

# MATANUSKA-SUSITNA BOROUGH

350 E Dahlia Ave., Palmer, Alaska 99645

## CHAIRPERSON

Mike Wood



## BOARD MEMBERS

Andy Couch

Howard Delo-VC

Larry Engel

Dan Mayfield

Tam Boeve

Amber Allen

Robert Chlupach

*Ex officio:* Bruce Knowles

## MSB STAFF

Ted Eischeid

## FISH AND WILDLIFE COMMISSION AGENDA

**In Person Option: MSB Assembly Chambers – Back Half**

**Teleconference Option:**

<https://conf.matsugov.us/conference/95496494>

**Dial-in Info:** +1 (907) 861-7888  
**OR Internal Extension:** 1113  
**Participant Code:** 954-964-94

## **REGULAR MEETING                      4 P.M.                      September 17, 2020**

- I. CALL TO ORDER; ROLL CALL; ESTABLISH QUORUM
- II. APPROVAL OF AGENDA
- III. APPROVAL OF MINUTES – 5 minutes
  - a. February 27, 2020 regular meeting
  - b. May 7, 2020 special meeting
- IV. AUDIENCE INTRODUCTIONS & PARTICIPATION (3 min./person, chair’s discretion) – 10 minutes
- V. STAFF/AGENCY REPORTS & PRESENTATIONS
  - a. Staff report – 10 Minutes
- VI. ITEMS OF BUSINESS
  1. Items for Updates/Action:
    - a. Discussion: Summer observations on local fisheries post-BOF – 20 minutes
    - b. West Susitna Access Road – 10 minutes

c. SB 204/HB 258 Opposition Resolution – 15 minutes

2. Presentation at joint ANC/MSB Assembly meeting Oct. 14 – 5 minutes

3. Preparations for end-of-season ADF&G meeting – 20 minutes

4. Preparations for FWC member turnover – 10 minutes

VII. MEMBER COMMENTS – 15 minutes

VIII. NEXT REGULAR MEETING – October 15, 2020, 4 PM – AGENDA AND PRESENTATION IDEAS

a. [Salmon Gold](#) presentation?

b. ADFG Special Meeting preparations?

IX. ADJOURNMENT

**I. CALL TO ORDER; ROLL CALL; ESTABLISH QUORUM**

Meeting was called to order at 4:08 PM

Members present:

Howard Delo HD, Andy Couch AC (phone), Larry Engel LE (phone), Dan Mayfield DM, Tam Boeve TB, Amber Allen AA, and Mike Wood MW.

Members absent:

Robert Chlupach RC, Bruce Knowles BK.

\*LE left the meeting at 4:50 PM

**II. APPROVAL OF AGENDA**

Agenda Amendment: Move V(a) to right after Approval of Agenda.

**MOTION:** Dan Mayfield moved to approve the Agenda as Amended by moving item V(a) to consideration immediately after approval of the agenda; Howard Delo seconded.

**Discussion:** No Discussion

**Motion as amended approved unanimously.**

**III. APPROVAL OF MINUTES for JANURAY 16, 2020.**

**MOTION:** Howard Delo moved to approve the minutes; Dan Mayfield seconded.

**Discussion:** Andy Couch corrected a word on red page 3 of the minutes, changing *make* to *may*.

**Motion to approve the corrected minutes approved unanimously.**

**IV. AUDIENCE INTRODUCTIONS AND PARTICIPATION**

1. Todd Smolden, Governor's Office: Was pleased with how everything worked out for the FWC at the BOF; sending thank you from the governor's office for everyone's work.

2. Stefan Hinman, Staff

3. Karol Riese, staff (phone).

**V. STAFF/AGENCY REPORTS & PRESENTATIONS**

a. Presentation/Dialogue: Mac Minard, BOF Results/Recommendations

Mr. Minard presented his report and answered questions/statements as presented. He stated that this BOF effort was more organized than years prior; social media and email updates had a

positive affect; the FWC were united in their message; housing at the Captain Cook provided opportunities to meet with BOF Commissioners in an informal setting. Kudos to Stefan Hinman for his online streaming efforts and numerous FB posts.

**\*Larry Engel left the meeting at 4:50 PM.**

Recommendations for next BOF cycle:

- 1) *Begin preparations* for the next Board meeting *now*.
- 2) *Cultivate relations with leaders of the business community within the Borough* in a way that causes them to support the Mat Su positions relative to the fisheries.
- 3) Consider *developing a strategic approach to media management* for both the short and long run.
- 4) Continue to *communicate and work with KRSA*.
- 5) *Work business owners or others that have seen a positive effect of the accomplishments* of the 2020 BOF Cycle helped their businesses.

b. Staff report

- (1) Ted Eischeid gave his reflections of his BOF experience. Howard Delo advised that there were very positive comments made regarding Ted's role at the BOF meetings. Ted is preparing a 3-year plan to be prepared for the next BOF meeting.
- (2) March 10, 2020 there is a joint meeting between MSB Assembly and Planning Commission. Ted is giving a presentation and would like to invite MSB FWC to attend the future such joint meetings. The next joint Assembly/PC meeting is October 2, 2020.
- (3) Gratitude resolution: Andy Crouch suggested three ACs;
- (4) Thank you letters – make resolution for the Chair to sign specifically to people; Ask an Assembly member to sponsor a resolution to give it some teeth.
- (5) Conservationist of the Year – Safari Club International (February 29, 2020)
- (6) Moose Range Habitat Resolution
- (7) Detail of minutes – how much detail do you want – are they helpful? Dan Mayfield: We really do not need that much detail – the action items is the important part. Does anyone go back through them? Howard Delo: I do like the details; it does help me on details and such. Andy Crouch: I hear what Dan is saying, those details are important when you need them. Mike Wood: Personally does not need that much detail. Andy Couch: We need to

have detailed notes when we have big meetings, i.e. ADF&G; BOF meeting preparation. Ted Eischeid: I can prepare action minutes and provide notes when it is needed.

## VI. ITEMS OF BUSINESS

1. Reflect on UCI Board of Fisheries meeting, Feb. 7-19. 20 minutes

Tam Boeve: Live streaming was appreciated.

2. Consider Assembly presentation on BOF results. 10 minutes

Mike Wood: Would someone like to do that from FWC? I won't be able to attend.

Howard Delo: Larry Engel would be the ideal guy. Andy Couch: I won't be available.

**Motion: Howard Delo made a motion to have Larry Engel help with the presentation; Larry Couch seconded.**

**Discussion: DM stated that he and/or Tam could mention the success of the BOF meeting in Assembly comments; HD said perhaps it could be combined with recognition of LE if he wins the SCI Conservationist of the Year award.**

**Motion passed without objection.**

3. Board of Fisheries Resolution.

Salmon Habitat Partnership; three ACs (Yenlo AC, Upper Susitna AC, and Matanuska Valley AC). Howard Delo: Jessica Speed's testimony at the BOF meeting was very helpful, so recognition to SHP should.

**Motion: Dan Mayfield made a motion to add the above four group names to the Board of Fisheries Recognition Resolution; Howard Delo seconded. Motion passed without objection.**

4. Consider motion to send letters of appreciation to BOF allies.

**Motion: Andy Couch made a motion to send letter of appreciation to BOF allies; Howard Delo seconded. Motion approved unanimously.**

5. Moose Range habitat resolution – Campfield.

**Motion: Andy Couch made a motion to approve the Moose Range Habitat Resolution; Tam Boeve seconded. Dan Mayfield moved to table this resolution; HD seconded. DM would like to know more about this and would like Mike Campfield to give a presentation; other members of the board would like to hear more about this before**

**making a resolution. No objection to tabling motion. Tabling motion passed unanimously.**

**VI. MEMBER COMMENTS**

Karol Riese: Get your expenses when you get back; check Karol's earlier email.

Amber Allen: Thank you to the FWC – did an awesome job.

Tam Boeve: You all did an awesome job. I'm looking forward to preparing for next time.

Dan Mayfield: House Bill 258 coming out – this would like to take platting authority and the local contract is detrimental to us; I hope to have something from administration at our next FWC meeting to present a resolution on taking a stance on this. Both he and the Mayor have dialogued with staff asking about HB 258/SB 204 asking resolutions be prepared for the FWC/Platting Commission/Planning Commission with recommendations to the Assembly on actions towards these bills. Great job by everybody – it is really unbelievable how much success we had. I am learning a lot and I truly support the valuable work you do.

Howard Delo: We were cautioned about getting political – you guys do the biology and social economics and let the Assembly do the politics. The BOG comes up next year (2021); but we should schedule one of the game biologist to come to one of our meetings. The deadline for proposals is May 1, 2020. Letter of support for John Wood – it is very appropriate in my mind to support John Wood – MSB FWC supports the nomination of John Wood to the BOF Commission.

Mike Wood: Not that doing one is a bad thing. but I do not know if a letter from the MSB FWC would be helpful. I think it would be more helpful for one from another entity. Is there enough time - the meeting is March 3, 2020. I will be on the phone on Tuesday as a set netter but not as a MSB FWC member.

Ted Eischeid: I think I mis-spoke earlier. Essentially, we try to get the Agenda posted the Friday before the meeting – it is really appropriate to send Agenda items through the chair for their approval before sending them to me and Karol as staff.

Mike Wood: I have tried to be on the ball enough to get Agenda items in a timely manner. There is so much else going on right now that we need to give attention to, like the HB199; Su-Hydro Project; West Susitna Access. There are decisions that are being made about habitat in the MSB that need our attention. We really need to let these people know the impacts. We won a battle but we are going to lose the war if these things happen. All of the top people were in this – this one done with all agencies. This is a model of what we should be doing today.

VII. NEXT REGULAR MEETING – March 19, 2020 – AGENDA AND PRESENTATION IDEAS

1. Presentation: [Salmon Gold](#) program
2. Presentation from Mike Campfield on the Moose Range Habitat
3. ADFG Representative BOG
4. HB 258/SB 204 Resolutions

VIII. ADJOURNMENT

**Meeting adjourned at 6:30PM.**

\_\_\_\_\_  
Mike Wood, Chair

\_\_\_\_\_  
Dated

ATTEST:

\_\_\_\_\_  
Ted Eischeid, Planner II Staff

\_\_\_\_\_  
Dated



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## MSB STAFF

Ted Eischeid

## FISH AND WILDLIFE COMMISSION

### AGENDA

### Telephonic Meeting

**SPECIAL MEETING**

**2:00 P.M.**

**MAY 7, 2020**

Due to State Mandate 9.1.2, there will not be public attendance at the meeting. To listen to the meeting and/or offer comment at Agenda item III please phone in:

Conference Line: **(907)290-7880** or **(844)643-2217** (toll-free)

Conference ID: **281 671 873 #** (do not forget to enter the pound sign).

- Once you call in, **please mute your phone until you wish to speak (if your phone does not have a dedicated mute button, use \*6 to mute; \*6 again to unmute)**. If you do not, there will be feedback and it will be disruptive to the meeting. When you unmute your phone to speak, be sure to identify yourself by name; for agenda item III, audience participation, when making public comment please use first and last name, spelling your last name.

