

Draft for public review:
A policy for the
stewardship of Yukon's
wetlands
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1 1. Introduction

2 Wetlands are areas that typically have water at, or near, the ground surface during some or all
3 of the year. These areas can be considered wetlands if the water is present long enough for
4 poorly drained soils to form, and for water-loving plants to become the dominant type of plant
5 in the area. There are five classes of wetlands: bogs, fens, marshes, swamps and shallow open
6 water wetlands.

7 Wetlands are dynamic and highly variable; their appearance and the plants that are found
8 within them can change from year to year and even throughout the year. While some wetlands
9 have water at or near the surface year-round, in many other wetlands the water may not be
10 visible. In addition, some areas of Yukon are wetlands because of the presence of permafrost,
11 which helps retain moisture near the surface.

12 There is a diversity of wetlands in Yukon, each with different functions and benefits based on
13 the ecological characteristics of the specific wetland. These are described in the following table
14 as foundational knowledge for this policy. Wetlands are also places where human activities can
15 be concentrated and economic wealth generated, which is a factor considered as part of
16 environmental assessment and regulatory review.

17



18 **Table 1:** Brief description of the functions occurring within wetlands and the ecological and
 19 cultural benefits derived from those functions. Whether a wetland provides these
 20 benefits and functions depends on its ecological characteristics.

	Function	Benefit
Hydrological (Water)	Water storage and regulation	Flood and drought resilience; support of aquatic life; groundwater recharge for drinking water availability
	Water temperature regulation	Fish and wildlife habitat, particularly during overwintering and the early spring
	Water quality regulation and filtration	Maintain water quality
	Erosion control	Prevent shoreline erosion
Biophysical (Land)	Terrestrial and aquatic habitat	Maintain stable and healthy fish and wildlife populations
	Biological diversity	Ecological resilience
	Natural wildfire protection barrier	Public safety and infrastructure protection
Chemical	Carbon storage and release	Influencing atmospheric carbon and climate change
	Nutrient cycling	Maintain water quality
Social and cultural	Sense of place	Cultural wellbeing
	A place for practicing cultural pursuits (hunting, fishing, gathering)	Cultural wellbeing, providing traditional medicines and foods
	Recreational use and appreciation	Social wellbeing



21 Unlike many other parts of the world (and Canada), the relatively small human activity footprint
22 in the territory¹ suggests wetlands are relatively intact and healthy at a territory-wide scale. At
23 a local scale, some places in Yukon may have experienced significant wetland alteration,
24 degradation and loss.

25 2. Policy goal

26 The Government of Yukon recognizes the intrinsic value of wetlands, their importance to
27 ecosystems, and the benefits they provide to people. Guided by this policy, by the best
28 available knowledge, and by respect for the knowledge, culture and rights of Yukon Indigenous
29 Peoples, **the Government of Yukon will work to ensure the benefits of Yukon's wetlands are**
30 **sustained for all.**

31 Specifically, through implementation of this policy the Government of Yukon will work towards:

- 32 1. improving our knowledge and understanding of Yukon's wetlands;
- 33 2. identifying and protecting Wetlands of Special Importance; and
- 34 3. managing the impacts of human activities on wetlands by implementing a mitigation
35 hierarchy.

36 This policy is a high-level, principles based document that is not intended to give direction at a
37 project or sector level. Throughout this policy, various commitments are identified. Areas where
38 additional guidance needs to be developed are also noted. Appendix A provides a list of actions
39 needed to achieve these commitments, along with timelines for their completion, and interim
40 approaches.

41 3. Scope of application

42 This policy applies to all wetlands in Yukon where the Government of Yukon has decision-
43 making authority and applies to all land uses and resource sectors under the control and
44 administration of the Government of Yukon. It will guide the Government of Yukon in the

¹ The actual human footprint in Yukon is expected to be similar to Alaska where 95% of the state is considered pristine. See Trammell and Aisu (2015) report Development of landscape integrity dataset for the Alaska Crucial Habitat Assessment Tool, available online at: <http://accs.uaa.alaska.edu/publications>.

45 evaluation of proposed projects, the issuance of permits, licences and authorizations, and in
46 land use and protected area planning. For further clarity, this policy does not change any
47 existing private property rights.

48 By working collaboratively to develop this policy, the Government of Yukon hopes this policy
49 will provide useful guidance for other governments and agencies in Yukon when considering
50 wetlands within their jurisdiction.

