarine wetlands that support salmon spawning and rearing, waterfowl, and other habitat. Concerns that logging areas will cause:
  - a) non-point source pollution from erosion and siltation because of inadequate buffer strips, especially if allotment owners are not required to have buffer strips where they log
  - b) Degradation of moose and bear habitat
  - c) Degradation of drinking water supply in Port Graham from the log staging area
4. Increased access to resources, creating:
  - a) increased or unmanaged take of salmon, moose, bear, goat, waterfowl, berries, and traditional use plants
  - b) Unauthorized off-road ATV-traffic and trespass
  - c) Violation of easement rights
  - d) Illegal dumping of hazmats, used oil and batteries, solid waste.
  - e) Non-Native use.
5. Increased population growth
6. Job/employment opportunities. Development of a cash economy is important to both communities. Stakeholders are concerned about how to balance the need for jobs while managing wetland and other watershed resources in a sustainable manner.

## **Regulation and Property Rights**

Some stakeholders have expressed fears that the Wetlands Management plan will increase regulation and cause loss of property rights. A number of state and federal regulations currently exist that stakeholders are subject to but may not be aware of. The Wetlands Management plan will clarify these already existing federal and state regulations (pages 31-37) and their significance to encourage better management and planning and avoidance of non-compliance situations. Details of Tribal codes and ordinances will be explained in the Wetlands Management plan if they are developed.

- NEPA.
- The Clean Water Act and 404 permits
- The Resource Conservation Recovery Act
- Title 16 permits
- The Endangered Species Act
- Forest Practices Act
- Coastal Zone Management Act
- Tribal codes and ordinances(pending)

## **Education**

Education will play a major role in helping stakeholders understand the functions and values of wetlands, the watershed approach to planning, and the need for and use of a wetlands management plan. The Watershed Council has indicated the need for educating stakeholders and residents in the Port Graham/Nanwalke watersheds on existing state and federal regulations.

Of special concern is that allotment owners are not legally required to have buffer strips along streams when they cut the timber on their land. The Watershed Council believes that educating allotment owners on the importance of buffer strips for the sake of protecting salmon and other habitat will create a situation of self-regulation, eliminating the need for deliberate enforcement of a tribal code requiring buffer strips.

The Watershed Council has identified the need for the following education methods and/or strategies:

- ◇ Brochure with photos and text explaining wetlands, the watershed concept, the makeup of the Watershed and Council, the plan they are developing, and why. (See Appendix E)
- ◇ A newsletter published at least twice a year with articles and other information on wetlands, the Watershed Council, and the planning process. (See Appendix E)
- ◇ A brief video providing visually the information described above.
- ◇ Community forums and field days on wetlands and the planning process, including events for school-age children.
- ◇ Displays at the Port Graham and Nanwalek airstrip waiting areas.(See Appendix E)

## **Management**

In the scoping process stakeholders identified the following management issues. Actual management strategies and alternatives are discussed in the plan. The Wetlands Management plan is to consider:

- Managing forest harvest and other development activities on village, corporation, and allotment lands so as to maintain water quality for drinking, fish and wildlife habitat.
- Developing monitoring and assessment tools such as Rapid Bioassessment for water quality and HGM, coordination with other monitoring programs such as Cook Inlet Keeper, etc.
- Development of tribal water quality standards
- Development of a GIS (See Appendix F)
- Integration of wetlands management with other management practices and strategies, such as the Forest Stewardship Plan, solid waste, waste water, hazmats, and other related environmental management strategies.
- Identifying cultural and traditional resources that may need specialized management plans, such as: berries, medicinal and culinary plants, and materials for crafts and art.
- Developing a tribal Environmental Assessment process similar to that required by NEPA.

- Develop funding opportunities for the implementation of projects

**Formulation of Wetland Conservation Alternatives**

Watershed Council members created the alternatives presented here within a series of three meetings. The alternatives were developed with an appreciation for the different levels of conservation management that could be undertaken by the community. Some of the alternatives were feasible in the minds of members others were not. Ultimately, it would be up to the community and Tribal Councils to decide which level of conservation management would be undertaken by the Watershed Council.

## **Port Graham/Nanwalek Watershed Planning**

**Alternative Development Process**

**Alternative A: Take no action in the protection and management of the Port Graham/ Nanwalek watershed:** The current level of management and economic development will continue to occur without public participation. Growth and development proceeds as opportunities present themselves and as landowners see fit. Resource problems (pollutants, gully erosion, etc.) will be addressed by landowners or land managers as they are encountered. Site specific water quality monitoring or similar activities will be carried out as needed to address identified problems. Regulatory authority will remain with government agencies.

**Alternative B: Develop a PGNWC education and information program:** Develop a PGNWC information and education program to promote healthy watershed (i.e. information on wetlands, water quality and quantity, timber resources, wildlife Populations, fishery populations, archeological/cultural resources). The Watershed Council will refer requests for technical assistance to appropriate agencies.

**Possible action items:**

- distribute existing reports, brochures, videos, etc.
- meet annually to discuss environmental, social, and economic changes within the watershed
- provide education upon request

**Alternative C: Develop a PGNWC staff to provide technical assistance:** Under this alternative, the PGNWC seeks funding from existing tribal, local, state, federal, and private sources to maintain a staff of technical resource specialists (forester, wetland scientist, fisheries biologist, other). The staff will provide technical assistance and watershed education to landowners, managers, and other interested parties in the watershed.

**The duties of the PGNWC staff will include:**

- Assistance with planning and implementation of best management practices to the allotment owners, corporations, and other interested entities.
- Gathering and providing existing resource information,
- Researching and distribution of available reports, brochures, videos, etc...

- Monitoring and assessing community and ecological changes
- Refer unique requests for technical assistance to appropriate agencies
- The technical staff will provide the PGNWC with monthly progress reports

**Additionally, the PGNWC technical staff may provide contracted assistance to Native Corporations and other private entities.**

**Alternative D- Provide information, education and technical assistance:** This alternative is a voluntary approach to resource management utilizing a local PGNWC coordinator supported by private, state, and federal programs and resources. The coordinator will facilitate collaboration of activities related to watershed planning and management. This alternative supports the philosophy that landowners will make wise resource management decisions if they are provided with accurate information as to the effects of their actions, and are provided adequate technical assistance to implement best management practices. Wetland management recommendations will be based upon local values (cultural, traditional, and spiritual) and western science principles.

Below are examples of activities that the coordinator would accomplish under the direction of the PGNWC to address the issues, concerns, problems and opportunities that were identified by tribal members during PGNWC meetings.