**Public Comment:** Two options: verbally under agenda item III, or via email (info below):

\*\*\* You are also welcome to provide your input to the Fish and Wildlife Commission in writing to

[karol.riese@matsugov.us](mailto:karol.riese@matsugov.us) please put this in the subject line: *FWC May 7, 2020 – Input* \*\*\*

You can obtain copies of the meeting agenda and packet from the website:

<https://www.matsugov.us/boards/fishcommission>

### I. CALL TO ORDER; ROLL CALL; ESTABLISH QUORUM

2:02 PM Call to order

**Present:** Mike Wood MW, Andy Couch AC, Howard Delo HD, Larry Engel LE, Tam Boeve TB, Robert Chlupach RC.

**Absent:** Dan Mayfield DM, Amber Allen AA, Bruce Knowles BK.

**II. APPROVAL OF AGENDA**

**LE moved to approve, HD second. Passed unanimously.**

**MW moved to allow public questions during business items; second by LE: Passed unanimously.**

**III. AUDIENCE INTRODUCTIONS & PARTICIPATION (3 min./person, chair's discretion)**

1. Ken FEDERICLO– SC Dip Netters.

2. Lynn Fuller

3. Troy Sayer - affiliation??

4. Andrea Jacuk – TIRI

5. Melissa Heuer – Susitna River Coalition

Opposes SB204; Still learning about the WSAR, but concerned about changes and transparency.

6. Kiegheiy Jacobson – Cabin owner in WSAR area.

7. Mike Overcast – Tordrillo Mtn. Lodge

Own a Judd Lake lodge that the proposed road will come near to. In business in 15 years in W. Susitna; concerned about road in the terrain in the area; worried about Talachulitna River and King Salmon habitat/ up to several crossings required; feasibility in terms of number of bridges and expense; wants to learn more about this – EIS, etc.

8. John Gaedeke – Fairbanks

Has a wilderness lodge in the Brooks Range, recreates in Talkeetna area; Say no to MOU because of experiences with AIDEA and the Ambler Road project in Brooks Range – his experience is that AIDEA is too pro-development, even for high risk, low tax industries/empty promises tear communities apart; AIDEA board structure is irresponsible.

9. Kim Sollien – MSB staff

10. Becky Long – Talkeetna

Hope FWC oppose SB204; also oppose WSAR MOU and access road; originally commented on the 2014 road plan; suggest MSB take no action on the MOU until the public has additional information; see her comments in her email; there should be no unmitigated wetland destruction as happened in the Donlin pipeline impacts; Port Mac route could parallel Donlin and the INHT; need more public input.

11. Zoe Fuller – Palmer

Concerned about myriad of impacts of the WSAR mine road; fast-tracked; concerned; this road would impact 1/3 of the land in the MSB; huge decision that warrants public involvement;

impacts of mining road; concerned about impacts to cultural heritage sites; concerned that access via a remote road will lead to vandalism and crime; concerned about impact to rec rivers Dec.

12. Neil Dewitt: May 21 Federal Subsistence Bd, to close unit 13 to some users; 888 566 1030, 334 4290 code; will take public comment; news release on May 6 on Fed.

13. Lynn Fuller – AIDEA comment from FBX; Assembly needs to ask basic questions – do we want to mine, and do we want a private, publically funded road to a mine?; do we need what this mine is proposing? C/B analysis needed.

#### IV. STAFF/AGENCY REPORTS & PRESENTATIONS

##### a. Staff report

##### i. BOF

1. Story Map
2. Presentations about results if possible
3. Message: *the fish you see now came from efforts at BOF earlier in 2020; think now about 2023...*

ii. Wetlands Ordinance – expect to see more details this summer with a FWC resolution for fall consideration.

##### iii. SHP

1. Science Summaries coming.
  - a. Wetlands
  - b. Invasive Species.
  - c. Riparian buffers
2. Summer Site Tour? Unsure given COVID-19.

#### V. ITEMS OF BUSINESS

a. AK Senate Bill 204, State Land Surface Disposal background -- FWC position.

**Mike Wood:** Reviewed background; eliminating rec rivers mgmt. plan impacts the MSB; involves 6 MSB rivers; related to MOU?; Nova Minerals related to other entities;

**HD:** looking for a FWC action? **MW:** try to not be political, but advisory – maybe we can develop some points where we can develop a resolution;

**HD:** Didn't know much about this, but thinks that the MSB letter sent to MatSu delegation was good; sees legislation as power grab by the state; opposed elimination of rec rivers program;

**LE:** Supports what Howard said; bill was unacceptable as written; thinks that FWC should take a position on this; suggested we stay on top of this; be ready to deal with this if needed; worked on Susitna River rec plan – had lots of public involvement and occurred when MSB was selecting its land; this bill removes benefit from MSB citizens; need to support a resolution of support for MSB letter to Assembly; maybe form a subcommittee;

**AC: Moved to draft a resolution to the Assembly in supporting the MSB letter position opposing SB 204,** noting the public comments of concern at this meeting, the importance of the recreational rivers plan, **with a committee of FWC members to develop, approve, and submit a draft resolution on behalf of the FWC; LE seconded.**

**Discussion:**

**AC:** MSB should not lose authority; the costs of this bill to the MSB is not desirable for MSB citizens;

**MW:** Little Su, Talkeetna, Lake Creek, Tal, Alexander, \_\_\_\_ (5 of the 6 rivers are in the Nova Minerals mine area).

**HD:** Haven't heard any public supporting SB 204 – this could be in the resolution; there's been no public vetting;

**LE:** form a working group on this issue.

**HD:** Sees no discussion how this would interface with the MSB's wetland mitigation bank.

**RC:** Has history with the rec river program.

**Committee review of draft: MW, LE, RC**

**Motion passed Unanimously.**

**Additional Public Comment: None**

**b. West Susitna Access Road proposed MOU background – FWC position.**

**MW:** provided some background; comments from FWC?

**LE:** There would be a lot of bridges/culverts in this project; 20 conventional bridges plus 4 long span bridges, 440 culverts... lots of stream crossings and major impacts on fish habitat;

**MW:** is it worth speaking about how fish are impacted? Lots of attention on critical fisheries here.

**HD:** wasn't aware of how big this project was; would be nice to have an EIS; project is very much in the early planning stages; how would this impact wetlands and wetland mitigation?; that said, having a road into undeveloped area could be nice for people like me with some limited mobility for hunting/fishing, but not if it is at the expense of fish/wildlife habitat; opposes this Phase II proposal; feels NOVA Minerals should be paying all planning costs, and then present the data – like Pebble Mine is doing;

**MW:** AIDEA would say that by signing the MOU that would start the public process and EIS if needed;

**HD:** AIDEA could add funds to the \$100K Nova Minerals has committed; need more info before a nonbinding MOU was signed.

**AC:** Public has asked, how does this road benefit the public? There is also significant private land inholdings that would be impacted; there is already a significant off road trail in the area, and a road could take that route; the original talk about a WSAR was about accessing other resources for the public, but now the talk is for a private road to benefit a mine with less benefit for the public in general;

**LE:** Need more information on this issue; there are several reports we could gather to help us; a suggestion is the FWC request all studies and information on various access routes; we could also make this an issue for updates at each of our meetings;

**TB:** I expect this to come before the Assembly in June, and I anticipate that the MOU will pass; I think we need to consider whether we sign it, or to suggest additional language.

**MW:** It is critical that the public in this area be more engaged, need more information.

**AC:** Regarding TB comment, we were just looking at the logging access off of Susitna – the reason the FWC considered that was all the dead spruce trees in the area – little economic value; at the very least an access road might benefit fire suppression regarding the dead spruce.

**HD:** If MOU is signed, that will create more pressure to getting rid of the Recreational Rivers Act; I would like to know more about this project before I can support this MOU; original work was for a public road, but the new information seems to show an intentional change to a private, industrial road.

**MW:** LE said we have this MOU as a point of discussion at every FWC meeting; Would TB have any advice?; MW would like to hear from public on this.

**TB:** My concern is that the MOU will be passed despite problems with the MOU; I would be open to making amendments if they were proposed.

**HD:** Maybe the FWC should write a letter about some of the concerns, and that we agree with the Mayor's decision to postpone consideration.

**TB:** the Mayor's intention was to avoid work until budget was done, and expects this to be dealt with in June.

**PUBLIC Comment:**

1. Neil Dewitt: Ambler Road is trying to do the same thing as here; issue arose with Oil Well Road;

2. Melissa Heuer: What happens if MOU isn't approved? Can FWC request clarification?

3. Lynn Fuller: MOU comment, FWC should at a minimum insist that the MOU wording be changed so it doesn't seem like a "done deal" – change 2-C to "being committed to look at the information"; Concerned about the confidentiality clause as a transparency clause; as written, this undercuts confidence see 6;

4. Mike Overcast: a tactic that the mining companies do is to use the MOU to generate investments; not supporting this MOU will undercut this investment tactic; thinks that the \$100K investment from Nova would give much information.

5. Becky Long: Mike Overcast above is correct; mining company will use this to show public support; need the MOU to demand 1:1 wetland mitigation; 8 in MOU.

**MW**: 3-D: portion is the only part on fish.

6. Zoe Fuller: want to remind you that there are significant cultural heritage sites in area, which would trigger federal requirements;

**RC**: At a loss of what to say and where to direct comments; the MOU is predicated on SB 204 in my mind; I think SB 204 and this MOU seem interrelated; even private road will be accessed by Alaskans and will cause problems – Alaskans have a way of accessing off limit areas; SB 204 is such a shotgun of issues, covering a lot.

**LE**: wetland mitigation, strengthen fish habitat; do we want another committee?

**MW**: HD thought about writing a letter... What if we don't accept the MOU, or change some of the language in the MOU like having Nova add more money on the table, and how much will some aspects cost?

**HD**: Raising some of those concerns would shed light on why we might oppose this; if Ted's submission was rejected for the MOU that speaks volumes; could write a letter to Manager, Mayor, and assembly, that points out problems as we see it, and suggests MOU be delayed until there is more info;

**HD**: **Moved to form a committee to write a letter concerning the MOU concerns to Assembly and Borough Officers (Manager, Mayor) with the authority to send this letter on behalf of the FWC. Second by LE. Committee to be: MW, HD, and TB.**

**Motion passed unanimously**

**TB**: we might want to reference the success we had at BOF and how this MOU could threaten that.

**AC**: referenced Becky Long's comments; these are public resources, and the public should know what's happening, including study results, etc.

**MW**: requested we keep track of SB 204 and the MOU as a standard agenda item.

**Additional Public Comment:**

Lynn Fuller... Could the public forward comments to the FWC committees? [Yes, but send to Ted/Karol for routing.]

c. **COVID-19 impacts on sport fishing and guiding, Andy Couch's work – report.**

**AC**: gave a report on his involvement with this and some of the details of the plan

- *Clear as mud* at times.
- KRSA contributed ideas.

- Templates for business action plans.
- 14 day quarantine requirement impacting sport fish guiding industry.
- More remote guides. who typically use lots of nonresidents, probably won't open.
- Andy's business showing impacts. Only has 10-15 fishing groups, with all being nonresidents except for one resident; has to tell clients that situation is fluid and trips may not happen; an opportunity for AK residents to get out with less competition, especially later in the summer.

**HD:** State parks has info for state park camps; some of the private managers running these might not open until later; can I walk in past a closed gate;

**AC:** Ricky Gease said some parks might not be open, and that outhouses would not be disinfected per guidelines;

**MW:** who's on this task force? **AC:** 29 people on the list, like Crum, Vincent-Lang, etc..

## **VI. MEMBER COMMENTS**

**HD:** This meeting was smoother and better than I thought it would be; appreciate Ted and Karol getting the background information together; got lot of good public comments; although I think when I chaired a meeting it was shorter than MW's 2:20 meeting.