51 4. Guiding principles

52 The Government of Yukon recognizes that our stewardship decisions must be:

- 53 • Informed by, and respect, all forms of knowledge—including equal consideration of
54 traditional, local and scientific knowledge.
- 55 • Informed by and consistent with existing processes outlined in Yukon land claim
56 agreements and legislation.
- 57 • Informed by and consistent with Indigenous rights and commitments described in
58 existing treaties, agreements, legislation, the Truth and Reconciliation Commission Final
59 Report, and the Canadian Constitution.
- 60 • Adaptive to new information and forward-looking to anticipate future changes and
61 needs.

62 The Government of Yukon developed this policy through a collaborative approach with First
63 Nations and transboundary Indigenous groups, boards and councils, municipal and federal
64 governments, industry representatives and non-governmental organizations. Out of the
65 dialogue, First Nations and transboundary Indigenous groups consistently brought forward
66 three concepts:

- 67 • The importance of taking a **holistic** approach that considers wetlands as an integral part
68 of an interconnected system.
- 69 • The importance of **respecting** the land.
- 70 • The concept of **reciprocity**, whereby we must give back to the land when we take from
71 the land.



72 Decisions about the stewardship of Yukon's wetlands must recognize and consider these
73 concepts.

74 5. Definitions

75 *Ecological characteristics* – the specific biological, hydrological, chemical, physical and
76 environmental characteristics of a wetland, and the processes resulting from these
77 characteristics.

78 *Wetland benefits* – the ecological and cultural benefits that result from the specific
79 characteristics of a wetland and the processes occurring within the wetland;
80 including hydrological, biophysical and chemical benefits, as well as benefits to
81 people.

82 *Wetland* – an area that is saturated with water long enough to promote wetland or aquatic
83 processes, as indicated by poorly drained soils, water-loving (hydrophytic)
84 vegetation and various kinds of biological activity which are adapted to a wet
85 environment (National Wetlands Working Group, 1997). A wetland may include
86 multiple associated wetland classes.

87 *Wetland class* – The Canadian Wetland Classification System divides wetlands into 5 classes
88 based on how they are formed and their ecological characteristics: bog, fen, marsh,
89 swamp, and shallow open water wetland classes.

90 *Human activity* – includes all types of human activity that could impact wetland benefits and
91 are under the control and administration of the Government of Yukon. This
92 includes, but is not limited to, road development, municipal development, resource
93 exploration and extraction, and agricultural development.

94 *First Nations and transboundary Indigenous groups* – For the purposes of this policy, when this
95 term is used we are referring to the 14 Yukon First Nations, Acho Dene Koe First
96 Nation, Taku River Tlingit First Nation, Inuvialuit, Gwich'in Tribal Council, Dease
97 River First Nation, and Kwadacha Nation.

98 Upland – an area with well-drained soils that is not affected by high water table or excess
99 surface water, or if affected, only for short periods such that hydrophytic
100 vegetation or aquatic processes do not exist.

101 Wetland inventory – a database or resource that provides detailed information on the
102 abundance, characteristics, and distribution of wetlands.

103 Yukon Bioclimate Ecosystem Classification – a framework for describing and grouping similar
104 portions of a landscape based on climatic and site-level characteristics. This
105 framework is based on the Biogeoclimatic Ecosystem Classification system of
106 British Columbia.

107 Stewardship – an approach for shepherding and safeguarding ecosystem values which
108 recognizes that people are an integral component of the system, accepts a sense
109 of responsibility for the state of the system and works to anticipate change and
110 shape responses for sustainability in a manner that does not lead to loss of future
111 options.

112 Ecological or management threshold – an ecological threshold is the point at which a
113 substantive or non-linear change in the dynamics or distribution of an individual
114 organism, population, or community is observed relative to some level of
115 disturbance. Ecological thresholds can be challenging to define, leading to use of a
116 management threshold, established at a regional or local level, that is a defined
117 magnitude or extent of human disturbance that is permitted after which
118 unacceptable ecological change or conservation risk is expected.

119 Protected area – land that has been withdrawn from resource and industrial development—
120 mining, oil and gas, logging, dams and land dispositions—and where conservation
121 and maintaining cultural values are the primary objective within the area.

122 6. Building knowledge

123 This policy has been developed using the best available knowledge related to Yukon's
124 wetlands. However, the implementation of this document must be responsive to new



125 information and adaptive to an improved understanding of Yukon’s wetlands and the effects of
126 a changing climate.