**Objective 1: Assemble existing resource information and make it available to everyone in the watersheds to allow the Watershed Council the opportunity to provide timely and meaningful assistance.**

***Possible action items:***

- publish soil survey and make original copies of photo/ maps available
- obtain current aerial photography from NRCS and make available
- make available the water quality baseline measurements and report written by UAA ENRI
- request schedule of planned timber harvest activities within the watershed
- establish a Geographical Information System (establish a system to make existing information like land use, land ownership, wetland maps, stream map available)
- train GIS users

**Objective 2: Collect additional resource data and make it available to everyone in the watersheds.**

***Possible action items:***

- collect snow accumulation (water forecasting) in the drinking water sub-watersheds
- collect water quality (rapid bioassessment, chemical, and physical) data at determined sites
- provide a detailed wetland maps

- complete a survey of resource values
- provide the findings of the log staging area hydrology study

**Objective 3: Develop, test, and adopt tools or methods to study, manage, and protect resources within the watershed.**

*Possible action items:*

- identify community wetland values through a community survey
- complete wetland functional assessments (HGM) at determined reference sites
- develop and implement citizen-based water quality monitoring program at selected sites on a yearly basis
- develop a list of best management practices (BMPs)

**Objective 4: Develop an information and education program.**

*Possible action items:*

- draft and distribute brochures and newsletters
- develop and deliver PGNWC video
- design and construct airport displays
- gather, organize, and make a watershed information library available to Port Graham/ Nanwalek residents
- construct 3-D watershed maps
- sponsor school projects (for students as well as new residents):
- help fund a publication on local etiquette and traditions of the villages (by elders) that includes the responsibilities of the private landowner, how to respect the resources, how to handle fish, how to treat wetlands, etc.

**Objective 5: Provide technical and financial assistance for watershed/ resource projects and education.**

*Possible action items:*

- develop conservation plans for allotment owners
- provide explanations of existing state and federal laws
- identify opportunities for landowners to participate in cost/share programs
- sponsor watershed restoration demonstrations
- coordinate with other entities to bring technical assistance to Port Graham and Nanwalek

**Alternative E: Develop tribal codes and ordinances:**

Under this alternative, the PGNWC supports existing tribal codes and ordinances and the development of a court and enforcement system. The PGNWC will provide recommendations to tribal councils for the development of new codes and ordinances as they relate to watershed planning and management activities. The goal is to take over regulatory control from federal, state, and borough government.

***Possible action items:***

- find examples of codes and ordinances from other tribes
- determine existing laws and regulations related to watershed protection
- explore opportunities for co-management and co-regulation of watershed resources
- hire an attorney
- develop specific ordinances to address local watershed protection needs
- assist the tribal councils in developing a judicial system
- assist the tribal councils in developing an enforcement and penalty system

**Categories for evaluation of alternatives**

**Wetlands**

**Water quality**

**Water quantity**

**Timber resources**

**Wildlife Populations**

**Fishery Populations**

**Archeological/Cultural resources**

**Subsistence environment**

**Social environment**

**Spiritual environment**

**Economics**

**Self Governance**

**Ecological environment**

The Watershed Council identified their preferred Alternative following extensive review and comment by the communities. The Watershed Council evaluated each alternative. A survey was also delivered to community members to gauge the level of support for each alternative. The survey was developed and delivered by Watershed Council members.



## **Public Participation**

From the beginning, the development of the Port Graham/Narwalek Wetlands Management Plan has been a public process or a true watershed approach. All interested stakeholders, including some identified after the process was initiated, were invited to participate. Stakeholders represented the broad and diverse interests within the watersheds. Open public meetings were held for allotment owners and other community residents in order to explain wetlands and what the management plan was designed to do, as well as to answer their questions. Articles on the Watershed Council and the wetlands plan were incorporated into regional newsletters. The final plan was made available to the public for review and comment.

The following is a list of activities undertaken by the PG/NWSC to encourage community participation:

- Newsletter(s)
- Brochure
- Video
- Airport Displays
- Allotment owners workshop
- Wetland tour

**Nanwalek and Port Graham  
Watershed Council Survey  
"Where do we go from here?"**

1.) Do you know about the Nanwalek and Port Graham Watershed Project? Yes \_\_\_\_\_  
No \_\_\_\_\_

2.) Have you seen the video, pamphlet or any other information about the Project?  
Yes \_\_\_\_\_ No \_\_\_\_\_

3.) What activities and land uses do you feel the Wetlands are effected?  
\_\_\_\_\_  
\_\_\_\_\_

4.) Are Wetlands important to you? Yes \_\_\_\_\_ No \_\_\_\_\_ How?  
\_\_\_\_\_  
\_\_\_\_\_

5.) What should be the function of the Watershed Council?  
\_\_\_\_\_  
\_\_\_\_\_

6.) Should the Watershed Council use local & traditional knowledge to determine a value  
in assessing wetlands?

Yes \_\_\_\_\_ No \_\_\_\_\_

7.) How should the communities use the finished document?

\_\_\_\_\_ Guide for future planning and management within our watershed.

\_\_\_\_\_ Regulation document, meaning development of tribal codes & ordinances.

\_\_\_\_\_ Learning tool to promote education in all that involves planning within the  
watershed.

8.) Which wetlands, you believe, should be protected?  
None \_\_\_\_\_ Preselected \_\_\_\_\_ Most \_\_\_\_\_ All \_\_\_\_\_

Name \_\_\_\_\_ (optional)

**Recommended Conservation Plan**

Based on the community survey results and Watershed Council members input Alternative D was selected to bring forward to the Tribal Councils of Port Graham and Nanwalek for their approval by resolution.

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**Objective 2: Collect additional resource data and make it available to everyone in the watersheds.**

***Possible action items:***

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**Objective 3: Develop, test, and adopt tools or methods to study, manage, and protect resources within the watershed.**

***Possible action items:***

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**Objective 4: Develop an information and education program.**

***Possible action items:***

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**Objective 5: Provide technical and financial assistance for watershed/ resource projects and education.**

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- develop conservation plans for allotment owners
- provide explanations of existing state and federal laws
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- coordinate with other entities to bring technical assistance to Port Graham and Nanwalek

## **Approved Plan**

The approved plan is yet to be delivered by the Tribal Councils. A thorough review of this document will lead to approval by Tribal Resolution. Any recommended changes will be made.

## **Plan Implementation**

A plan of work was developed to move through the planning stages for work by Watershed Council members and technical assistance providers. A plan of work will be followed in order to complete all objectives under Wetland Conservation Plan Alternative D. The Plan of Work has basically two sections. Section One- is that list of actions to be taken to carry out the planning process; and Section Two is the list of actions needed to implement the Plan. Section One items are complete, less the Tribal Council resolutions in support of the selected conservation plan alternative, see Appendix A. See Appendices A-F to review work within Alternative D in progress and completed.

**APPENDIX A**

**PGNWC Planning and Implementation Plan of Work**

## APPENDIX A

### PGNWC Planning and Implementation Plan of Work

| <b>Action required for the development of the Port Graham/Nanwalek Watershed Council (PGNWC) Wetland Conservation Plan</b> | <b>WHO</b>                   | <b>WHAT</b> | <b>WHERE</b> | <u>HOW</u> |
|--|------------------------------|-------------|--------------|------------|
| <b>1. Identify and Record Problems</b>   | PGNWC, Paul Jackson          |             |              |            |
| Logging  | PGNWC                        |             |              |            |
| Road Construction  | PGNWC                        |             |              |            |
| Off Road Vehicles  | PGNWC                        |             |              |            |
| Waste Disposal   | PGNWC                        |             |              |            |
|  |                              |             |              |            |
| <b>2. Determine and Record Objectives</b>  | PGNWC, Paul Jackson          |             |              |            |
| Draft Purpose Statement  |                              |             |              |            |
| Establish WS Area  |                              |             |              |            |
| Determine Participants   | PGNWC                        |             |              |            |
| Determine Level of Participation   | PGNWC                        |             |              |            |
|  |                              |             |              |            |
| <b>3. Inventory and Record Resources</b>   | PGNWC, Paul Jackson          |             |              |            |
| Geology  |                              |             |              |            |
| Soils  |                              |             |              |            |
| Hydrology  |                              |             |              |            |
| Plant Communities  |                              |             |              |            |
| Water Quality  |                              |             |              |            |
| Wetlands   |                              |             |              |            |
| Land Ownership   |                              |             |              |            |
| Land uses  |                              |             |              |            |
| Wildlife/Fishery Resources   |                              |             |              |            |
| Subsistence  |                              |             |              |            |
|  |                              |             |              |            |
| <b>4. Analyze Resource Data</b>  | PGNWC                        |             |              |            |
| Review GIS Database  | PGNWC, Paul, Dan             |             |              |            |
| Research and Record Alutiq Names to Fish, Wildlife, and Plants   | Donna Malchoff, Nancy Yeaton |             |              |            |