**AC:** I would like to compliment how MW ran the meeting; AA missed the meeting probably because she recently had a baby boy.

**LE:** Thank the FWC for the nomination for Conservationist of the Year and HD's role; I think this reflects well on the FWC.

**RC:** Congrats to LE many times over.

**TB:** Thanked MW for calling this meeting; thanks to Ted for organization; thanks to the public involved.

**MW:** Glad we had this opportunity to meet again since BOF; glad this telephonic meeting worked; disappointed in how the state government is working to overthrow all the good work we've done here in the MSB;

## **VII. NEXT REGULAR MEETING – DATE AND AGENDA ITEMS?**

May 21 – Cancelled

September 17 – next regular FWC meeting.

**VIII. ADJOURNMENT**

**Moved by LE: Second by HD. Passed unanimously** at 4:28 PM. Meeting stands adjourned.

\_\_\_\_\_  
Mike Wood, Chair

\_\_\_\_\_  
Dated

ATTEST:

\_\_\_\_\_  
Ted Eischeid, Planner II Staff

\_\_\_\_\_  
Dated

**Staff Report – FWC – 17 September 2020**

1. Current staffing changes in MSB Planning Department:
    - a. New Planning Director Alex Strawn replaced Eileen Probasco who retired.
    - b. Karol Riese promoted to Planning Dept. Administrative Specialist – impact.
    - c. Vacancies in Planning Division - impact.
  2. Update on:
    - a. NPFMC
      - i. Sept. 28 – Oct. 16 teleconference meeting
        1. Agenda item: Cook Inlet Salmon FMP – Initial Review (agenda item C4):
          - a. Agenda/Submit Comments:  
<https://meetings.npfmc.org/Meeting/Details/1565>
          - b. Deadline for written comments: Sept. 30, 5 PM AKST.
    - b. Supplemental Wetland Mitigation Ordinance
      - i. Updated timeline
      - ii. Draft for FWC consideration on October 15<sup>th</sup> meeting
    - c. Fishing season discussion – Couch article (BI 1-a)
    - d. WSAR committee work
    - e. SB 204 committee work
    - f. SHP – releasing three science summaries for policy makers – Wetlands SS attached.
    - g. Eklutna Dam/River update –
- The website that is being maintained by the Owners of the Eklutna Hydropower Project regarding the mitigation process is likely the most helpful - <https://www.eklutnahydro.com/>
- TU, Native Village of Eklutna, and The Alaska Center are in the process of building their own web site - initial launch should be the beginning of October.

- At this point there isn't much of an explicit discussion on water reservations that can be pointed too. However, the Technical Working Group, comprised of parties to the Mitigation Agreement and other stakeholders (including TU), has been putting together the draft study plans for the next two years which will include an Instream Flow Study.
3. Larry Engel presentation at Oct. 14 Joint MSB/Anchorage Assembly meeting (11 AM).
  4. End-of-season ADF&G meeting
  5. Planning for FWC member turnover

**Notes from 12/5/2019 ADFG Special Meeting on Fisheries – Guidance for future meetings:**

1. Need to determine meeting date(s) for special ADFG meeting. Typically it has occurred in December or January.
2. Doug Vincent-Lang at the December 2019 meeting suggested:
  - a. Consider having two meetings, since the presentation could answer many of the submitted questions:
    - i. ADFG staff presentation on season summary.
    - ii. Follow up meeting for FWC question discussion.
3. Last year we had too many questions. Suggest we limit each FWC member to maximum of 1 or 2 questions each.
4. Question list has to be finalized at least one month prior to the ADFG discussion meeting so ADFG has a chance to submit written responses prior to discussion meeting.
5. Our meeting last December ran 2:17. Suggest we schedule a 2.5 hour meeting, and early in the afternoon (1-3:30 PM?).
6. Ask that ADFG provide written summaries/presentations in advance of the meeting so FWC members and the public have a chance to review materials.
7. Consider a hard agenda with time allotments so that no one action in agenda dominates meeting (e.g., sport fish summary last year was a read statement that lasted 20 minutes).

8. ADFG Meeting Preparation Needs:

- a. Meeting format (one or two meeting format)?
- b. Meeting date(s)/time?
- c. Number of questions allowed per FWC member?
- d. Hard deadlines for question submittal?
- e. Guidance on key agenda components?

**Useful Background Info:**

FWC Meeting	Oct. 15
FWC Meeting	Nov. 19
Thanksgiving	Nov. 26
FWC Meeting	Dec. 17
2021 FWC Meetings (TBD)	Jan. 21, Feb. 18, March 18????

**Traditional ADFG Meeting:**

Finalized FWC Questions to ADFG	Oct. 22
ADFG Written Answers back to FWC	Nov. 25
ADFG Written Statements to FWC	Nov. 30
FWC/ADFG special meeting	Dec. 3

**DVL Two-Meeting Proposal:**

ADFG Fishery Summary Presentation	Nov. 12 or 19
FWC Questions to ADFG	Nov. 30 or Dec. 7
ADFG Written Answers back to FWC	Jan. 4 or 11
FWC/ADFG Discussion Meeting	Jan. 14, <b>21</b> , or 28.




## **Suggestions for Northern Cook Inlet Coho Salmon Management By Andy Couch**

For September 11, 2020 Frontiersman

After the February 2020 Upper Cook Inlet Board of Fisheries Meeting, I believed Northern Cook Inlet streams would see significantly better sport fishing opportunities for sockeye, chum, pink, and coho (silver) salmon this summer. Several groups worked together at the Board meeting including the Alaska Outdoor Council, Alaska Sportfishing Association, Kenai River Sportfishing Association, Matanuska Susitna Borough Fish and Wildlife Commission, Northern District Setnetters Association, Matanuska Valley Fish and Game Advisory Committee, Susitna Valley Fish and Game Advisory Committee, Mt Yenlo Fish and Game Advisory Committee, Southcentral Alaska Dipnetters Association, along with several individuals and business owners, and Board of Fisheries members, Alaska Department of Fish and Game Commissioner Doug Vincent-Lang provided well prepared clarity on department information and assessments — and I believe most were excited about the prospects of improved salmon abundances in the waters and drainages of Northern Cook Inlet. For sport anglers coho salmon run up numerous drainages throughout Northern Cook Inlet, and are prized as a top food fish and the most sport-harvested salmon species in the Northern Cook Inlet Management Area.

### Where Have All the Cohos Gone?

If you've been reading this fishing column through the summer of 2020, you likely know there was a strong return of pink salmon throughout Northern Cook Inlet's Susitna River drainage, and the sockeye salmon return to Fish Creek in the Big Lake drainage provided some of the best dip netting and sport opportunity at this drainage during the past decade, however, while steady throughout most of the season, coho salmon returns to many Northern Cook Inlet drainages were somewhat late and mediocre at best. Many anglers, fishing guides, and owners or operators of fishing related businesses told me of similar mediocre experiences with the 2020 Northern Cook Inlet sport coho salmon fishery. Therefore, the Board of Fisheries changes adopted to pass more coho North were extremely important during the 2020 season.

### Recent Northern District Commercial Coho Harvest Levels

Some might attempt to explain mediocre sport coho salmon fishing in Northern Cook Inlet stream drainages as simply a result from poor ocean coho production, however, revised fishing regulations and management decisions for the Central District commercial fisheries of Upper Cook Inlet DID pass a higher percentage of Northern Bound coho salmon into Northern Cook Inlet waters. This can be seen in improved coho salmon escapement counts compared to last years, at 3 locations where the Alaska Department of Fish and Game (ADF&G) counted coho for at least a portion of the 2020 season. This can also be seen in another banner coho salmon catch in the Northern District commercial set net fishery, where their top 4 coho salmon harvests in the past 20 years have all occurred in the past 4 years (2018, 2020, 2019, and 2017) according to information posted on the ADF&G website.

### Depressed Northern Sport Coho Harvests

How do Northern Cook Inlet Management Area sport coho harvests compare to the commercial harvests? The most recent ADF&G figures for sport harvests I could find ran through 2015 (why does it take so long to compile sport harvests?), but judging from coho salmon spawning escapements and the number of recent emergency restrictions placed on Northern Cook Inlet

sport fisheries, I feel positive the top 4 sport coho salmon harvests in the past 20 years occurred in 2002, 2006, 2008, and 2001. The most recent of those large sport harvests was 12 years ago!

On a year where the Alaska Board of Fisheries adopted changes that to provide more reasonable shared harvest opportunities for all Northern District user groups, why this discrepancy in harvest levels between commercial and sport on a species (coho) designated for minimized commercial harvest in order to provide a reasonable harvest opportunity for sport, guided sport, and other inriver users over the entire run, as measured by the number of inseason restrictions?

What does the “Funny phrase” (found only in the Northern District salmon management plan), “or as specified in this section and other regulations.” mean? Is it really acceptable for ADF&G commercial management to use that phrase as a “Get Out of Jail Free Card” to avoid providing sport and guided sport users a reasonable coho salmon harvest opportunity over the entire run?

#### A Little History

2013, 2014, and 2015 are the last back-to-back years where ADF&G commercial management allowed enough coho salmon to pass through the Northern District to provide a reasonable sport coho salmon harvest opportunity, over the entire run without inseason restriction or closure at Little Susitna River. The Little Susitna River coho salmon escapement goal is the longest established coho salmon goal in Upper Cook Inlet, and the Little Susitna River sport coho salmon fishery is one of the largest and most important sport fisheries in Northern Cook Inlet.

During 2013 — 2015 the entire Northern District set net fishery was restricted to one net between July 20 - 31 as a conservation measure to protect Stock of Concern Susitna River sockeye salmon. From August 1-6 the General Subdistrict south of the Susitna River was allowed to use a maximum of 2 nets, while the remainder of the Northern District would remain restricted to one net.

Management Discretion — How does this **Choice** help Alaska or most Alaskans?

From 2016 — 2020 commercial management made a conscious decision to start allowing the Eastern Subdistrict of the Northern District to fish 2 nets (instead of one) from July 20 - August 6. During 4 of these 5 years (2016, 2017, 2019, and 2020) reasonable sport coho salmon harvest opportunity had to be restricted in Little Susitna River in efforts to meet the coho salmon escapement goal. (In 2016 the Little Susitna River sport coho fishery was entirely closed for a portion of the season and in 2019 both the Little Susitna River and Deshka River coho salmon sport fisheries were entirely closed for a portion of the season). In addition from July 20 - August 6 the General Subdistrict East of the Susitna River remained restricted to one net AND was further restricted and or closed later in August during 2016, 2017, 2019, and 2020.

The Little Susitna coho salmon goal minimum at the time, 10,100, was not attained by 102 fish in 2016, and in 2019 only 4,226 of the 10,100 — 17,700 Little Susitna goal range was attained. Finally — even though ADF&G’s best genetic science shows Eastern Subdistrict harvests a substantial amount of Knik Arm coho salmon (Little Susitna is part of this drainage) commercial management allowed the Eastern Subdistrict to continue harvesting with the increased nets without adjustment each of the 4 years, with documented conservation concerns, that negatively

affected many other users including sport, guided sport, and General Subdistrict commercial East of the Susitna River.

When Will We Ever Learn?