127 Building knowledge of wetlands, and addressing current and future knowledge gaps, will
128 improve our stewardship decisions. This includes recognizing and respecting all sources of
129 knowledge, giving equal consideration to traditional, local, and scientific knowledge.

130 6.1. Commitment

131 The Government of Yukon will seek to improve knowledge and understanding of wetlands in
132 Yukon through:

- 133 • Creating a broad scale territory-wide wetland inventory within 5 years of policy
134 approval;
- 135 • Supporting detailed inventories where needed;
- 136 • Promoting research on northern wetlands, and
- 137 • Promoting public awareness, understanding and stewardship of wetlands.

138 6.2. Support wetland inventory

139 Understanding and mapping wetlands in Yukon are integral to the success of this policy. This
140 information serves as the foundation for determining how to manage human impacts on
141 wetlands.

142 The Government of Yukon’s Ecological and Landscape Classification Program has developed a
143 Yukon Bioclimate Ecosystem Classification, which includes details on how to classify wetlands.
144 This approach builds on the five major classes of wetlands identified in the Canadian Wetland
145 Classification System (i.e., bog, fen, marsh, swamp and shallow open water). The Government
146 of Yukon will continue to develop products to support wetland identification and classification
147 in the territory. In addition, the Government of Yukon will develop clear methodologies and
148 acceptable standards for wetland inventory as part of implementation of this policy.

149 Wetlands can be inventoried through a variety of approaches. At this time, territory-wide
150 wetland inventories exist for Yukon, but are either dated or at very coarse resolution, and do not
151 distinguish wetlands by class. Ecosystem mapping developed to support Regional Land Use
152 Planning also includes identification of wetlands at a broad scale. These products have been



153 completed for the North Yukon, Peel and Dawson planning regions. They do not identify
154 wetlands to the level of class. There is a need for an improved broad-scale inventory to support
155 the Government of Yukon's stewardship decisions regarding wetlands. The Government of
156 Yukon will work collaboratively with First Nations and transboundary Indigenous groups to
157 develop these broad-scale inventory.

158 Where more detailed mapping has been required, watershed level products have been
159 developed at a class level or more detailed (e.g., within Indian River watershed and Beaver
160 River watershed). The Government of Yukon will work collaboratively with First Nations and
161 transboundary Indigenous groups to support watershed level inventory in areas of high priority
162 and will ensure this information becomes publicly available. The Government of Yukon will
163 work with proponents to ensure that wetland inventory conducted at a project scale is collected
164 pursuant to approved methodologies and standards.

165 6.3. Promote research on northern wetlands

166 Partnership and collaboration is essential to increasing our collective knowledge. How we build
167 this knowledge is as important as the research that is completed. To that end, it is important to
168 foster community-led research to ensure local perspectives and needs are fully integrated into
169 the research agenda and that community capacity is generated. In addition, the Government of
170 Yukon will continue to support local, national, and international partnerships to increase
171 knowledge of northern wetlands. In promoting northern wetland research, the Government of
172 Yukon will ensure that knowledge gained is shared.

173 The following research themes are identified as priorities to enhance the Government of
174 Yukon's ability to steward Yukon's wetlands and include:

- 175 • Status and trends of Yukon's wetlands to define baseline distribution of wetlands,
- 176 • Relationship between permafrost and wetlands,
- 177 • Effective strategies to reclaim wetlands and restore their benefits in northern
178 environments,
- 179 • Effects of northern wetlands on the carbon cycle,
- 180 • Effects of a changing climate on wetlands,



- 181 • Ecological resilience of northern wetlands with a focus on determining ecological or
182 management thresholds, and
183 • Measurable indicators of wetland health and benefits.

184 6.4. Promote public awareness, understanding and stewardship
185 of Yukon’s wetlands

186 Public awareness of the benefits that wetlands provide is important to ensure activities in and
187 around wetlands are conducted in a responsible manner. There is also a need to encourage and
188 support individual and organizational stewardship of wetlands.

189 The Government of Yukon will work with its partners to improve wetland education,
190 communicate the benefits of wetlands to the public, and support active local participation in
191 wetland stewardship.