| ACTION                                   | WHO  | WHAT | WHERE |
|--|--|------|-------|
| <b>5. Formulate Alternatives</b>         | Christine, Dan,<br>Phil, Mark K.,<br>Mark W.,<br>Robin,<br>PGNWC |      |       |
| Alternative A                            |  |      |       |
| Alternative B                            |  |      |       |
| Alternative C                            |  |      |       |
| Alternative D                            |  |      |       |
| Alternative E                            |  |      |       |
|  |  |      |       |
|  |  |      |       |
| <b>6. Evaluate Alternatives</b>          |  |      |       |
| Estimate /measure potential benefits     | PGNWC  |      |       |
| Estimate /measure potential costs        |  |      |       |
|  |  |      |       |
| <b>7. Decide on Course of Action</b>     | PGNWC  |      |       |
| Share alternatives with each community   |  |      |       |
| Public comment on each Alternative       |  |      |       |
| Decide on Alternative                    |  |      |       |
| <i>Draft Wetlands Management Plan</i>    |  |      |       |
| <b>8. Implement Decisions</b>            |  |      |       |
| That's where the action items come in... | PGNWC<br>Tribal Councils   |      |       |
|  |  |      |       |
| <b>9. Evaluate Decisions</b>             | PGNWC  |      |       |
|  |  |      |       |



| <b>Action Items for Public Education</b>        | <b>WHO</b>   | <b>WHAT</b>   | <b>WHERE</b> |                          |
|---|--|---|--------------|--------------------------|
| <b>Public Education</b>                         | Christine Celentano, PGNWC                               | Create and share with communities of Port Graham and Nanwalek | PG and Nan   | Deliver to co Door, Mail |
| 1. Airport Displays                             | PGNWC, Christine Celentano, Tom Evans                    |   |              |                          |
| 2. Video  | PGNWC, Christine, Tom, Elenore, Walter, Nancy, Paul, Dan |   |              |                          |
| 3. Brochure                                     | PGNWC, Paul, Christine                                   |   |              |                          |
| 4. Watershed Model                              | PGNWC, Nancy   |   |              |                          |
|   |  |   |              |                          |
| <b><u>Action Items for Management Tools</u></b> | <b>WHO</b>   | <b>WHAT</b>   | <b>WHERE</b> |                          |
| 1. Development of PGNWC GIS                     | PGNWC, Paul, Christine, Dave-Interrain Pacific           |   |              |                          |
| GIS Data Collection                             | Interrain Pacific  |   |              |                          |
| GIS Mapping                                     | Interrain Pacific  |   |              |                          |
| GIS Technical Writing                           | Interrain Pacific  |   |              |                          |
|   |  |   |              |                          |
| <b>2. HGM Development &amp; Use</b>             |  |   |              |                          |
| Local HGM Training Curriculum                   | Christine, Robin, NRCS-Dan, EPA-Phil, Jim Powell-DEC     |   |              |                          |
| Local HGM Training                              | Christine, Robin   |   |              |                          |
| Wetlands Maps                                   | Christine, Robin   |   |              |                          |
| Wetlands Surveys                                | Gene, Robert, Nancy                                      |   |              |                          |

|   |   |  |  |  |
|---|---|--|--|--|
| <b>3. Rapid Bioassessment Monitoring</b>          |   |  |  |  |
| Rapid Bioassessment Baseline Measures             | Robin, ENRI,<br>Tom Evans,<br>Johnny<br>Moonin Melvin<br>Malchoff |  |  |  |
| Rapid Bioassessment Protocols/QAPP                | Robin, ENRI   |  |  |  |
| Rapid Bioassessment Training #1                   | Robin, ENRI   |  |  |  |
| Rapid Bioassessment refresher training            | Robin, trained water watchers                                     |  |  |  |
| Water quality monitoring                          | Robin, trained water watchers                                     |  |  |  |
| <b>*Informational &amp; Logistical Assistance</b> |   |  |  |  |
| (Resources to Complete "How" portion)             |   |  |  |  |
| Port Graham/Nanwalek Traditional Knowledge        |   |  |  |  |
| Port Graham/Nanwalek Community Members            |   |  |  |  |
| Chugachmiut Environmental Health                  |   |  |  |  |
| Environmental Protection Agency                   |   |  |  |  |
| Natural Resource Conservation Service             |   |  |  |  |
| Interrain Pacific Inc.                            |   |  |  |  |
| UAA-Environment & Natural Resource Institute      |   |  |  |  |

**APPENDIX B**  
**Wildlife Species common to the Lower Kenai Peninsula**

## APPENDIX B

### Wildlife Species common to the Lower Kenai Peninsula

Alutiiq names were provided by students in the bilingual program at the Port Graham School and by Feowna Sawden. Some species do not have a direct Alutiiq translation.