4 out of 5 years this “new” management strategy has failed to provide reasonable harvest opportunity for sport and guided sport users as defined in the Northern District Salmon Management Plan. That is an 80% failure rate. In addition, this “new” management strategy has forced additional restrictions on other commercial users — once again at an 80% failure rate. Finally this “new” strategy has failed to attain even the minimum Little Susitna River coho salmon escapement goal 40% of the time over the past 5 years— even with restrictions and great financial costs to other Alaskans. How can such management possibly be good for the State of Alaska? or for a majority of Alaskans? **Why is ADF&G commercial management favoring Eastern Subdistrict commercial set netters over all other Northern District users?** Surely there must be some solutions that would better meet the Management Plan purpose and provide a better sharing of the valuable Northern Cook Inlet coho salmon resource.

Many Alaskans and visitors are willing to pay considerably more for a reasonable opportunity to recreationally harvest their own Alaska salmon, than they are willing to pay for the fish in a store. Therefore allowing a maximum number of people an opportunity to harvest their own salmon would seem to provide a maximum amount of benefit. The Northern Cook Inlet sport fishery is based on very conservative harvest methods and limits, and requires a maximum number of days of opportunity in order to best maximize benefit. This is likely the rationale behind the board-adopted direction in the Northern District Salmon Management Plan. Surely there is a way to allow reasonable sport harvest opportunity, under current conservative sport regulations, throughout the season, and without restrictions on most years, while still sharing the resource abundance with commercial netters.

## Suggestions

The management plan states: “(b) the department shall manage the Northern District commercial salmon fisheries based on the abundance of sockeye salmon counted through the weirs on Larson, Chelatna, and Judd Lakes or **other salmon indices the department deems appropriate.**” Bold and underline added for emphasis.

Because of budget reductions ADF&G did not operate the Chelatna Lake weir in 2020. Furthermore, even though the management plan calls for the minimization of commercial harvest of coho salmon bound for the Northern District of Upper Cook Inlet— in both 2018 and 2020 coho salmon were the most harvested salmon species in the Northern District commercial fishery. Therefore, it seems logical **1. the department (Commissioner) should deem it appropriate to manage Northern District commercial fisheries to attain at least two extremely important Northern District coho salmon goals: Little Susitna River and Deshka River.**

At the February 2020 Upper Cook Inlet Meeting, Alaska Board of Fisheries members spoke to their clear intent that the Northern District be managed on a conservative basis, and adopted amended preamble language in the Northern District Salmon Management Plan directing a more shared management approach amongst ALL Northern District user groups. With this thought in mind, and considering the negative consequences of more liberal management

outlined above, perhaps **2. ADF&G management should return to the more conservative practice of restricting the Eastern Subdistrict to one net between July 20 — August 6** (similar to how the General Subdistrict East of the Susitna River is managed).

Concerning section (C) where the plan states:

“. . . except from July 31 — August 6 the commissioner **MAY** allow 2 set gill nets in that portion of the General subdistrict south of the Susitna River.” Bold and underline added for emphasis.

The Department should use a logical guideline for when to allow (or not allow) 2 commercial nets such as:

**“If all measured Susitna sockeye salmon goal components are projected to be met as measured by Commercial Fish Division, AND the Deshka River coho salmon escapement goal is projected to be met as measure by Sport Fish Division.”**

Such logical guidelines are allowed under section “g” of the plan: “(g) The commissioner may depart from the provision of this management plan under this section as provided for in 5 AAC 21.363(e).”

Concerning when to allow the Northern District commercial fishery to go back to full gear after August 6th — appropriate guidelines for different portions of the Northern District might be:

For the General Subdistrict East of the Susitna River and the Eastern Subdistrict:

**“When the Little Susitna River coho salmon escapement goal has been attained, or can conservatively be projected to be attained by Sport Fish Division.”**

For the General Subdistrict South of the Susitna River :

**“When all measured components of the Susitna River Sockeye Goal have been attained as measured by Commercial Fish Division, AND the Deshka River coho salmon escapement goal has been attained, or can conservatively be projected to be attained by Sport Fish Division.”**

Why should Commercial Fish Division assess sockeye and Sport Fish Division assess coho salmon escapement goals, and why should both divisions manage for both species? On several occasions the Commercial Division and Sport Fish Division seem to be making awkwardly disjointed management decisions that make little or no sense to the public. Some of these decisions (while allowed by management plan) appear opposed to management plan direction and opposed to intent provided by Alaska Board of Fisheries members during the 2020 Upper Cook Inlet meeting. Using one set of escapement goal projections with Commercial Fish providing sockeye and Sport Fish providing coho may provide a solution. At very least it may get commercial and sport fish managers talking / communicating more often and encourage better joint decisions that could benefit all users.

**Warnings:** Some 2020 management actions listed below are so skewed that two people, one a minister and the second a 40+-year professional Alaska journalist ,separately commented, they believe some management decisions may have been taken to, “Get back at Northern Cook

Inlet users who advocated for changes (providing more reasonable shared salmon harvest opportunities for all Northern Cook Inlet users).”

A Mat-Su salmon fishing guide said, “These management actions do not help, they just stir up animosity between the user groups.”

A Northern District commercial set netter lamented, “I don’t know why management is doing this, it just makes us (commercial fishers) look bad.”

An Alaska resident who voted for statehood questioned, “Is the Department even meeting its Alaska Constitutional mandate to manage on a sustainable basis?”

#### Questionable ADF&G Inseason Actions during 2020 — and the Questions

Emergency Order (EO) **2S-19-20** Covering commercial fishing periods between July 20 — July 27 allowed the Eastern Subdistrict to fish with 2 nets, while limiting the General Subdistrict of the Northern District to one net. \*\*\*Considering the Northern District Salmon Management Plan does **NOT** provide instruction that **ANY** portion of the Northern District **MAY** be allowed larger amounts of gear during this time period, and considering ADF&G failed to attain the Little Susitna River coho salmon escapement goal 2 of the 4 previous years (with less than 1/2 of the escapement goal minimum in 2019) this action was previously taken, and considering this same commercial liberalization had failed to provide a reasonable Little Susitna River sport and guided sport coho salmon harvest opportunity 3 of the previous 4 years this action was taken, and considering this action only exacerbated fishing restrictions / closure to General District commercial users East of the Susitna River 3 of the previous 4 years it was taken, What is ADF&G justification for this action? **Is there ANY reason to believe future use of this liberalization would produce different results?**

**EO 2S-24-20** Covering August 3 and August 6 Northern District Commercial fishing periods liberalized the General Subdistrict South of the Susitna River to allow the use of 2 nets and also allowed the Eastern Subdistrict to continue fishing with 2 nets. \*\*\*Although not stated (how it was determined) in Emergency Announcement 24 — ADF&G should have somehow made an assessment that the Susitna River sockeye salmon escapement goals would be achieved in order to make this liberalization South of Susitna River. Extending the liberalization to 2 nets in the Eastern Subdistrict appears an irresponsible call considering ADF&G’s documented impacts on Little Susitna River coho salmon escapements in the past, the past record of restrictions to both the Little Susitna River coho salmon sport fishery and the General Subdistrict commercial fishery East of the Susitna River. Announcement 24 also mentioned the use of 3 nets starting on August 10 in the entire Northern District commercial fishery — considering the Commercial Fish Division’s poor track record over the past 5 years with Little Susitna River coho, why was this mention of a future gear liberalization for the entire Northern District commercial fishery appropriate? and why was this the time to make it?

**EO 2-RS-47-20** Issued August 4, Effective August 6 — Closed the sport fishery for all salmon species in Larson Creek and within 1/4 mile of its confluence with the Talkeetna River through December 31, 2020. This emergency order mentions that the Larson Creek weir sockeye salmon count is the lowest on record for August 3, and further states that the sustainable escapement goal (SEG) can not be projected even with late run models. \*\*\*The Larson Creek SEG is part of the Susitna River sockeye salmon goals — If the Larson Creek sockeye salmon

SEG can not be projected through the weir even with late run models, **what other indices did ADF&G “deem appropriate” as called for in the Northern District Salmon Management Plan to determine Susitna River sockeye salmon escapement goals would be achieved?**  
— After all, ADF&G’s own announcement mentioned this assessment as a necessary benchmark for EO 2S-24-20 — the previous liberalization of the Northern District commercial fishery.

If there was enough time to close the Larson Creek sport fishery by August 6, ADF&G managers would also restrict the commercial fishery South of the Susitna River back to one net for at least the August 6 period, right? WRONG!!! — ADF&G emergency commercial regulations continued to allow expanded nets for the remainder of the season, AND the Larson Creek sockeye salmon SEG was NOT attained. **How does ADF&G justify managing for continued liberalized commercial harvest in light of an ADF&G documented conservation concern, and in seeming defiance of the Northern District Salmon Management Plan, and Board of Fisheries intent to manage Susitna River sockeye salmon on a conservative basis?**

**EO 2 SS-2-48-20** Issued August 4, Effective August 6 — Closed the Little Susitna River sport coho salmon fishery to the use of bait from August 6 — September 30, 2020. By the first week of August sport anglers, who regularly fish Little Susitna River, knew there was not much abundance of coho salmon in the river. Most anglers would acknowledge, it was a necessary move to close bait fishing if the escapement goal was to be attained. \*\*\*Since commercial management is charged by the plan with providing enough salmon passage into Northern District streams to provide reasonable sport and guided sport coho salmon harvest opportunities, and for the 4th time in the last 5 years that was not happening, why did commercial management continue to allow the Eastern Subdistrict to continue fishing more nets than other users in the Northern District — even after the Little Susitna River coho salmon sport fishery was restricted? How does ADF&G management justify continued liberalization of the Eastside Subdistrict? especially considering language in the plan calling for minimization of commercial coho salmon harvest and providing for reasonable sport and guided sport harvest opportunity?

**EO 2S-28-20** Issued August 9, Effective August 10 acknowledged the conservation concern for achieving the Little Susitna River coho salmon SEG and restricted the Central District commercial drift gill net fishery, **BUT allowed** the entire Northern District commercial fishery to fish 3 nets for the **entire August 10 period. Action in the Northern District maximized (rather than minimized)** coho salmon harvest during a time of department documented Northern District coho salmon shortage at Little Susitna River. August 10 was the Northern District’s largest daily coho salmon harvest of the entire season with ADF&G’s website showing a preliminary harvest of 8,219 coho from a Northern District harvest of 12,992 total salmon. Allowing for maximum commercial coho harvest on August 10 greatly reduced the small and late portion of the season where sport and guided sport anglers would have a reasonable coho salmon harvest opportunity at Little Susitna River. This would appear to be in direct defiance of Northern District Salmon Management Plan direction, and at the greatest possible economic loss and loss of reasonable harvest opportunity for sport fishing and guided sport fishing user groups. **In light of board amending the plan directing for more sharing with other user groups, and 2020 board members’ stated intent for conservative management, why did ADF&G take this action?**

One distressed veteran Mat-Su Valley salmon guide business owner told me, he figured one individual Northern District permit holder harvested more than twice as many Northern Cook Inlet coho salmon on August 10 than ALL his charter guests for the ENTIRE 2020 season. From my experience as a Mat-Su Valley salmon fishing guide, and from my discussion with additional guide business owners, likely most (if not all) Northern Cook Inlet fishing guides had a similar experience during the 2020 season.

**EO 2-SS-2-50-20** Issued August 11, 2020 (one day after the largest Northern District coho salmon harvest of the entire season) Effective August 13 reduced the Little Susitna River coho salmon sport daily bag and possession limits from two to one fish daily. **Why does ADF&G issue these back to back contradictory emergency orders?** How can there possibly be enough coho salmon for every commercial permit holder in the entire Northern District to harvest at maximum capacity with No Daily Bag Limit, IF there is not enough for a Little Susitna River sport angler to even harvest two coho salmon in a day? How can there possibly be enough coho salmon for every commercial permit holder in the entire Northern District to harvest using 3 large gill nets, IF there is not enough coho salmon for even one Little Susitna River sport angler to fish a single salmon egg on a hook?