192 7. Protection of Wetlands of Special
193 Importance

194 While all wetlands are important ecosystems, the Government of Yukon recognizes that some
195 wetlands merit protection or special mitigation requirements by virtue of their unique ecological
196 characteristics and the benefits derived from them. Many of Yukon’s existing or identified
197 protected areas include wetlands within their boundaries. Some of these areas were identified
198 for protection based, in part, on the importance of their wetlands. However, for wetlands
199 outside of established protected areas, listing as a Wetland of Special Importance can be used
200 to protect wetland benefits during regulatory review and planning processes.

201 7.1. Commitment

202 The Government of Yukon commits to achieving no loss of wetland benefits within Wetlands of
203 Special Importance. The Government of Yukon will achieve this by:

204 applying appropriate mitigation measures during regulatory review processes; and

205 considering appropriate protection measures for listed Wetlands of Special Importance and
206 wetlands that meet the below criteria during planning processes.



207 Existing authorizations and tenure will be honoured by the Government of Yukon and will not
208 affected by listing a Wetland of Special Importance. New and renewed authorizations in a
209 Wetland of Special Importance are required to ensure no loss of wetland benefits.

210 7.2. Wetlands of Special Importance and planning processes

211 Land use and management plans provide direction on the management of human activities and
212 stewardship actions, and can effectively balance competing interests on specific areas of
213 land. Plans are targeted to specific scales, including local area, district, sub-regional and
214 regional. They may be created through negotiated agreements, or through other collaborative
215 processes.

216 Implementation of land use or management plans may lead to legally-binding protection of
217 wetlands via various legislation, such as the Yukon's *Parks and Land Certainty Act*,
218 *Environment Act*, and *Wildlife Act*.

219 Plans are complex documents that take time to complete. Threats to a wetland area may need
220 to be addressed in advance of the completion of a plan. Nomination and listing of areas as a
221 Wetland of Special Importance can be used as a tool to require specific mitigation measures to
222 safeguard wetland benefits in advance of plan completion. Wetlands of Special Importance are
223 also a flexible tool for protecting wetland benefits, as they do not limit adjacent activities within
224 a larger planning area.

225 7.3. Wetlands of Special Importance and environmental 226 assessment

227 When a project is proposed in Yukon, whether on federal, territorial, First Nation, or private
228 lands, it may need to be assessed under the *Yukon Environmental and Socio-Economic*
229 *Assessment Act* or through environmental assessment screening processes outlined in the
230 *Inuvialuit Final Agreement*.

231 If an activity is proposed within a listed Wetland of Special Importance and the activity is likely
232 to result in loss of wetland benefits, the Government of Yukon will provide a recommendation in
233 its response to the environmental assessment, outlining any required mitigations measures

234 consistent with this policy. The Government of Yukon's regulatory decisions must also be
235 consistent with this policy.

236 7.4. Criteria

237 The following criteria will be used to assist with evaluating and making a decision about
238 whether a wetland is listed as a **Wetland of Special Importance**. The proposed area will be
239 evaluated based on its wetland benefits (Table 1), and the below criteria. If a wetland meets
240 more than one criteria, it will have higher consideration than a wetland which meets only one
241 criteria.

242 The criteria for a Wetland of Special Importance include that it is:

- 243 • Significant social or cultural importance, as identified by a Yukon First Nation or
244 transboundary Indigenous group.
- 245 • Identified as a **Wetland of International Importance**² (a "Ramsar Site") or as a national
246 or international **Key Biodiversity Area**³.
- 247 • **Critical Habitat**⁴ for the recovery of one or more federally listed species at risk.
- 248 • Key habitat required for the continued survival and optimal productivity of fish or wildlife
249 in Yukon.
- 250 • A rare or threatened type of wetland in Yukon.
- 251 • An important source of surface and/or groundwater for a Yukon community.
- 252 • Important flood control upstream of a community.
- 253 • Critical water filtration downstream of sources of impacted waters.

2 **Wetland of International Importance** – a wetland which has been formally listed under the international Convention on Wetlands (Ramsar, 1971) and is recognized by the international community as being of significant value not only for the country, or the countries, in which they are located, but for humanity as a whole. In Yukon, the Old Crow Flats is listed as a Wetland of International Importance.

3 **Key Biodiversity Area** – an area or site that contributes significantly to the global persistence of biodiversity. The area or site must meet the criteria outlined in the new KBA Standard developed by an International Union on the Conservation of Nature Task Force and recommended for use in Canada by the Pathway to Target 1 National Advisory Panel.