#### MAMMALS

| <u>Common</u>               | <u>Genus/Species</u>            | <u>Family</u>    | <u>Alutiiq</u> |
|-----------------------------|---------------------------------|------------------|----------------|
| Little Brown Bat            | <i>Myotis lucifugus</i>         | Vespertilionidae | Qallaciquaq    |
| Masked Shrew                | <i>Sorex cinereus</i>           | Soricidae        | Quplenqaq      |
| Dusky Shrew                 | <i>Sorex obscurus</i>           | Soricidae        | "              |
| Water Shrew                 | <i>Sorex palustris</i>          | Scricidae        | "              |
| Pigmy Shrew                 | <i>Sorex hoyi</i>               | Scricidae        | "              |
| Tundra Shrew                | <i>Sorex tundrensis</i>         | Scricidae        | "              |
| Snowshoe Hare (Varing Hare) | <i>Lepus americanus</i>         | Leporidae        | Ukayiq         |
| Hoary Marmot                | <i>Marmota caligata</i>         | Sciuridae        | Quarriq        |
| Red Squirrel                | <i>Tamiasciurus hudsonicus</i>  | Sciuridae        | El'kiaq        |
| Northern Flying Squirrel    | <i>Glaucomys sabrinus</i>       | Sciuridae        | El'kiaq        |
| Arctic Ground Squirrel      | <i>Spermophilus parryii</i>     | Sciuridae        | El'kiaq        |
| Beaver                      | <i>Castor canadensis</i>        | Castoridae       |                |
| Northern Red-backed Vole    | <i>Clethrionomys rutilus</i>    | Cricetidae       |                |
| Meadow Vole                 | <i>Microtus pennsylvanicus</i>  | Cricetidae       |                |
| Singing Vole                | <i>Microtus miurus</i>          | Cricetidae       |                |
| Muskrat                     | <i>Ondatra zibethicus</i>       | Cricetidae       |                |
| Meadow Jumping Mouse        | <i>Zapus hudsonius</i>          | Zapodidae        | Qupilengaq     |
| Porcupine                   | <i>Erethizon dorsatum</i>       | Erethizontidae   | Qangateraaq    |
| Coyote                      | <i>Canis latrans</i>            | Canidae          | Kayutaq        |
| Gray Wolf                   | <i>Canis lupus</i>              | Canidae          | Kaganaq        |
| Red Fox                     | <i>Vulpes vulpes</i>            | Canidae          |                |
| Black Bear                  | <i>Ursus americanus</i>         | Ursidae          | Tan'erliq      |
| Marten                      | <i>Martes americana</i>         | Mustelidae       | Qaugciquaq     |
| Ermine                      | <i>Mustela erminea</i>          | Mustelidae       | Amitatuk       |
| Least Weasel                | <i>Mustela nivalis (rixosa)</i> | Mustelidae       | "              |
| Mink                        | <i>Mustela vison</i>            | Mustelidae       | El'kuayaq      |
| Wolverine                   | <i>Gulo gulo</i>                | Mustelidae       | Alas'aamaaq    |
| River Otter                 | <i>Lutra canadensis</i>         | Mustelidae       | Kep'arqaq      |
| Sea Otter                   | <i>Enhydra lutris</i>           | Mustelidae       | Ikam'aq        |
| Lynx                        | <i>Felis lynx</i>               | Felidae          | Etertuliq      |
| Northern Sea Lion (Stellar) | <i>Eumetopias jubatus</i>       | Otariidae        | Wiinaq         |
| Harbor Seal                 | <i>Phoca vitulina</i>           | Phocidae         | Qiagyaq        |
| Moose                       | <i>Alces alces</i>              | Cervidae         | Teglliq        |

**Mountain Goat**

**Oreamnos americanus**

***Bovidae***

**Pehnaiq**

|                               |                                    |                                   |           |
|-------------------------------|------------------------------------|-----------------------------------|-----------|
| Yellow-billed loon            | <i>Gavia adamsii</i>               | Gaviidae (Loons)                  | Tuullek   |
| Common loon                   | <i>Gavia immer</i>                 | Gaviidae (Loons)                  | " "       |
| Red-throated loon             | <i>Gavia stellata</i>              | Gaviidae (Loons)                  | " "       |
| Pacific Loon                  | <i>Gavia pacifica</i>              | Gaviidae (Loons)                  | " "       |
| Horned grebe                  | <i>Podiceps auritus</i>            | Podicipedidae<br>(grebes)         |           |
| Red-necked grebe              | <i>Podiceps grisegena</i>          | Podicipedidae<br>(grebes)         |           |
| Northern pintail              | <i>Anas acuta</i>                  | Anatidae (swans,<br>geese, ducks) |           |
| American wigeon               | <i>Anas americana</i>              | Anatidae (swans,<br>geese, ducks) |           |
| Green-winged teal             | <i>Anas carolinensis (crecca)</i>  | Anatidae (swans,<br>geese, ducks) |           |
| Northern shoveler             | <i>Anas clypeata</i>               | Anatidae (swans,<br>geese, ducks) |           |
| Mallard                       | <i>Anas platyrhynchos</i>          | Anatidae (swans,<br>geese, ducks) | Nillqitak |
| Gadwall                       | <i>Anas strepera</i>               | Anatidae (swans,<br>geese, ducks) |           |
| Greater white-fronte<br>goose | <i>Anser albifrons</i>             | Anatidae (swans,<br>geese, ducks) | Temngiaq  |
| Greater scaup                 | <i>Aythya marila</i>               | Anatidae (swans,<br>geese, ducks) |           |
| Bufflehead                    | <i>Bucephala albeola</i>           | Anatidae (swans,<br>geese, ducks) |           |
| Common goldeneye              | <i>Bucephala clangula</i>          | Anatidae (swans,<br>geese, ducks) | Qapugnaq  |
| Barrow's goldeneye            | <i>Bucephala islandica</i>         | Anatidae (swans,<br>geese, ducks) | Qapugnaq  |
| Oldsquaw                      | <i>Clangula hyemalis</i>           | Anatidae (swans,<br>geese, ducks) |           |
| Harlequin duck                | <i>Histrionicus histrionicus</i>   | Anatidae (swans,<br>geese, ducks) |           |
| Common merganser              | <i>Mergus merganser</i>            | Anatidae (swans,<br>geese, ducks) |           |
| Red-breasted merganser        | <i>Mergus serrator</i>             | Anatidae (swans,<br>geese, ducks) |           |
| Canada goose                  | <i>Branta canadensis</i>           | Anatidae (swans,<br>geese, ducks) | Temngiaq  |
| Black brant                   | <i>Branta nigricans (bernicla)</i> | Anatidae (swans,<br>geese, ducks) |           |
| Snow goose                    | <i>Chen caerulescens</i>           | Anatidae (swans,<br>geese, ducks) | Temngiaq  |
| Emperior goose                | <i>Chena canagica</i>              | Anatidae (swans,<br>geese, ducks) | Temngiaq  |
| Tundra swan                   | <i>Olor (Cygnus) columbianus</i>   | Anatidae (swans,<br>geese, ducks) | Qugyug    |