EO **2S-29-20**, EO **2S-33-20**, EO **2S-34-20**, EO **2S-35-20** Effective August 13, 17, 20, 24 These emergency orders reduced commercial fishing time in the General Subdistrict East of the Susitna River from 12 to 6 hours daily on August 13, 17, 20, and 24, while allowing 3 nets to be fished per permit.. These restrictions are a belated response to coho salmon sport fishery restrictions on Little Susitna River during the 2020 season, and after these restrictions were imposed, enough coho salmon did finally migrate past the weir to attain the Little Susitna River SEG and restore a belated sport fish harvest opportunity with bait. \*\*\*Commercial permit holders in this specific area were held responsible for the entire Northern District commercial conservation burden for Little Susitna River coho salmon, even though ADF&G's best available genetic science shows Knik Arm coho salmon are also harvested, and earlier in the season, and in significant numbers, in the Eastern Subdistrict. With no specific direction from the Northern District Salmon Management Plan, why did ADF&G **NOT** share the conservation burden with the Eastern Subdistrict in proportion to its harvest of Knik Arm coho salmon, as called for in the department's own Sustainable Salmon Fisheries Policy? **Who in the Department makes this choice to favor a portion of one particular user group over all others? and why?**

I hope all readers can see a clear trend here. ALL emergency liberalizations for a specific portion of the user group with the most and largest nets and no daily limits and no seasonal limits, which are NOT truly based on achieving Department established escapement goals, and which do NOT provide for reasonable harvest opportunities for other user groups at the same time, rob board-allocated benefit from the State of Alaska and from all other Northern Cook Inlet user groups. These well documented "robberies," have occurred for too long and are unacceptable. The professional "criminals" who commit these robberies should be stopped immediately and held fully responsible. A friend suggested, "Perhaps, they should be required to pay full restitution to all they have robbed."

While he has no degree to certify intelligence, Andy Couch has proposed a few Upper Cook Inlet fisheries regulation changes adopted by the Alaska Board of Fisheries. Opinions expressed in this article are his own, except as credited to others, and he appreciates your reading and consideration of them, and your possible participation in the public process. He knows people can change public policy / regulations for the better.



**SUBJECT:**

DRAFT MEMORANDUM OF UNDERSTANDING AGREEMENT BETWEEN MATANUSKA SUSITNA BOROUGH, AIDEA AND AK OPERATIONS LLC FOR PHASE II OF THE WEST SUSITNA ACCESS PROJECT.

**AGENDA OF:** June 16, 2020

**ASSEMBLY ACTION:**

Im 20-123 & RS were amended & adopted with ass

**MANAGER RECOMMENDATION:** For information only  
**APPROVED BY JOHN MOOSEY, BOROUGH MANAGER:** John Moosey Digitally signed by John Moosey Date: 2020.05.22 10:47:02 -08'00'

Route To:	Department/Individual	Initials	Remarks
	Originator / <b>John Moosey</b>	John Moosey <small>Digitally signed by John Moosey Date: 2020.05.22 10:46:49 -08'00'</small>	
	Planning and Land Use Director	Eileen Probasco <small>Digitally signed by Eileen Probasco Date: 2020.05.22 11:29:04 -08'00'</small>	
	Community Development Director	Nancy Cameron <small>2020.05.22 11:35:35 -08'00'</small>	
	Finance Director	Cheyenne Heindel <small>Digitally signed by Cheyenne Heindel Date: 2020.05.22 11:37:56 -08'00'</small>	
	Borough Attorney	Nicholas Spiropoulos <small>Digitally signed by Nicholas Spiropoulos Date: 2020.05.22 13:16:37 -08'00'</small>	
	Borough Clerk	<i>Sam Stepp</i>	<i>RSJ</i>

**ATTACHMENT (S) :**

Phase II West Susitna Access Project MOU between AIDEA, MSB and AK Operations LLC (27pp)

**SUMMARY STATEMENT:**

Building on the results of Phase I, AIDEA has requested a proposal for Phase II to perform preliminary engineering, develop cost estimates, and map wetlands in consideration of a road-only corridor to the West Susitna area to promote economic development. This Phase II agreement does not obligate the borough to provide funds for these services. The Manager is approved to execute an agreement in substantially the same form as the attached.

**MEMORANDUM OF UNDERSTANDING PHASE 2**

The Memorandum of Understanding Phase 2 ("MOU") is made effective as of this \_\_\_ day of \_\_\_\_\_, 2020, by and between the Matanuska-Susitna Borough ("MSB"), the Alaska Industrial Development and Export Authority ("AIDEA"), and AK Operations LLC ("AKO") each a "Party" and collectively the "Parties."

The Parties recite that:

A. The purpose of this MOU is to clarify rights, roles, responsibilities, and expectations of each Party for the phased feasibility analysis, due diligence and development of the West Susitna Access Road (the "Project").

B. In 2014, the Alaska Department of Transportation and Public Facilities (DOT&PF) Roads to Resources program completed an extensive natural resources inventory and access corridor study known as the West Susitna Reconnaissance Study for Access to Resource Development Opportunities. The purpose of the study was to identify multiple resource development opportunities that can be accessed by one transportation corridor, thereby attracting multiple private sector investments across resources.

C. Under AS 38.04.065, the Commissioner of the Department of Natural Resources, with local, governmental, and public involvement under AS38.05.945, may adopt, maintain, and when appropriate, revise regional land use plans that provide for the use and management of State of Alaska-owned lands, and to identify important land resources that can be used for the maximum public benefit.

D. AIDEA's purpose is to promote, develop, and advance the general prosperity and economic welfare of the people of Alaska. One of the ways in which AIDEA pursues the fulfillment of this purpose is by supporting and encouraging the development of natural resources in Alaska. AIDEA has the statutory authority to finance, develop, and own and operate facilities and improvements, including roads and related infrastructure, that are intended for use in connection with the extraction, transportation and production of timber, metals, minerals, hydrocarbons, petroleum products and other resources (each a "Resource" and collectively known as "Resources").

E. On October 23, 2019, MSB and AIDEA entered into a Memorandum of Understanding for Phase 1 of the Project to identify proposed and alternative transportation corridors, gather digital data, conduct field reconnaissance, and define the next phases of the Project.

F. MSB continues to explore the possibility of building a multi-user transportation corridor within the MSB to the Little Susitna River and further west within the MSB in advancing the work initiated by DOT&PF. The Parties acknowledge that such road(s) and infrastructure could and may be used, subject to the appropriate permits and agreements, to access MSB's Resources, as well as enhancing MSB's fire suppression activities.

↑ provide public access

G. AKO is a Resource owner in the Yentna Mining District area within the MSB seeking to investigate the viability of permitting and constructing an all-season multi-user industrial access road to the area in collaboration with MSB, AIDEA and other Resource owners.

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Best Management Practices for the Stewardship of fish and wild life habitat, cultural and historical sites, and other assets

H. The Parties intend to foster partnerships with other Resource owners, both publicly and privately owned, who's commercial and business activities within the MSB will benefit from the development of road(s) and infrastructure. The Parties are committed to an open and transparent public process for all phases of major decision making on the Project.

NOW, THEREFORE, the Parties agree as follows:

1. **COOPERATION.** The Parties will work cooperatively, act in good faith, and use reasonable best efforts to coordinate activities and responsibilities with each other in pursuit of the Project. The parties will cooperate with one another and furnish each other with any information regarding the Project or the planned development of the Project that the other Party may reasonably request. MSB, AIDEA, and AKO are committed to an open public process and stakeholder engagement for the project phases and milestones. No Party, however, shall be obligated to disclose to the other Parties confidential, proprietary information or information that is required to be kept confidential under applicable law.

This MOU is non-exclusive for all Parties. Any Party may cooperate and work with any other third persons and/or entities regarding the Project. This MOU is not intended, and shall not be deemed, to create a partnership or joint venture between the Parties. No Party shall owe a fiduciary duty to any of the other Parties.

Any decision to progress the project forward past Phase II will require the authorization of all Parties and include compliance with AIDEA's statutes and finance regulations.

2. **PHASED DEVELOPMENT.** The Project will be budgeted and progressively pursued in phases to be mutually agreed by the Parties.

The objectives and goals for Phase 2 include:

- a. Investigate the viability of permitting and constructing an all-season industrial access road to the Yentna Mining District, terminating near the Whiskey/Bravo airstrip and potentially investigate beyond to AKO's operated Estelle Gold Project.
- b. Facilitate strategies to maximize the local economic benefit and job opportunities in the MSB as a result of responsible development of the Yentna Mining District.
- c. Establish the groundwork and collaboratively develop a plan for salmon habitat.
- d. Provide a framework for AIDEA, MSB, AKO, and consortium to cooperatively engage with local communities and other project stakeholders to incorporate via public meetings and consultations.
- e. Identify areas requiring federal, state and local permitting, and facilitate support for obtaining such permits.

and public

To assist in accomplishing the objectives and goals, subject to the terms of this MOU, the Parties hereby agree to pursue Phase 2 of the Project and will seek to complete all agreed tasks for Phase 2 by [December 31, 2020]. The tasks for Phase 2 are agreed to be the following:

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tm 20-123

- f. Compile & review digital/geospatial information and aerial imagery;
- g. Perform preliminary engineering analysis;
- h. Wetlands mapping and field verification of wetlands within corridor;
- i. Develop project communications program; and
- j. Define the next phase(s) of the Project.

The Parties hereby agree that AIDEA engages with HDR Alaska, Inc. (HDR) for Phase 2. The Parties have reviewed and approved detailed scopes of work and contract terms for Phase 2 of the Project and find the timeline acceptable to the Parties. The agreed scope of work are attached as Exhibit B to this MOU.

3. **BUDGET.** The Parties will establish a project budget for each phase prior to the initiation of each phase of the Project.

The budget for Phase 2 of the Project is attached as Exhibit A. The Parties agree that costs for Phase 2 of the Project shall not exceed four hundred, twenty five thousand dollars (\$425,000). The Parties shall share the costs of Phase 2 proportionately based on the following:

- a. MSB will not contribute funds to Phase 2
- b. AIDEA agrees to pay \$155,000, plus a commitment to fund up to \$7,500 in contingency funding,
- c. AKO agrees to pay \$155,000, plus a commitment to fund up to \$7,500 in contingency funding; and
- d. Funding will be raised from third party participants to pay the remaining \$100,000 prior to the commencement of Phase 2, with agreed upon Contribution Agreement form attached as Exhibit C.

Funds from AIDEA, AKO and any third party participants will contribute its share to a designated project account held and controlled by AIDEA for Phase 2 of the Project. No funds will be disbursed from the designated project account, unless otherwise agreed to in writing by the Parties, until a full balance of \$410,000 is achieved.

Any expenditures to be incurred that exceed the Phase 2 Budget will require the written approval of the Parties. Any funded amounts which have not been disbursed from the project account at the end of the term of Phase 2 shall be refunded to the Parties and to any third party participants upon their written request, unless otherwise agreed to in writing by the Parties and the third party participants.