4 **Critical Habitat** – the habitat necessary for the survival or recovery of a species listed under the Canadian Species at Risk Act (2002) as endangered or threatened, and identified in the recovery strategy or in an action plan for the species.

- 254 • An intact representative wetland in a watershed where further alteration or loss will
255 cross an accepted ecological or management threshold.

256 These criteria will also inform the Government of Yukon's approach to considering wetlands
257 within planning processes.

258 7.5. Nomination and listing of Wetlands of Special Importance

259 Wetlands may be nominated as Wetlands of Special Importance by a government or by a
260 board or council which has the authority to make recommendations to the Government of
261 Yukon. The Government of Yukon will perform an initial evaluation to ensure there is adequate
262 information and to determine overlap with other administrative land parcels. The boundary of a
263 proposed Wetland of Special Importance should be inclusive of the entire wetland area
264 (including wetland complexes) as well as areas surrounding the wetland that would impact the
265 wetland if developed. The Government of Yukon may amend boundaries based on available
266 wetland inventory.

267 If a nominated area includes Settlement or private lands, the department will first consult the
268 First Nation or landowner to determine whether they support listing the area as a Wetland of
269 Special Importance. If they do not support the listing, the nomination will either be refined to
270 exclude the Settlement or private lands or it will not proceed.

271 The Government of Yukon will make a decision on listing an area as a Wetland of Special
272 Importance after consultation with the relevant First Nations and transboundary Indigenous
273 groups. The decision will be based on (1) input received from consulted governments; (2) how
274 the proposal meets Wetland of Special Importance criteria; and (3) an assessment of economic
275 impacts and legal risks.

276 Following a decision, the Government of Yukon will update a publicly accessible catalogue of
277 Wetlands of Special Importance.

278 A Wetland of Special Importance may be considered for removal from the list by a formal
279 written request from a government or board or council. The Government of Yukon will make a
280 decision about removal of a listed Wetland of Special Importance after consultation with the
281 relevant First Nations and transboundary Indigenous groups and, if applicable, the landowner.



282 7.6. Mitigation requirements for Wetlands of Special Importance

283 Where human activities overlap a Wetland of Special Importance, the Government of Yukon
284 will require specific mitigation measures to demonstrate how the activity can avoid impacting
285 wetlands and achieve no loss of wetland benefits. Activities which impact wetland benefits, but
286 where wetland benefits could be reclaimed or restored post-disturbance, are not consistent
287 with the commitment to no loss of wetland benefits.

288 Common mitigations may include, but are not limited to:

- 289 • No removal of wetlands of any class, as measured by a decrease in the areal extent of
290 wetlands within the Wetland of Special Importance shall be permitted to occur.
- 291 • No alteration or conversion of wetlands from one class to another within the Wetland of
292 Special Importance shall be permitted to occur.
- 293 • No permanent structures can be built within the mapped extent of a Wetland of Special
294 Importance.
- 295 • No semi-permanent or permanent structures which, if constructed, would result in
296 alteration of the water quality, quantity or rate of flow within a Wetland of Special
297 Importance.

298 If a proposed activity is deemed necessary to Yukon society, there may be circumstances where
299 it may be allowed to impact a listed Wetland of Special Importance. The Government of Yukon
300 would consult with the affected First Nations and transboundary Indigenous groups and the
301 public before allowing the activity to occur. If allowed, then avoidance, minimization and
302 reclamation of impacts to wetlands is required. Should those efforts be insufficient to mitigate
303 all impacts, additional measures to offset impacts may be considered for the activity to proceed.

304 8. Managing human impacts

305 Managing human activities that impact wetland benefits is an essential component of ensuring
306 sustainable and responsible economic development. Human activities that impact wetland
307 benefits include those activities occurring directly within a wetland, and those activities
308 occurring adjacent to a wetland which may impact the wetland, for example through altering
309 local hydrologic connectivity.



310 While this policy provides an overarching approach to managing human impacts, more specific
311 policies and guidance may be developed where there are local, regional, or sectoral concerns. In
312 those instances, this policy provides the foundation for development of additional guidance.

313 8.1. Commitment

314 The Government of Yukon will manage the impacts of human activities on wetlands by
315 implementing a mitigation hierarchy—a set of sequential and prioritized steps that must be
316 followed to minimize the loss and degradation of wetland benefits. Through this mitigation
317 hierarchy, proponents will be expected to demonstrate how and to what extent they will:

- 318 1. Avoid impacting wetlands;
- 319 2. Minimize unavoidable impacts;
- 320 3. Reclaim impacted wetlands; and
- 321 4. If required, offset residual wetland impacts.