|                          |                                   |  |           |
|--------------------------|-----------------------------------|--|-----------|
| White-winged scoter      | <i>Melanitta deglandi</i>         | geese, ducks)<br>Anatidae (swans,<br>geese, ducks) |           |
| Surf scoter              | <i>Melanitta perspicillata</i>    | Anatidae (swans,<br>geese, ducks)                  |           |
| Black scoter             | <i>Oidemia nigra</i>              | Anatidae (swans,<br>geese, ducks)                  |           |
| Steller's eider          | <i>Polysticta stelleri</i>        | Anatidae (swans,<br>geese, ducks)                  |           |
| Common eider             | <i>Somateria mollissima</i>       | Anatidae (swans,<br>geese, ducks)                  |           |
| King eider               | <i>Somateria spectabilis</i>      | Anatidae (swans,<br>geese, ducks)                  |           |
| Double-crested cormorant | <i>Phalacrocorax auritus</i>      | Phalacrocoracidae<br>(cormorants)                  |           |
| Pelagic cormorant        | <i>Phalacrocorax pelagicus</i>    | Phalacrocoracidae<br>(cormorants)                  |           |
| Brendt's cormorant       | <i>Phalacrocorax penicillatus</i> | Phalacrocoracidae<br>(cormorants)                  |           |
| Red-faced cormorant      | <i>Phalacrocorax urile</i>        | Phalacrocoracidae<br>(cormorants)                  |           |
| Rufous hummingbird       | <i>Selasphorus rufus</i>          | Trochilidae  | Megtarpak |
| Crested auklet           | <i>Aethia cristatella</i>         | Alcidae  |           |
| Kittletz's murrelet      | <i>Brachyramphus brevirostris</i> | Alcidae  |           |
| Marbled murrelet         | <i>Brachyramphus marmoratus</i>   | Alcidae  |           |
| Pigeon guillemot         | <i>Cepphus columba</i>            | Alcidae  |           |
| Rhinoceros auklet        | <i>Cerorhinca monocereata</i>     | Alcidae  |           |
| Parakeet auklet          | <i>Cyclorhynchus psittacula</i>   | Alcidae  |           |
| Tufted puffin            | <i>Fratercula cirrhata</i>        | Alcidae  | Ngaqngaap |
| Horned puffin            | <i>Fratercula corniculata</i>     | Alcidae  | Ngaqngaap |
| Cassin's auklet          | <i>Ptychoramphus aleuticus</i>    | Alcidae  |           |
| Ancient murrelet         | <i>Synthliboramphus antiquus</i>  | Alcidae  |           |
| Common murre             | <i>Uria aalge</i>                 | Alcidae  | Alpaq     |
| Thick-billed murre       | <i>Uria lomvia</i>                | Alcidae  | Alpaq     |
| Semi-palmated plover     | <i>Charadrius semipalmatus</i>    | Charadriidae                                       |           |
| Black-bellied plover     | <i>Pluvialis squatarola</i>       | Charadriidae                                       |           |
| American                 | bl. <i>Haematopus bachmani</i>    | Haematopodidae                                     |           |
| Oystercatcher            |                                   |  |           |
| Herring gull             | <i>Larus argentatus</i>           | Laridae  | Naruyaq   |
| Mew gull                 | <i>Larus canus</i>                | Laridae  | " "       |
| Glaucous-winged gull     | <i>Larus glaucescens</i>          | Laridae  | " "       |
| Glaucous gull            | <i>Larus hyperboreus</i>          | Laridae  | " "       |
| Bonaparte's gull         | <i>Larus philadelphia</i>         | Laridae  | " "       |
| Thayer's gull            | <i>Larus thayeri</i>              | Laridae  | " "       |
| Black-legged kittiwake   | <i>Rissa tridactyla</i>           | Laridae  |           |
| Long-tailed jaeger       | <i>Stercorarius longicaudus</i>   | Laridae  |           |
| Parasitic jaeger         | <i>Stercorarius parasiticus</i>   | Laridae  |           |

|                         |                                 |                      |             |
|-------------------------|---------------------------------|----------------------|-------------|
| Pomarine jaeger         | <i>Stercorarius pomarinus</i>   | Laridae              |             |
| Aleutian tern           | <i>Sterna aleutica</i>          | Laridae              |             |
| Arctic tern             | <i>Sterna paradisaea</i>        | Laridae              |             |
| Sabine's gull           | <i>Xema sabini</i>              | Laridae              | Naruyaq     |
| Spotted sandpiper       | <i>Actitis macularia</i>        | Scolopacidae         | Kulikekiiq  |
| Surfbird                | <i>Aphriza virgata</i>          | Scolopacidae         |             |
| Ruddy turnstone         | <i>Arenaria interpres</i>       | Scolopacidae         |             |
| Black turnstone         | <i>Arenaria melanocephala</i>   | Scolopacidae         |             |
| Sanderling              | <i>Calidris alba</i>            | Scolopacidae         |             |
| Dunlin                  | <i>Calidris alpina</i>          | Scolopacidae         |             |
| Baird's sandpiper       | <i>Calidris bairdii</i>         | Scolopacidae         | Kulikekiiq  |
| Western sandpiper       | <i>Calidris mauri</i>           | Scolopacidae         | " "         |
| Pectoral sandpiper      | <i>Calidris melanotos</i>       | Scolopacidae         | " "         |
| Least sandpiper         | <i>Calidris minutilla</i>       | Scolopacidae         | " "         |
| Rock sandpiper          | <i>Calidris ptilocnemis</i>     | Scolopacidae         | " "         |
| Semi-palmated sandpiper | <i>Calidris pusilla</i>         | Scolopacidae         | " "         |
| Common snipe            | <i>Gallinago gallinago</i>      | Scolopacidae         |             |
| Wandering tattler       | <i>Heteroscelus incanus</i>     | Scolopacidae         |             |
| Short-billed dowitcher  | <i>Limnodromus griseus</i>      | Scolopacidae         |             |
| Long-billed dowitcher   | <i>Limnodromus scolopaceus</i>  | Scolopacidae         |             |
| Whimbrel                | <i>Numerius phaeopus</i>        | Scolopacidae         |             |
| Bristle-thighed curlew  | <i>Numerius tahitiensis</i>     | Scolopacidae         |             |
| Red phalarope           | <i>Phalaropus fulicaria</i>     | Scolopacidae         |             |
| Red-necked phalarope    | <i>Phalaropus lobatus</i>       | Scolopacidae         |             |
| Lesser yellowlegs       | <i>Tringa flavipes</i>          | Scolopacidae         |             |
| Greater yellowlegs      | <i>Tringa melanoleuca</i>       | Scolopacidae         |             |
| Solitary sandpiper      | <i>Tringa solitaria</i>         | Scolopacidae         |             |
| Belted kingfisher       | <i>Ceryle alcyon</i>            | Alcedinidae          | Kulikekiiq  |
| Sharp-shinned hawk      | <i>Accipiter striatus</i>       | Accipiteridae        | Angluqauliq |
| Northern goshawk        | <i>Accipiter gentilis</i>       | Accipiteridae        | Qecu'uliq   |
| Northern harrier        | <i>Curcus cyaneus</i>           | Accipiteridae        | " "         |
| Bald eagle              | <i>Haliaeetus leucocephalus</i> | Accipiteridae        | Saqrtuliiq  |
| Osprey                  | <i>Pandion haliaetus</i>        | Accipiteridae        |             |
| Merlin                  | <i>Falco columbarius</i>        | Falconidae (falcons) |             |
| Peregrine falcon        | <i>Falco peregrinus</i>         | Falconidae (falcons) |             |
| Spruce grouse           | <i>Dendragapus canadensis</i>   | Phasianidae          | Egtugtuliq  |
| Rock ptarmigan          | <i>Lagopus mutus</i>            | Phasianidae          | Qategyuk    |
| Sandhill crane          | <i>rus canadensis</i>           | Gruidae (cranes)     | Tatelggaq   |
| Brown creeper           | <i>Certhia americana</i>        | Certhiidae           |             |
|                         |                                 | (creepers)           |             |
| American dipper         | <i>Cinclus mexicanus</i>        | Cinclidae (dippers)  |             |
| Northwestern crow       | <i>Corvus caurinus</i>          | Corvidae             | Qanitiisaq  |
| Common raven            | <i>Corvus corax</i>             | Corvidae             | Qanitiirpak |
| Steller's jay           | <i>Cyanocitta stelleri</i>      | Corvidae             |             |
| Black-billed magpie     | <i>Pica pica</i>                | Corvidae             |             |
| Lapland longspur        | <i>Calcarius lapponicus</i>     | Emberizidae          | Qallqanaq   |
| Yellow warbler          | <i>Dendroica petechia</i>       | Emberizidae          |             |