4. **ROLES.** The Parties shall have to the following roles and responsibilities:

- a. MSB will:
  - i. Lead the designation of the proposed and alternative transportation corridors;
  - ii. Promote and communicate to MSB constituents project updates and engage project stakeholders to ensure an open and transparent public process;

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*including fish and wildlife habitat, cultural and historical sites, tourist attractions, and other assets*

- iii. Identify Resources owned by MSB along the proposed and alternative transportation corridors and ~~assist AIDEA in determining programs to achieve the economic value of the Resources; and~~
- iv. ~~Potentially represent all Parties as applicant in all applicable approvals or permits necessary for the Project and lead discussions with federal, state and other local governmental entities (if any) regarding the Project.~~

b. AIDEA will:

- i. Engage HDR as consultant to undertake the agreed Phase 2 scope of work and lead communications between HDR and the Parties;
- ii. Manage disbursements from the designated project account;
- iii. Use commercially reasonable best efforts to raise Phase 2 funding from third party Resource owners;
- iv. Identify and approach other third party Resource owners that will benefit from the Project to participate in future phases of the Project;
- v. Determine and structure the finance plan for the Project phases.

c. AKO will:

- i. Support MSB, AIDEA and any arranged consortium;
- ii. Provide relevant resources and contribute financier contracts in investigating AIDEA supported financing options;
- iii. Provide human resources and further synergy by providing aircraft support for Phase 2 studies whilst AKO's exploration programs underway to minimize aircraft utilization costs where directed by MSB and AIDEA

d. MSB, AIDEA and AKO will jointly prepare and facilitate strategies to maximize the local and regional economic benefits and job opportunities associated with the Project.

5. **RIGHTS.** Except as provided for under Section 9 of this MOU, each Party to this MOU shall have full access and rights to use the data, reports, studies, analysis or any other work product produced under this MOU for any purposes determined at the sole discretion of that Party.

6. **NO COMMITMENT, WAIVER, OR GRANT OF PERMISSION.** Nothing in this MOU obligates the Parties to take any specific action with respect to the Project other than Phase 2. Nothing in this MOU obligates AIDEA to provide any financing for the development of the Project. Likewise, nothing in this MOU waives any provisions of State Law or Borough Code or grants any form of permission under any law which may apply to activities beyond this MOU, including but not limited to, future approvals under MSB platting or land use regulations and governing body approval AS 44.88.095(c).

7. **TERMINATION.** The MOU may be terminated:

- a. By mutual consent of the Parties;

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- b. For convenience of one Party, provided that the terminating Party notifies the other Party of its intent to terminate at least thirty (30) days prior to the effective date of the termination; or
- c. For cause, by either Party where the other Party fails in any material way to perform its obligations under the MOU. Termination for cause requires the terminating Party to notify the other Party of the intent to terminate, stating with reasonable specificity the grounds therefore, and the termination for cause shall be effective only if the other Party fails to cure the failure to perform within (30) days after receiving the notice.

Notwithstanding a termination, each Party will remain obligated to fund its share of the Phase 2 Budget, and any other approved budgets for subsequent phases of the Project, with respect to those costs that cannot be avoided or that must be incurred in closing out a contract or previously approved task order.

8. **THIRD PARTY CLAIMS.** Each Party will bear its own costs (including attorney's fees) with respect to any third-party claim brought against one or both of them that arises from or is related to this MOU.

9. **CONFIDENTIALITY.** The Parties acknowledge that their records with respect to the Project and matters connected to it are generally available to the public for inspection upon request.

In the event MSB desires AIDEA to keep confidential any information or records that MSB provides to AIDEA, MSB must specifically request that the Executive Director of AIDEA determine that the information or records be treated as confidential and MSB must demonstrate to AIDEA that the information or records are within the categories established in AS 44.88.215 or are confidential under other applicable law. Upon MSB complying with the preceding sentence, AIDEA shall keep all such information and records confidential pursuant to the provisions of AS 44.88.215.

The Parties acknowledge that certain documents and records related to this MOU or the Project may be subject to the attorney-client privilege. Nothing in this MOU is intended or will alter the Parties' ability or authority to maintain the privilege within their own respective organizations.

10. **Governing Law; Forum Selection.** This MOU and the rights of the parties under it are governed by the law of the State of Alaska. Any judicial proceeding arising out of or related to this MOU shall be filed and heard in the Superior Court for the State of Alaska, Third Judicial at Anchorage, and not elsewhere.

11. **Amendments.** Any Party may request changes to this MOU. Any changes, modifications, revisions or amendments to this MOU must be in a written instrument, which shall be effective when executed and signed by both of the Parties.

12. **Third-Party Beneficiary Rights.** The Parties do not intend to create in any other individual or entity the status of a third-party beneficiary, and this MOU shall not be construed so as to create any third-party rights.

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13. **Assignment.** No Party may assign its rights or delegate its duties under this MOU to any other person or entity without the prior written consent of the other parties to the assignment or delegation.

14. **Expiration.** Unless sooner terminated as provided for in Section 7, this MOU and the Parties obligations under it expire three years after the effective date first stated above. The Parties, however, may extend this MOU by mutual written consent.

IN WITNESS WHEREOF, the parties to this MOU through their duly authorized representatives have executed this MOU effective as of the date first written above.

ALASKA INDUSTRIAL DEVELOPMENT  
AND EXPORT AUTHORITY

By: \_\_\_\_\_

Alan Weitzner  
Interim Executive Director

MATANUSKA-SUSITNA BOROUGH

By: \_\_\_\_\_

Borough Manager

AK OPERATIONS LLC

By: \_\_\_\_\_

Christopher Gerteisen  
North American Director

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# Exhibit A

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West Susitna Phase II  
Project Budget  
May-20

Item	Description	Qty	Units	Price
1	HDR Engineering Scope of Work	1	LS	\$ 399,893.00
2	Additional Lidar & Aerial Imagery	1	LS	\$ 10,107.00
3	Phase II Cost Contingency	1	LS	\$ 15,000.00
Total				\$ 425,000.00

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# Exhibit B

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May 14, 2020

Jesse Peterson  
Senior Manager  
Project Finance & Asset Management  
Alaska Industrial Development and Export Authority  
[JPeterson@aidea.org](mailto:JPeterson@aidea.org)

Subject: Proposal – West Susitna Access Project, Phase 2, Road Only

Dear Mr. Peterson,

In 2019 HDR Alaska, Inc. (HDR) was contracted by AIDEA to identify preliminary multi-modal surface access corridors to known resource-abundant areas on the west side of the Susitna River and to perform a field reconnaissance study of the identified corridors. Those efforts were considered Phase 1 of the West Susitna Access Study, which culminated in a Field Reconnaissance Report dated January 7, 2020. That Phase 1 report identified engineering and environmental considerations and constraints along the corridors and also recommended corridor alignment changes in some locations. Building on the results of Phase 1, AIDEA has requested a proposal to perform preliminary engineering, develop cost estimates, and map wetlands for a road-only corridor - work that is referred to herein as Phase 2.

This letter is HDR's modified proposal for Phase 2 (road only) of the West Susitna Access Project. We understand that AIDEA, the Matanuska-Susitna Borough (MSB), and private partners are collaborating on this study. We understand that AIDEA is leading this effort and that AIDEA is asking HDR to provide engineering, environmental, and strategic communications services to further advance the project. We understand that if HDR is awarded this work it will be contracted as a task order under our AIDEA Project Support Services Term Agreement (Agreement No. 18009).

### Project Route Alternatives

HDR's Phase 2 work on the West Susitna Access Project will consider the following route (study area):

Port Mackenzie Route (PMR): This route would be approximately 100 miles of road starting near the end of Ayrshire Road and heading northwest to the vicinity of the confluence of the Talachulitna River and Skwentna River, then crossing the Skwentna River, and continuing generally along the proposed Donlin Gold gas pipeline route on the north side of the Skwentna River. Near the Happy River crossing the route would diverge away from the Donlin Gold gas pipeline route and continue east to a point of tie-in with existing exploration roads near Gold Mining Inc.'s exploration camp. Approximately 57 miles of this segment would follow the proposed Donlin Gold gas pipeline route.

### Project Purpose

HDR understands AIDEA's purpose of this Phase 2 effort is to:

- a) advance the preliminary engineering to a point that preliminary opinions of probable capital cost can be developed for economic decision making; and

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- b) conduct wetland mapping and wetland field work by the end of summer/fall 2020 in preparation for developing a Clean Water Act Section 404 permit application.

### Scope of Services

HDR proposes the following scope of services:

#### Task 1. Acquire and Review Information:

- A. Compile and Review Existing Digital/Geospatial Information: HDR will review and compile LiDAR, aerial imagery, wetland, and other geospatial data, that is either publicly available or provided by project proponents, into one geodatabase for the project. It is assumed that data will be coming from the following sources: Donlin Gold (via MSB), and DNR-DGGS (via AIDEA), and MSB's own LiDAR. It is assumed that all data will be provided by AIDEA to HDR within two weeks of receipt of an executed NTP.
- B. Aerial Imagery Procurement Assistance: It is assumed that aerial imagery will need to be purchased from private vendors for some segments of the corridors. HDR will coordinate with private vendors for the procurement of necessary aerial imagery. This coordination will include preparing and sending aerial imagery boundaries to up to two vendors to inquire about the imagery that is available in the project areas, reviewing samples of the available imagery, and identifying which imagery will need to be purchased. AIDEA will select and pay the vendor(s) directly for the cost of the imagery. It is assumed that adequate imagery currently exists for the project area.

#### Task 2. Preliminary Engineering:

Specific preliminary engineering activities to be performed are as follows:

- A. Design Criteria: HDR will interview project proponents to determine the design vehicle criteria and the appropriate ADOT&PF standard road design criteria (e.g. typical cross-section, minimum curvature, maximum grades, bridge load rating).
- B. Geotechnical Evaluation: HDR's subconsultant, RECON LLC, will perform desktop geotechnical evaluations of routes to inform route alignment adjustments, design of typical sections, and design of waterway crossings. This work will also include desktop research and evaluation of potential material source availability and quality.
- C. Alignment design: HDR will use LiDAR data to create a 3D surface model of the existing ground. HDR will overlay route alternatives on the 3D surface, develop typical sections, and develop centerline profiles. Routes will be adjusted to meet design criteria and optimize grades, waterway crossing locations, and cut/fill.

By overlaying aerial imagery and other geospatial information (such as wetlands and geology), routes will be adjusted to minimize and/or avoid impacts to area resources. HDR will document route adjustments to avoid wetlands. (Note: Wetland mapping work (Task 3) will be happening simultaneously, so adjusting the

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alignments for wetland avoidance will be an iterative process).

The deliverable of this task will be a map book showing the alignments in plan view at a scale of approximately 5 to 10 miles per sheet. Maps will show alignment centerline, cut/fill lines, mileposts, and callouts identifying bridge crossings. Maps will be overlaid on aerial imagery and topographic contours. The map book will include an overview map. The map book will be developed in pdf and formatted to 11x17-inch sheets.

- D. Waterway crossing design: HDR will develop a geodatabase tabulation of all waterway crossings categorized based on type of crossing (bridge versus culvert, bridge type, bridge spans, bridge length, culvert type, fish presence, anadromous fish presence, and drainage only). Crossing length will be estimated by measuring between banks using aerial imagery and this measurement will be considered ordinary high water (OHW). No field work is included in the waterway crossing design effort. No hydrology/hydraulic calculations/modeling/engineering will be performed.