322 8.2. Guiding principles for managing wetland impacts

323 Determining whether proposed mitigation actions are sufficient is a complex decision that must
324 consider the specific context for the proposed human activities. The following principles will
325 guide decisions about managing the impacts of human activities on wetlands. Implementation
326 guidance documents will provide additional clarity on the application of these principles to
327 activities impacting wetlands in Yukon and how the mitigation hierarchy will apply.

- 328 • All projects will seek to avoid or minimize the loss of wetland benefits.
- 329 • Loss of wetland benefits is permissible in some circumstances, but cumulative wetland
330 loss must remain below the accepted ecological or management threshold for the
331 watershed.
- 332 • Some wetlands warrant more restrictive mitigation controls:
 - 333 ○ Mitigation requirements are higher for those wetlands in watersheds that
334 already have high loss of wetland benefits (i.e., heavily impacted areas).
 - 335 ○ Mitigation requirements are higher for those wetlands that cannot be effectively
336 reclaimed within a reasonable timeframe.
- 337 • Evaluation of proposed mitigation measures is an iterative and adaptive process which
338 recognizes that as these measures progress through the mitigation hierarchy, there is:



- 339 ○ Increasing risk of a time lag between lost and recovered wetland benefits;
- 340 ○ Decreased probability of mitigation success; and
- 341 ○ Increased costs of mitigation measures.
- 342 ● Best available information, including local and Traditional Knowledge, is used to guide
- 343 decisions and this may evolve as more information is available about Yukon's wetlands
- 344 and their reclamation.
- 345 ● Where permanent loss of wetland benefits would result from a specific activity, a higher
- 346 priority is placed on avoidance and minimization. Offsetting loss of wetland benefits
- 347 may be required.
- 348 ● Human activities that result in the removal and loss of wetlands contribute to
- 349 greenhouse gas emissions, and therefore reducing wetland losses supports the
- 350 Government of Yukon's commitment to achieving its emissions targets.

351 For any proposed human activity that impacts wetland benefits, a plan outlining wetland
352 impact mitigations will be required. This plan will outline measures taken to minimize impacts
353 to wetland benefits, including consideration of each level of the mitigation hierarchy.

354 Wetland impact mitigations may be described within documents supplied during environmental
355 assessments, in existing plan requirements (e.g., Timber Harvest Plans for forestry), or within
356 documents required during regulatory review. Additional sectoral or regional guidance may be
357 developed to support the implementation of this policy.

358 8.3. Avoid impacting wetlands

359 Avoiding impacts is the preferred and most effective way to protect and conserve wetland
360 benefits. Avoidance practices are proactive measures taken to prevent adverse effects to
361 wetlands.

362 Examples of measures that can be undertaken to avoid impacts on wetland benefits include,
363 but are not limited to:

- 364 ● (Re)locating the activity, or parts of the activity;
- 365 ● (Re)designing the activity to avoid impacting wetland benefits;
- 366 ● Scheduling activities to take place at a time that would avoid impacting wetland
- 367 benefits; and



368 • Not undertaking certain activities.

369 Based on the type of human activity, avoiding loss of wetland benefits may not be possible.

370 8.4. Minimize unavoidable impacts

371 If impacts to wetlands cannot be completely avoided, the proponent will be responsible for
372 demonstrating how they will minimize their impacts to wetland benefits. Minimization refers to
373 the reduction or control of adverse effects on wetland benefits through project modification or
374 implementation under approved conditions. It would be practiced after all reasonable attempts
375 to avoid impacts have been undertaken.

376 Examples of measures that can be undertaken to minimize impacts on wetland benefits include,
377 but are not limited to:

- 378 • Physical controls: adapting the physical design of infrastructure to reduce potential
379 impacts, e.g., culverts and clear span structures to maintain water connectivity,
380 sedimentation trapping structures to reduce sediment runoff, etc.
- 381 • Operational controls: managing and regulating the activities of people associated with
382 the project, e.g., changing operational procedures and staff training, restricting roadway
383 access to minimize increased human access to wetlands, scheduling activities to
384 minimize impacts, etc.
- 385 • Abatement controls: reducing levels of pollution (emissions of dust, chemicals, light,
386 noise, etc.), through reduction of sources or barriers

387 8.5. Reclaim impacted wetlands

388 Where human activities result in unavoidable impacts to or loss of wetland benefits, the
389 proponent will be responsible for demonstrating how and to what extent they will
390 progressively reclaim wetlands to restore wetland benefits throughout the life of, and at the
391 completion of, the activity. Reclamation refers to specific measures taken to recreate self-
392 sustaining wetland environments following disturbance, and strive, as much as possible, to
393 provide similar wetland benefits.