|                           |                                  |                  |             |
|---------------------------|----------------------------------|------------------|-------------|
| Townsend's warbler        | <i>Dendroica townsendi</i>       | Emberizidae      |             |
| Rusty blackbird           | <i>Euphagus carolinus</i>        | Emberizidae      |             |
| Dark-eyed junco           | <i>Junco hyemalis</i>            | Emberizidae      |             |
| Lincoln's sparrow         | <i>Melospiza lincolnii</i>       | Emberizidae      | lituyuaq    |
| Savannah sparrow          | <i>Passerculus sandwichensis</i> | Emberizidae      | " "         |
| Fox sparrow               | <i>Passerella iliaca</i>         | Emberizidae      | " "         |
| Snow bunting              | <i>Plectrophenax nivalis</i>     | Emberizidae      |             |
| American tree sparrow     | <i>Spizella arborea</i>          | Emberizidae      | lityuaq     |
| Orange-crowned warbler    | <i>Vermivora celata</i>          | Emberizidae      |             |
| Wilson's warbler          | <i>Wilsonia pusilla</i>          | Emberizidae      |             |
| Golden-crowned sparrow    | <i>Zonotrichia atricapilla</i>   | Emberizidae      | lituyuaq    |
| White crowned sparrow     | <i>Zonotrichia leucophrys</i>    | Emberizidae      | " "         |
| Common redpoll            | <i>Carduelis flammea</i>         | Fringillidae     |             |
|                           |                                  | (finches)        |             |
| Pine siskin               | <i>Carduelis pinus</i>           | Fringillidae     |             |
|                           |                                  | (finches)        |             |
| Rosy finch                | <i>Leucosticte arctoa</i>        | Fringillidae     |             |
|                           |                                  | (finches)        |             |
| Red crossbill             | <i>Loxia curvirostra</i>         | Fringillidae     |             |
|                           |                                  | (finches)        |             |
| White-winged crossbill    | <i>Loxia leucoptera</i>          | Fringillidae     |             |
|                           |                                  | (finches)        |             |
| Pine grosbeak             | <i>Pinicola enucleator</i>       | Fringillidae     |             |
|                           |                                  | (finches)        |             |
| Bank swallow              | <i>Riparia riparia</i>           | Hirundinidae     | La'tackaaq  |
|                           |                                  | (swallows)       |             |
| Tree swallow              | <i>Tachycineta bicolor</i>       | Hirundinidae     | " "         |
|                           |                                  | (swallows)       |             |
| Violet-green swallow      | <i>Tachycineta thalassina</i>    | Hirundinidae     | " "         |
|                           |                                  | (swallows)       |             |
| Northern shrike           | <i>Lanius excubitor</i>          | Laniidae         |             |
| Water pipit               | <i>Anthus spinoletta</i>         | Motacillidae     |             |
| Hermit thrush             | <i>Catharus guttatus</i>         | Muscicapidae     |             |
| Varied thrush             | <i>Ixoreus naevius</i>           | Muscicapidae     |             |
| Ruby-crowned kinglet      | <i>Regulus calendula</i>         | Muscicapidae     |             |
| Golden-crowned kinglet    | <i>Regulus satrapa</i>           | Muscicapidae     |             |
| American robin            | <i>Turdus migratorius</i>        | Muscicapidae     | Keliimaanii |
| Chestnut-backed chickadee | <i>Parus rufescens</i>           | Paridae          |             |
| Red-breasted nuthatch     | <i>Sitta canadensis</i>          | (chickadees)     |             |
|                           |                                  | Sittidae         |             |
|                           |                                  | (nuthatches)     |             |
| Winter wren               | <i>Troglodytes troglodytes</i>   | Troglodytidae    |             |
|                           |                                  | (wrens)          |             |
| Alder flycatcher          | <i>Empidonax alnorum</i>         | Tyrannidae       |             |
| Downy woodpecker          | <i>Picoides pubescens</i>        | Picidae          |             |
|                           |                                  | (woodpeckers)    |             |
| Short-eared owl           | <i>Asio flammeus</i>             | Strigidae (owls) | Yartuliq    |

|                   |                         |                  |     |
|-------------------|-------------------------|------------------|-----|
| Great horned owl  | <i>Bubo virginianus</i> | Strigidae (owls) | " " |
| Snowy owl         | <i>Nyctea scandiaca</i> | Strigidae (owls) | " " |
| Northern hawk-owl |                         | Strigidae (owls) | " " |
|                   | <i>Surnia ulula</i>     |                  |     |

**FISH**

| <b>Common</b>   | <b><u>Genus/Species</u></b>     | <b><u>Family</u></b> | <b><u>Alutiiq</u></b> |
|-----------------|---------------------------------|----------------------|-----------------------|
| Silver Salmon   | <i>Oncorhynchus kisutch</i>     | Salmonidae           | Qakiiyaq              |
| Chum Salmon     | <i>Oncorhynchus keta</i>        | Salmonidae           | Alimaq                |
| King Salmon     | <i>Oncorhynchus tshawytscha</i> | Salmonidae           | Kluq'akaaq            |
| Pink Salmon     | <i>Oncorhynchus gorbuscha</i>   | Salmonidae           | Amartuq               |
| Red Salmon      | <i>Oncorhynchus nerka</i>       | Salmonidae           | Niklliq               |
| Rainbow Trout   | <i>Oncorhynchus mykiss</i>      | Salmonidae           | Saguayaq              |
| Dolly Varden    | <i>Salvelinus malma</i> Walbaum | Salmonidae           |                       |
| Arctic grayling | <i>Thymallus arcticus</i>       | Salmonidae           |                       |
| Longnose sucker | <i>Catostomus datostomus</i>    | Catostomidae         |                       |
| <br>            |                                 |                      |                       |
| <b>Eulacho</b>  | <i>Thaleichthys pacificus</i>   | Osmeridae            |                       |

**APPENDIX C**

**Port Graham Nanwalek Watershed Council**

**Biological Monitoring Program Summary – 1998**

# **Port Graham Nanwalek Watershed Council**

## **Biological Monitoring Program Summary – 1998**

Biological assessment (bioassessment) is the use of living organisms to tell us something about the environment. Because aquatic insects live in streams, they are directly affected by water quality. Streams with good water quality generally have several different types of insects. Streams that have been affected by pollutants generally do not support as many insect groups. Aquatic insects are the “canaries in the coal mine”. They are monitored to indicate potential problems in a watershed before they affect other aquatic resources, such as salmon populations, or human health and safety.

The University of Alaska Anchorage’s Environment and Natural Resources Institute (ENRI) designed a biological monitoring program to provide the Port Graham Nanwalek Watershed Council with a tool to monitor water quality. A summary of biological monitoring activities in the Port Graham and English Bay River basins follows:

- In June, 1998, bioassessments were conducted by ENRI, Chugachmiut, and interested volunteers at each of the eight sampling stations. These samples provided baseline information and allowed volunteers to become familiar with the methods.
- In September, 1998, ENRI and Chugachmiut conducted a Bioassessment Training Workshop. Participants included members of the Port Graham Nanwalek Watershed Council, environmental specialists responsible for the collection of bioassessment data, and interested volunteers. Training included an overview and field demonstration of bioassessment procedures, assessment of four sites established on the English Bay River, and family level identification of insects collected at the four sites. Four participants received a Certificate of Bioassessment Training as a Water Watcher.
- In September, 1998, ENRI and Chugachmiut also conducted a classroom training session for middle and high school students to generate interest in the aquatic resources of the English Bay River, the Port Graham/ Nanwalek biological monitoring program, as well as career opportunities in the environmental field. The training focused on what bioassessment is and how it can be used to evaluate water quality. Students processed samples and identified aquatic insects using the Alaska Volunteer Bioassessment Methods.
- In 1999, ENRI and Chugachmiut would like to conduct a similar 3-day training workshop. The purpose of the training would be to:
  1. Conduct a refresher training workshop for environmental specialists.
  2. Assist environmental specialists with sample collection as needed.
  3. Conduct field training for other interested individuals.
  4. Discuss results of samples collected in 1998.