For the purposes of limiting field work and cost at this early stage of the project HDR will develop a conservative approach to assumptions about fish presence, anadromous fish presence, and which waterways will be designed for fish passage and which will not.

HDR's cost is based on the following estimate of numbers of single and multi-span bridges:

Route/Segment	Single-span	Multi-span	Total
PMR	9	4	13

- E. Opinion of Probable Capital Cost (OPCC): HDR will develop an OPCC to the AACE Class 4 or Class 5 level depending on availability of input information. The OPCC will be based on rough-order of magnitude construction and material quantities. Bridges will be estimated based on deck surface area or based on other recent similar bridge projects depending on information availability.
- F. Preliminary Engineering Report: HDR will prepare a preliminary engineering report documenting the activities and outcomes of the tasks above. The report will include the OPCCs, alignment design, waterway crossing categorization, conclusions, recommendations on routes, and recommendations on next steps.

The report will be submitted to AIDEA in draft version for review and comment. HDR's project manager, lead engineer, and lead wetland scientist will attend one 2-hour draft review meeting at AIDEA. HDR will incorporate draft comments and submit a final version 2 weeks after the draft review meeting or receipt of draft comments, whichever occurs later. HDR's budget for this deliverable is based on one round of consolidated comments (provided by AIDEA) and revisions from draft to final.

Task 3. Wetlands:

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- A. Preliminary Wetlands Mapping: Using the compiled LiDAR, aerial photography, and publicly-available existing information, HDR will produce preliminary planning-level wetland mapping for an approximate 2,000 foot-wide corridor (approximately 1,000 feet to either side of the alignment) along the two study routes. The net area requiring wetland mapping along the study routes is approximately 8,000 acres (33 miles x 2,000 feet) from the end of Ayrshire Road to the point of tie-in with the proposed Donlin Gold gas pipeline route near Upper Sucker Creek; this excludes approximately 57 miles of the PMR that overlaps with the proposed Donlin Gold gas pipeline route and the westernmost 8 miles of the PMR for which it is assumed that adequate wetland mapping already exists and will be provided by Donlin.

Wetland/upland boundaries will be digitized in GIS at a scale of approximately 1:3,000 to produce mapping intended to be viewed at approximately 1:7,500. Within wetland areas, only large areas of major wetland types will be distinguished from each other. Wetlands and waterbodies will be classified according to the Cowardin et al. (1979)<sup>[1]</sup> system used by the National Wetlands Inventory, and the hydrogeomorphic (HGM) system<sup>[2]</sup>. In addition, wetland mappers will identify wetlands that are likely to have the highest overall ecological value, based on professional judgment and available datasets.

During the desktop wetland mapping, wetland scientists will map the corridors using best available data. As the mapping progresses, mappers will rank the wetlands mapped with two rankings: 1) confidence level and 2) prevalence level. The confidence level will represent the confidence of the wetland or upland determination based on vegetation signature, topography, hydrology indicators, correspondence with existing data sets, and professional judgment. The prevalence ranking will estimate how widespread the particular vegetation signature is across the mapping corridor. The rankings will be combined to create a prioritization for the wetland field work. Using this prioritization method, only widespread vegetation signatures with low confidence levels will be field-verified. This will maximize field work efficiency with the available budget.

- B. Wetland Field Program Planning: This task will cover the upfront planning and coordination with vendors and subconsultants on the field effort logistics and health and safety program coordination (both in general and as it relates to COVID-19). The deliverable from this effort will be a technical memo, up to about four pages in length, documenting the logistics and health and safety plans for the field program.
- C. Wetland Field Program: HDR will conduct reconnaissance-level field work within the study area during the summer or early fall of 2020. The intent of the field work is to collect sufficient data to verify the accuracy of the preliminary wetland mapping at a level appropriate for route selection and comparison of alternatives.

Two field teams, each consisting of two wetland scientists and one bear guard, will each conduct up to four day-trips during summer 2020. A day trip is budgeted as

<sup>[1]</sup> Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79-31. Office of Biological Services, U.S. Fish and Wildlife Service, Washington, D.C.

<sup>[2]</sup> Brinson, M.M. 1993. A hydrogeomorphic classification for wetlands. Technical Report WRP-DE-4, U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS.

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10 labor hours per team member and 6 hours total helicopter flight time per day. Field work will be based out of Merrill Field. Field work will be conducted during the growing season for the Cook Inlet ecoregion in which the study area is located (May 8 to October 5).<sup>[3]</sup> Field targets will be identified based on the prioritization rankings from subtask 3.A.

During the field trips, teams will visit the targeted locations and collect data on soil conditions, hydrology, and plant communities using methods described in the 1987 Wetlands Delineation Manual<sup>[4]</sup> and the 2007 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region.<sup>[5]</sup> Teams will complete standard Wetland Determination Forms in representative wetland communities and collect observational data to characterize uplands and waterbodies.

HDR will conduct a quality control (QC) review of the field data following completion of field work.

- D. Preliminary Wetland Mapping Report: HDR will use the 2020 field data to make revisions to the preliminary wetland mapping. GPS locations of field-visited sites will be overlaid on aerial imagery and other data layers in GIS to verify the classification of wetlands and waterbodies in the study area. Aerial photography vegetation signatures from these field-visited sites will be extrapolated to similar locations. Revisions to the preliminary wetland mapping will be conducted at a scale of 1:3,000.

HDR will produce a preliminary wetland mapping report presenting the mapping for all study routes. The report will briefly describe the wetland and waterbody types documented in the study area; the methods of the field work and wetland mapping; and the results of the field-verified mapping, including the acreage of wetlands and waterbodies judged to be of relatively high ecological value. Appendices to the Preliminary Wetland Mapping Report will include the completed Wetland Determination Forms as well as site-photographs of the locations visited in the field.

The report will be submitted to AIDEA as a draft version for review and comment. HDR will incorporate draft comments and submit a final version 2 weeks after receipt of draft comments. HDR's budget for this deliverable is based on one round of consolidated comments provided by AIDEA and revision from draft to final.

#### Task 4. Meetings and Project Management:

- A. Meetings: HDR will attend the following meetings in addition to the task-specific meetings identified above:
- i. Kick-Off Meeting: One 2-hour meeting for up to four HDR staff at AIDEA's Anchorage office to discuss project approach, goals, and communication

<sup>[3]</sup> U.S. Army Corps of Engineers. 2007. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region (Version 2.0). ERDC/EL TR-07-24. U.S. Army Engineer Research and Development Center, Vicksburg, MS.

<sup>[4]</sup> U.S. Army Corps of Engineers. 1987. Corps of Engineers Wetlands Delineation Manual. Corps of Engineers Environmental Laboratory, Vicksburg, MS.

<sup>[5]</sup> U.S. Army Corps of Engineers. 2007. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region (Version 2.0). ERDC/EL TR-07-24. U.S. Army Engineer Research and Development Center, Vicksburg, MS.

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protocols. This meeting will occur within two weeks of receipt of an executed NTP. It is expected that representatives of all project proponents will attend. HDR will take notes during the meeting and will distribute the notes to attendees 1 week after the meeting.

- ii. Progress Meetings: HDR will participate in up to thirteen 1-hour meetings at AIDEA or via teleconference to discuss progress, upcoming work efforts, and information/decision needs. Up to two HDR staff will participate in these meetings. These meetings are anticipated to be held every two weeks over a six month period from July through December 2020.
  - iii. Project Team Meetings: HDR will hold up to thirteen 1-hour project team meetings every two weeks to discuss progress, upcoming work efforts, and information needs. These meetings will be internal for HDR and subconsultant staff only.
- B. Project Management: HDR includes project management activities; project start up, accounting, invoicing, and project close out; and administration of HDR's safety and quality programs on this project.

Task 5. Strategic Communications:

Strategic communications is important for overall public support on the project and to minimize potential project impacts. HDR is prepared to provide three strategic communication support services for the West Susitna Access project. These include: A) A Strategic Communications and Public Relations Plan to address the communication goals of the project, B) One public outreach meeting, and a C) Project fact sheet.

- A. Strategic communication and public relations plan: HDR will work closely with AIDEA and the investing partners to develop a strategic communications plan. This plan will outline the strategy, approach, and tactics for reaching the project communication goals. The contents of the plan will include:

- Project terminology
- Communication goals
- Key messaging, talking points, and internal Q&A information
- Communication roles and responsibilities
- Stakeholder list
- Stakeholder analysis
- Social and political risk analysis
- Strategy and approach to stakeholder engagement/public outreach for target audience(s)
- Recommended tactics
- Digital engagement suggestions

The plan will be drafted electronically and is assumed to be no more than 25 pages, including attachments or appendices. HDR will provide a draft and final version delivered electronically in a PDF format (no hardcopy provided) along with any assets. HDR's budget is based on two rounds of comments and revision from draft to final. The plan assumes no implementation of the recommended strategy or tactics, except for the one public meeting and development of a

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project fact sheet as described below. The plan will be created using the AIDEA brand. No customized project branding will be created. Development of the plan includes project leadership collaboration time, stakeholder analysis, and up to three 2-hour meetings with project partners to align messaging, roles and responsibilities, and communication plan content. Two of these meetings will be in person and one of these meetings will be conducted via web conferencing. Up to two HDR staff will participate in the meetings. HDR includes agendas and meeting summaries for the planning meetings.

- B. Public meeting: HDR will coordinate and host one public outreach meeting to stakeholders. Using an open house style format, there shall be displays and tables where attendees can write comments and discuss concerns with project team leadership. HDR will schedule and plan the open house, develop and print all materials (boards, comment forms, sign-in sheets, and nametags) and participate in the public meeting in person. One dry run or preparation meeting will be conducted in person prior to the public meeting up to one hour in length. Up to 8 display boards are assumed. No presentation is assumed. A court reporter will not be available. HDR will provide all comments to AIDEA for tracking. HDR will not provide a comment tracking spreadsheet or responses to comments. Travel for the public meeting is assumed at one hour each way with a combined four hours of setup and breakdown. HDR will provide two staff for the public meeting and dry run. The public meeting will be held at a no or low cost locations with water and cookies provided. The planning for each public meeting will be conducted over the phone and via email. No in person planning meetings are assumed. Planning is assumed at no more than eight hours including client correspondence and logistics coordination. HDR will advertise and promote the public meeting in the following ways: a newspaper ad in the general section of the Anchorage Daily News, three social media posts with paid advertisement to boost the post to the specified target audience, a radio public service announcement (unpaid), and mailed postcards to up to 250 residents in the area.
- C. Project fact sheet: HDR will create a project fact sheet that is one page, double sided. It will use existing graphic images and maps. No new images or GIS maps will be created for the fact sheet. Two rounds of consolidated comments on the draft version and one round of consolidated comments on the final. Edits will be delivered in a single email to HDR and no more than two hours of client correspondence is assumed to develop the fact sheet content. The AIDEA brand is assumed for the fact sheet. No customized project branding will be created. The final fact sheet will be delivered electronically via email along with any correlating assets.

### Notes and Assumptions

This proposal is contingent on the following notes and assumptions:

1. HDR asks for AIDEA's understanding and flexibility in terms of schedule and meeting format as we all navigate new conditions caused by COVID-19. Meetings may need to be

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conducted electronically rather than in person; there could be issues with adequate staffing; and the project schedule may need to change.