394 Some wetlands cannot be effectively recreated within a reasonable timeframe. For example, it
395 is not currently feasible to recreate peatlands due to the time required to accumulate partially



396 decomposed organic matter and restore wetland hydrology. Similarly, degradation or loss of
397 permafrost can alter an area's hydrology (e.g., through lowering the water table), which makes
398 it difficult to establish self-sustaining wetlands post reclamation until the permafrost is
399 regenerated.

400 Reclamation of wetlands to the same wetland class as they were prior to impacts is preferred
401 as it will result in restoration of similar wetland benefits. Where this cannot be reasonably
402 achieved, reclamation which results in different but valuable wetland benefits may be
403 acceptable, subject to the guiding principles for evaluating the mitigation hierarchy.
404 Reclamation resulting in changes in wetland class can result in increases in some wetland
405 benefits; however, these increases must be considered in the context of the lost benefits
406 provided by the original wetland. Recognizing that wetlands are part of a connected
407 ecosystem, reclamation resulting in a mix of related wetland and upland environments will be
408 considered, as this can provide valuable benefits.

409 Further general wetland reclamation guidelines, as well as sector specific guidance, may be
410 necessary to inform the Government of Yukon's evaluation of proposed reclamation activities.

411 8.6. Offset residual wetland impacts

412 If human activities result in the permanent loss of wetland benefits through direct loss or failed
413 reclamation efforts, additional mitigation measures to offset losses may be required. This
414 should be considered as a last resort, and only after best efforts to avoid, minimize and reclaim
415 lost wetland benefits have been considered.

416 Offsetting wetland impacts can be accomplished through restoration activities outside of the
417 affected area, such as enhancing or recreating wetlands that have been previously impacted or
418 lost to compensate for lost benefits. Offsetting can also be accomplished through supporting
419 other initiatives, such as funding research. Specific guidance documents around wetland offsets
420 will be developed to support implementation of this policy.



421 9. Implementation and evaluation

422 Implementing the Wetland Policy will be a government-wide initiative. The Government of
423 Yukon will work with partners including First Nation and transboundary Indigenous groups,
424 municipal and federal governments, non-governmental organizations, businesses, academic
425 institutions, and the public to fulfill the objectives of this policy.

426 This policy is based on our best available knowledge determined through the collaborative
427 development of this policy; however, new information will improve our ability to steward
428 Yukon's wetlands and this policy will be adaptable to respond to new information.

429 This policy provides the framework for how the Government of Yukon will steward wetlands,
430 however, in some areas additional information must be collected to support implementation of
431 this policy. Where further information is required, additional documents and guidance will be
432 developed (see Appendix A).

433 The evaluation of progress on the specific actions outlined in this policy will consist of two
434 levels of review:

435 1. Implementation action tracking and review. Yearly tracking of progress on
436 implementation actions through the annual State of Environment Report. An
437 implementation report will be completed every 5 years.

438 The following metrics will be considered when tracking implementation:

- 439 ○ Wetlands that are designated as protected areas.
- 440 ○ Wetlands identified as Wetlands of Special Importance.
- 441 ○ A summary of action taken to minimize wetland impacts, including:
 - 442 ■ Total area of human activities that affect wetland benefits;
 - 443 ■ Total area of reclaimed wetlands and total area committed to being
444 reclaimed as wetland; and
 - 445 ■ Equivalent area of wetlands where impacts to wetland benefits were
446 offset.
- 447 ○ State of Yukon's wetland inventory.
- 448 ○ Measures undertaken to increase knowledge of Yukon's wetlands.



449 2. Policy Review. A full review of the policy should be conducted within 10 years, unless
450 otherwise agreed to by all management partners. This review will evaluate the progress
451 towards achieving the policy goal, as well as provide an opportunity for ensuring the
452 long-term direction outlined in this policy is still relevant and consistent with overall
453 wetland stewardship direction in the territory.