5. Demonstrate a database designed to manage bioassessment data collected by environmental specialists.

If there were interest, ENRI and Chugachmiut would conduct a similar classroom training session for middle and high school students in 1999. With the permission of the Watershed Council, parents, and teachers, students could conduct their own assessment of one station following a field demonstration of the procedures.

We look forward to working with you again in 1999. Please contact me at (907) 257-2744 or Bill Sobers at (907) 562-4155 if you would like to participate or have any questions.

Lisa Houston  
Environment and Natural Resources Institute  
University of Alaska Anchorage  
707 A Street  
Anchorage AK 99501

**APPENDIX D**

Port Graham/ Nanwalek Watershed Council  
**Tribal Wetlands Survey**

## APPENDIX D

### Port Graham/ Nanwalek Watershed Council

### **Tribal Wetlands Survey**

#### **Purpose Statement**

The Port Graham Nanwalek Watershed Council (PGNWC) would like to conduct a survey of wetlands within each village. The delivery of the survey will aid the PGNWC in identifying wetlands within each watershed that are important to residents. The PGNWC recognizes that the community uses wetlands for many different traditional purposes, for example, fishing, hunting, recreating, and berry picking to name a few. The following reasons for the delivery of a local survey were developed by the PGNWC:

#### **As a Primary Goal:**

To utilize a method for gathering local information about wetland use which will aid in decision making processes for the *tribal* management of wetland resources; and

To make a record of traditional wetland use areas and monitor for changes over time; and

To engage community members in substantial dialogue about important future use and management of wetland resources; and

To create an opportunity for developing partnerships in research management and understanding; and

To pass information onto future generations for both planning purposes and to preserve a traditional use perspective; and

#### **As a Secondary Goal:**

To protect and preserve important wetland areas now, instead of having to fix it later.

To record local value for wetlands which may later be supported by western science methods for assessing wetlands; and

To develop groundbreaking method for incorporating traditional values with western science and then sharing that information with other Tribes.

## **Scope of Survey Work**

Violet Yeaton, Tribal Environmental Specialist in Port Graham, will lead the delivery of wetland surveys to each home in Port Graham and will fulfill the role of Recorder.

Nancy Yeaton, Natural Resource Specialist and Tom Evans, Tribal Environmental Specialist in Nanwalek will deliver the surveys to each home in Nanwalek and will fulfill the role of Recorder. Everyone in the community who would like to participate is welcome. The Recorders will arrive at a home or welcome members of a home to join them in a community meeting place to deliver the survey. Cassette recorders with microphones will be made available to participants so that the Recorder does not miss important information. A translator will be provided upon request.

**Recorders will have a participant release form and an agreement between The Port Graham/Nanwalek Watershed Council and each tribal council. The recorders will explain the purpose and use of the forms to all participants.**

**The time frame for the survey completion is to begin in June 2000 and carry through for as long as it takes, not to exceed six months.**

**Maps of the watershed planning area have been provided to the Recorders to make identification of a wetland easier for the participants and the Recorder.**

**The results of the survey will *remain within the community* and will be kept on file by each tribal council.**

**The results will be compiled and formatted to be included in a narrative report, which will be made available to each tribal council upon completion of the data gathering.**

**Results of the survey will be made available to the community after all results are in and recorded properly.**



# Participant Release Form

## Port Graham/Nanwalek Watershed Council Traditional Wetland Value Survey

### Port Graham/Nanwalek Watershed Council

Elenore McMullen, Co-Chair  
PO BOX 5510, Port Graham, AK 99603  
Phone: (907) 284-2227  
Fax: (907) 284-2222

Tom Evans, Co-Chair  
PO BOX 8065, Nanwalek, AK 99603  
Phone: (907) 281-2214  
Fax: (907) 281-2277

### RELEASE

I, \_\_\_\_\_, understand the purpose of the research project named above, and am willing to participate in this project. The information that I provide in interview sessions will be tape-recorded and will be marked on maps. All such information, including direct quotes, may be used in the final reports, maps and other research products. The Port Graham/Nanwalek Watershed Council will be responsible for writing a report based on information collected in these interviews. A space to note confidential information can be found below. All confidentiality requests will be granted upon participant signature. I also understand that I will review the information documented by the Port Graham/Nanwalek Watershed Council, and that I have the right to correct and edit this information to ensure that it is accurate and that it is not potentially harmful to me or my community.

**This material contains no confidential or sensitive material unless noted here.**

---

In addition:

- Any photos/video of me taken for this project may/may not be used in final reports or research products. Any other use of photographs/video must be agreed to separately.
- My name may/may not be used in final reports or research products.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Address: \_\_\_\_\_

Interpreter (if applicable): \_\_\_\_\_

## Participant Release Form (Continued)

### RIGHT OF REVIEW

The Port Graham/Nanwalek Watershed Council will review draft maps and reports with participants in the project, both to ensure that the information is accurate and to ensure that potentially harmful information, as identified by research participants, is not included in the final reports, maps, and other research products. As Principal Recorder, I, \_\_\_\_\_, promise to conduct/review these sessions and to follow the directions given to me by research participants as the final reports are prepared. All reports, maps, and other research products will be distributed to participants, and their Village Councils.

Signed: \_\_\_\_\_  
\_\_\_\_\_

Date:

# Village Consultation Form

## Port Graham/Nanwalek Watershed Council Traditional Wetland Value Survey

### Port Graham/Nanwalek Watershed Council

Elenore McMullen, Co-Chair  
PO BOX 5510, Port Graham, AK 99603  
Phone: (907) 284-2227  
Fax: (907) 284-2222

Tom Evans, Co-Chair  
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Fax: (907) 281-2277

### DATA OWNERSHIP AGREEMENT

The Port Graham/Nanwalek Watershed Council (PGNWC) is conducting a research project to document traditional ecological knowledge by determining location and use of wetlands in the two watersheds of Port Graham and Nanwalek. The information collected in this study will be compiled into a report and other publications and will also be entered into the PGNWC Geographic Information System (GIS) to prepare maps and computer generated display and analysis of the information.

To ensure that the information collected in this project remains under the control of the villages where the research is conducted, the Port Graham/Nanwalek Watershed Council will:

1. Obtain signed release forms from each of the participants in the project, indicating that the project has been explained to them, and that they are willing to share what they know.
2. Sign a commitment to review all information with the participants before it is published, to make sure that the report is accurate and that it will not adversely affect the use of wetlands in the villages.
3. Sign this agreement with the appropriate tribal government, stating that the project has been approved by the village, and that when the project is over, the data that has been collected will remain under the control of the village, to the best of the PGNWC's ability. Any further use of the original information beyond the PGNWC's

project must first obtain the consent of the tribal government co-signing this agreement. The data will be stored in the place or places mutually agreed upon.