454 Roles and Responsibilities:

- 455 • The Government of Yukon will be responsible for yearly tracking of progress on action
456 items. Information will be requested from other management partners, as required.
- 457 • The Government of Yukon will be responsible for reviewing and developing the five-
458 year implementation report.
- 459 • The full policy review will be completed in collaboration with all partners.



460 Appendix A:
 461 Summary of actions and targeted
 462 implementation

463 The Government of Yukon recognizes that in some areas further implementation guidance will
 464 be necessary to clarify the application and use of this policy, and to provide additional guidance
 465 at a project or sector level.

466 The following table details some specific actions needed to implement this policy. It identifies
 467 how the Government of Yukon plans to engage with partners on these initiatives as well as a
 468 targeted timeline. Where appropriate and prior to the action being completed, the table also
 469 outlines initial approaches the Government of Yukon will use.

470 For the purposes of this table: YG = the Government of Yukon; FN = First Nations and
 471 transboundary Indigenous groups.

Actions	Level of engagement	Targeted timeline	Initial approach, prior to action completion
Building Knowledge			
1. Develop guidance on how to evaluate wetland benefits (Table 1).	YG-led, with opportunity for comment by all interested parties.	Near-term	The area of each wetland class impacted by a human activity will be used as a proxy for wetland benefits prior to completion of guidance documents.
2. Create a broad scale territory-wide wetland inventory.	YG will work with FN and land-use planning bodies to identify priorities.	Within 5 years of policy approval	Evaluate wetland inventory requirements as they arise.



Actions	Level of engagement	Targeted timeline	Initial approach, prior to action completion
3. Support detailed inventory where needed.	YG, FN and proponents to complete as necessary.	Ongoing	Inventory needs arising from ongoing land use planning, and proposed project assessments will be high priority for detailed wetland inventory.
4. Develop an accessible and easy to use guide to identifying Yukon wetlands for proponents and the public.	YG-led	Near-term	The Yukon Bioclimate Ecosystem Classification includes technical guidance for wetland identification.
5. Further refine the classification system and mapping guidelines specific to Yukon's northern wetlands.	YG-led	Near-term	Rely on the existing Yukon Bioclimate Ecosystem Classification.
6. Promote northern wetland research.	Various, through fostering collaboration and partnership	Ongoing	Themes identified in this policy, as well as emerging needs identified by communities or First Nations will inform research priorities.
7. Promote public awareness of wetlands.	Various through fostering collaboration and partnership	Mid-term	Initial communication and education efforts will focus on sharing an understanding of the policy and sharing knowledge about Yukon's wetlands.



Actions	Level of engagement	Targeted timeline	Initial approach, prior to action completion
Wetlands of Special Importance			
8. Develop clear guidance for nomination, assessment, and listing Wetlands of Special Importance.	YG-led	With policy	N/A
9. Create a publicly accessible catalogue (spatial database) of Wetlands of Special Importance.	YG will develop and maintain.	Mid-term	A list of nominated and listed Wetlands of Special Importance will be available upon request from the Department of Environment, Habitat Programs.
Managing Wetland Impacts			
10. Develop mitigation hierarchy evaluation guidance.	YG-led, with opportunity for comment by all interested parties.	Near term	YG will rely on a best interpretation of the guiding principles when evaluating proposed human activities on a case-by-case basis.
11. Update or develop proponent guidance to be used when submitting environmental assessment, permitting or licensing for works impacting wetlands.	YG will work with FNs, the Yukon Water Board and YESAB with input from all interested parties.	To be determined with assessors and regulators	Requirements will be evaluated on a case-by-case basis. Where existing guidance documents are available they will be used.



Actions	Level of engagement	Targeted timeline	Initial approach, prior to action completion
12. Update or develop general wetland reclamation guidelines, with the potential for sector specific considerations, if needed.	YG will work with FNs, the Yukon Water Board and YESAB with input from all interested parties.	As required	Case-by-case, informed by this policy and using the best available information. Where existing guidance documents are available they will be used.
13. Update or develop Standard Operating Procedures / Preferred Management Practices for different activities impacting wetlands	Determined case by case.	Long-term, or as required	Case-by-case, informed by this policy and using best available information. Where existing guidance documents are available (e.g., Preferred Practices for Works affecting Water), they will be used.
14. Develop guidance for offsetting wetland impacts.	YG will provide draft for comment by all interested parties.	Long-term	Offsetting wetland impacts will not be permitted until guidance documents have been developed.

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