**For the Port Graham/Nanwalek Watershed Council:**

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**For the Community:**

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Title:** \_\_\_\_\_

# Survey Form

Participant ID #

WHAT IS YOUR  
TOP  
PRIORITY?

WHAT IS YOUR  
TOP  
PRIORITY?

|                                      | BO<br>ATI<br>NG | WA<br>LKI<br>NG/<br>HIK<br>NG | RET<br>RE<br>AT<br>(QU<br>IET) | ED<br>UC<br>ATI<br>ON<br>AL | FO<br>OD<br>GA<br>THE<br>RIN<br>G | CUL<br>TU<br>RAL | SPI<br>RIT<br>UAL | ST<br>OR<br>Y<br>TEL<br>LIN<br>G | ME<br>DICI<br>NAL | EC<br>ON<br>OMI<br>C<br>US<br>E | OT<br>HE<br>R | SP<br>RIN<br>G | SU<br>MM<br>ER | FAL<br>L | WIN<br>TER |
|--------------------------------------|-----------------|-------------------------------|--------------------------------|-----------------------------|-----------------------------------|------------------|-------------------|----------------------------------|-------------------|---------------------------------|---------------|----------------|----------------|----------|------------|
| <b>VEGETATION</b>                    |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>HERBS:</b>                        |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>GRASSES:</b>                      |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>SHRUB/TREE:</b>                   |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>PLANTS:</b>                       |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>BERRIES:</b>                      |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>ROOTS:</b>                        |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>MUSHROOM<br/>FUNGUS</b>           |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>GOOSE TONGUE<br/>SEAWEED/KELP</b> |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>LARGE ANIMALS</b>                 |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>MOOSE</b>                         |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>BEAR</b>                          |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| <b>GOAT</b>                          |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |
| -----                                |                 |                               |                                |                             |                                   |                  |                   |                                  |                   |                                 |               |                |                |          |            |

|                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| <b>SMALL ANIMAL</b> |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| PORCUPINE           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RABBIT              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SQUIRREL            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| GROUSE              |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| WATERFOWL           |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| <b>FISH</b>         |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FISH EGGS:          |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SALMON:             |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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|                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

|              |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
|--------------|-----|------|------|-----|-----|-----|-----|-----|------|-----|----|--------|-----|----|-----|-----|
| WHAT?        |     |      |      |     |     |     |     |     |      |     |    | WHEN ? |     |    |     |     |
|              | BO  | WA   | RET  | ED  | FO  | CUL | SPI | ST  | ME   | EC  | OT |        | SP  | SU | FAL | WIN |
|              | ATI | LKI  | RE   | UC  | OD  | TU  | RIT | OR  | DIGI | ON  | HE |        | RIN | MM | L   | TER |
|              | NG  | NG   | AT   | ATI | G   | RAL | UAL | Y   | NAL  | OMI | R  |        | G   | ER |     |     |
|              |     | HIKI | (QU  | ON  | THE |     |     | TEL |      | C   |    |        |     |    |     |     |
|              |     | NG   | NET) | AL  | RIN | G   |     | LN  |      | US  |    |        |     |    |     |     |
|              |     |      |      |     |     |     |     | G   |      | E   |    |        |     |    |     |     |
| <b>FISH</b>  |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| SHELLFISH:   |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
|              |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
|              |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| DOLLY VARDEN |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| TROUT        |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| STEELHEAD    |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| <b>OTHER</b> |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| SOIL         |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| AIR          |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| WATER        |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| STREAMS      |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| LAKES        |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| OCEAN        |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| MEADOWS      |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| BEACH        |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |
| MOUNTAINS    |     |      |      |     |     |     |     |     |      |     |    |        |     |    |     |     |



# SURVEY FORM INSTRUCTIONS

This sheet was put together to assist the surveyor and participant in the survey with any questions they might have regarding the survey form. The following information is designed to take the interviewer through each step of filling out the survey form beginning at the top.

## **SURVEY #:**

This should be filled in with the number assigned to the participant in the study. Each participant will be assigned a number, instead of using their name, to keep the surveys anonymous. For residence of Port Graham the number assigned will start with PG plus a number (PG1, PG2, PG3, etc.). For Nanwalek the number assigned will start with NA plus a number (NA1, NA2, NA3, etc.). The information collected is expected to be available to the Port Graham/Nanwalek Watershed Council, Village Councils, and participants in the study. Be sure to identify the survey participant number prior to interview for accuracy in audio recording.

## **DATE:**

Insert the date the survey was taken.

## **Participant ID #:**

This should be filled in with the participant ID #, (PG1, PG2, NA1, NA2, etc.)

Participant's number



Village code → PG1A ← Survey form page letter

## **Page Number ID:**

Up to five resources can be identified on each survey form. To differentiate easily between wetland resources on a single survey form, five different color markers will be used on the map to distinguish between resources if desired, i.e. berries, salmon, grasses, moose, herbs- PG1A...etc.

## **Wetland Location ID:**

On the topographic maps provided, the area representing a township is six square miles. Within each of those townships are thirty-six one square mile sections. All coordinates found within the Port Graham /Nanwalek Watershed planning area are consistently Northern townships and Western ranges. The wetland location ID includes the recording of a Township (T), Range (R) and Section (S) and will identify a wetland area. The resulting location ID number will look like T1N, R1W, S22.

## **WHAT?**

The "WHAT?" refers to the natural resource being used.

## **NATURAL RESOURCES:**

The resources are split into five categories (vegetation, large mammals, small mammals, fish, and other). The participant will choose the resources that they use at color coded



sites on the aerial survey map. There are spaces under some resources to write in a more specific resource used (i.e.: under berries you might write blueberries cranberries or salmonberries). There is also space on the second page to list additional resources that are not already listed under one of the five categories.

#### **WHEN?**

Refers to the season the resource is being used.

The time of year the resource is used should be marked in this box. Be sure to use the corresponding colored pen. The seasons that the resource is used can overlap. Extra room in the comment section has been provided to write more specific information regarding the time of year the resource is used, such as a specific month.

#### **COMMENTS:**

This is the section to write any information that the participant wants to add but did not have the room for on the first two pages. This would also be a good place for participants to explain why they don't use a certain resource or why they don't use them during a certain time of year. Remember to include the reasons people don't use resources in specific sights. These areas can be just as important as the reasons they do use them.

#### **MYLAR**

This is a thin plastic covering to place on the aerial photo. Using a permanent colored marker you can mark, directly on the Mylar, the resource use areas being discussed.

#### **OPTIONAL: WHY?**

Refers to the *reason* (i.e. cultural, spiritual, recreational) for using the resource. This may be added later with reference to the audio recording. The original database will be developed with information on which resource is used, along with where and when. A column with this particular information (Why) may be easily added to the survey form sheet at a later date.

Using a colored pen, corresponding to the resource on the aerial survey map, the surveyor will mark the reason for using that particular resource. In order to assure the resource is assigned to the correct area on the map, work with one resource at a time. Be sure to use a different colored marker for each resource on a map.

Additional information regarding *why* a resource is used can be placed in the "comments" section.

**APPENDIX E**

**PGNWC Video, Brochure & Airport Display**

**APPENDIX F**

**PGNWC Geographic Information System**