2. HDR is concerned about COVID-19 transmission risk as it relates to field work with two HDR field staff, one pilot, and one bear guard travelling in a small helicopter together. The specific concerns are how to meet health and safety policies of social distancing in the close confines of a helicopter without greatly increasing helicopter flight time, costs, or other safety risks. As part of subtask 3.B HDR will work with all parties involved to identify a reasonable and safe field work plan; however there is the potential that field work during the COVID-19 pandemic could be deemed unsafe or impractical due to the costs that could result in attempting to mitigate safety concerns. HDR leadership, HDR field staff, the helicopter company staff, and the bear guard company staff will all be allowed the decision to not conduct field work due to COVID-19 related health and safety precautions. HDR will try to be as flexible as possible to complete the field work, but if any of these parties decide to not conduct the field work and a suitable work-around cannot be identified, then HDR will negotiate a deductive change order for subtask 3.C.
3. AIDEA is responsible for coordinating deliverable reviews. This means that AIDEA will send deliverables to others for review. AIDEA will be responsible for compiling all comments from other reviewers into one document for transmittal back to HDR. AIDEA will be responsible for adjudicating and resolving potentially conflicting comments from different reviewers prior to delivery to HDR so that HDR has clear direction. AIDEA will provide deliverable review comments to HDR in a timely manner.
4. Excluded from this scope of work are the following items:
  - a. Ports, loading facilities, and unloading facilities.
  - b. Spur access from the defined study routes to resource areas.
  - c. Wetland mapping and other environmental reviews along the 57 miles (approx.) of the study area that overlaps the proposed Donlin Gold gas pipeline alignment and the westernmost 8 miles of the study area. For these segments it is assumed that Donlin Gold will be providing wetland mapping, aerial imagery, LiDAR, and other geodatabase information.
  - d. An environmental data gap analysis
  - e. Study or analysis of permits and environmental resource categories other than those specifically described herein.
5. It is assumed that aerial imagery of sufficient quality is available for purchase over the entire study area (minimum 1-meter pixel resolution).
6. Costs (labor and/or expenses) arising due to delays or false starts of field work, which are outside of HDR's control, will be negotiated with AIDEA on a time and expenses basis as additional services.
7. All deliverables will be produced and submitted electronically, unless specifically noted otherwise.
8. HDR includes helicopter and bear guard services in this scope and fee.
9. The budget for project management and regular progress meetings are built on an

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assumed six months of project duration.

10. There is one senior HDR engineer, John Sherk PE SE - a bridge engineer, whose direct rate and billing rate (as calculated using the contract IDCR and profit limit) would exceed the limits of \$75 (direct) and \$200 (billing) set in the term contract. The fee proposed for this work is based on this individual billing at a rate of \$231.67. HDR further assumes that an amendment to the term contract to allow the higher billing rate for this individual is acceptable to AIDEA and will be executed prior to issuing an NTP for this project.
11. HDR will receive an executed task order or NTP by July 1, 2020.
12. AIDEA will provide LiDAR, aerial imagery, and geospatial data to HDR within 2 weeks following NTP.
13. HDR will complete preliminary desktop wetland mapping by September 1, 2020.
14. HDR will complete wetland field work by October 1, 2020.
15. Based on the above milestones HDR anticipates completion of this scope of services by December 31, 2020.

#### **Deliverables Schedule**

HDR will prepare the following deliverables under this scope and cost estimate:

##### Task 1: Acquire and Review Information

*No deliverables for this task.*

##### Task 2: Preliminary Engineering

1. Draft Preliminary Engineering Report  
Submit to AIDEA by September 30, 2020
2. Final Preliminary Engineering Report  
Submit to AIDEA within 2 weeks of receipt of comments on draft

##### Task 3: Wetlands

3. Draft Preliminary Wetland Mapping Report  
Submit to AIDEA by November 13, 2020
4. Final Preliminary Wetland Mapping Report  
Submit to AIDEA by within 3 weeks of receipt of comments on draft

##### Task 4: Meetings and Project Management

5. Kick-off Meeting Notes  
Submit to AIDEA within 1 week of the kick-off meeting

##### Task 5: Strategic Communications

6. Draft Strategic Communication and Public Relations Plan  
Submit to AIDEA by July 17, 2020

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7. Final Strategic Communication and Public Relations Plan  
Submit to AIDEA within 2 weeks of receipt of comments on draft
8. Draft Public Meeting Materials, Planning, and Advertising Materials  
Submit to AIDEA by September 25, 2020
9. Final Public Meeting Materials and Advertising Materials  
Submit to AIDEA within 2 weeks of receipt of comments on draft
10. Draft Project Fact Sheet  
Submit to AIDEA by September 25, 2020
11. Final Project Fact Sheet  
Submit to AIDEA within 2 weeks of receipt of comments on draft

### Cost

HDR proposes a fixed price of \$399,893 for the above Scope of Services and this price is based on the Notes and Assumptions shown above. A breakdown of this price by task is shown below.

West Susitna Access, Phase 2		HDR Labor	Subs Total	OTHER DIRECT COSTS	TOTAL COSTS
Task					
1	Acquire and Review Information	\$19,328	\$3,150	\$0	\$22,478
2	Preliminary Engineering	\$91,666	\$22,575	\$0	\$114,241
3	Wetlands	\$115,909	\$0	\$40,096	\$156,005
4	Meetings & Project Management	\$61,767	\$5,775	\$200	\$67,742
5	Strategic Communications	\$34,727	\$0	\$4,700	\$39,427
Basic Services - Labor Hour Total					
BASIC SERVICES - TOTAL COSTS		\$323,397	\$31,500	\$44,996	\$399,893

HDR will provide monthly invoices based on HDR's estimate of the percent completion of the work broken down by task. Invoices will not include backup project accounting information.

I will serve as HDR's project manager and I can be reached directly at 907-644-2124 or [wescott.bott@hdrinc.com](mailto:wescott.bott@hdrinc.com).

Sincerely,  
HDR Alaska, Inc.



Wescott Bott, P.E.  
Civil Engineer & Project Manager

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# Exhibit C

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## WEST SUSITNA ACCESS CONTRIBUTION AGREEMENT

This West Susitna Access Contribution Agreement (the "Agreement"), dated as of \_\_\_\_\_, 2020 is hereby entered into by and between the Alaska Industrial Development and Export Authority (hereinafter "AIDEA") and \_\_\_\_\_, a party which may own, develop or use (hereinafter collectively or individually "ODU") resources in the Susitna Region.

**WHEREAS**, in 2014, the Alaska Department of Transportation and Public Facilities (DOT&PF) Roads to Resources program completed an extensive natural resources inventory and access corridor study known as the West Susitna Reconnaissance Study for Access to Resource Development Opportunities. The purpose of the study was to identify multiple resource development opportunities that can be accessed via one or more transportation corridors, thereby attracting multiple private sector investments for resource development.

**WHEREAS**, on or about [\_\_\_\_\_], AIDEA, the Matanuska Susitna Borough (hereinafter "MSB") and AK Operations LLC ("AKO") entered into a Memorandum of Understanding (hereinafter "MOU" and attached to this Agreement as Exhibit A), and the MOU is intended to initiate a phased feasibility analysis, due diligence and development of a West Susitna Access Corridor (hereinafter "Project"); and

**WHEREAS**, AIDEA is seeking contributions for the purposes of funding advance field wetland work and performing preliminary engineering analysis for the Port Mackenzie route as described in the MOU (hereinafter "Phase 2 Work"); and

**WHEREAS**, ODU desires to make a contribution in order to obtain the rights to and license in, as may apply, all of the data, technical reports and related information acquired and produced as a result of Phase 2 Work; and

**WHEREAS**, ODU understands that AIDEA has established and will administer a bank account for Phase 2 Work expenses relating to the Project (hereinafter "Project Account"), with a contingency of \$15,000 for potential cost overruns (hereinafter "Contingency"). The Phase 2 Work Budget is not to exceed \$425,000.

**NOW, THEREFORE**, in consideration of the mutual covenants, terms and conditions set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. AIDEA, MSB, and AKO Funding

With the execution of the MOU, AIDEA has deposited \$155,000 into the Project Account, and AKO has deposited an additional \$155,000 into the Project Account.

2. ODU Capital Pool

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Funds from participating ODU and other ODUs will be credited to a capital pool (the "Capital Pool"), the purpose of which is to raise \$410,000 to be spent on the Phase II Work and an additional \$15,000 for the Contingency.

3. ODU Contribution

ODU agrees to contribute \$ \_\_\_\_\_ to the Capital Pool.

4. Return of Unused Funds

The Parties hereby covenant and agree that if the total cost of the Phase 2 Work does not exceed \$410,000.00, all remaining funds of the Capital Pool shall be returned to participating ODUs as agreed amongst themselves. In the event that Phase II Work costs exceed \$410,000 the balance of the Contingency not used will be returned to participating ODUs as agreed amongst themselves. In the event there is a dispute or no agreement as to the return of funds from the Capital Pool or the Contingency, funds shall be returned to participating ODUs in proportion to their respective contributions.

5. ODU Rights and License

In consideration for the contributions contemplated hereunder, any contributing ODU shall have the right to receive and use the data, reports, studies, analysis or any other work product (collectively, the "Work Product") produced during Phase 2 Work, upon completion of Phase II Work, for any purpose at its sole discretion. This Agreement shall constitute an unlimited license agreement for the Work Product in the event that any supplier asserts intellectual property or similar rights over the Work Product.

6. No Liability of ODU

It is agreed that ODU is not responsible for nor liable for the Phase II Work in any way, including but not limited to, all field work. AIDEA covenants that it is contracting with independent contractors that AIDEA will require to be self-insured in order to conduct the Phase I Work.

7. No Commitment Beyond Phase II Work

Nothing herein obligates any Party hereto to take any action with respect to the Project not related to Phase 2 Work or as otherwise set forth herein.

8. Confidentiality

ODU acknowledges that AIDEA is a public entity, and therefore, documents and records of AIDEA are generally available to the public for inspection upon request. However, to the extent

RS 20-066  
fm 20-123

that ODU desires to transmit confidential information, such a request must be made in writing to AIDEA prior to transmission of the information to AIDEA. In making its request, ODU must demonstrate that the information is subject to one of the categories set forth in AS 44.88.215 or is otherwise protected by law. To the extent any information is protected by law it shall be maintained as confidential pursuant to the provisions set forth in AS 44.88.215.

The parties acknowledge that certain documents and records related to the Project may be subject to the attorney-client privilege. Nothing herein is intended to or will alter any Party's ability or authority to maintain the privilege within its respective organization.

#### 9. Cooperation

This Agreement is non-exclusive. Each Party reserves the right to work with any other person or entity regarding the Project. This Agreement is not intended, nor shall it be deemed, to create a partnership or joint venture between the Parties. Neither Party shall owe a fiduciary duty to the other.

#### 10. Amendment

This Agreement may only be amended, modified or supplemented by an agreement in writing and signed by each Party hereto. Any such amendment, modification or supplementation shall be considered effective when executed when signed by all Parties hereto.

#### 11. Assignment

No Party hereto may assign its rights or delegate its duties hereunder without the prior written consent of the other Party to this Agreement.

#### 12. Entire Agreement

This Agreement constitutes the sole and entire agreement of the Parties hereto with respect to the subject matter contained herein, and supersedes all prior and contemporaneous understandings, representations and agreements, both written and oral, with respect to such subject matter.

#### 13. Governing Law; Forum Selection

This Agreement shall be governed by and construed in accordance with the laws of the State of Alaska. Any proceeding arising out of or based on this Agreement shall be filed and heard in the Superior Court for the State of Alaska, Third Judicial District at Anchorage, Alaska, and not elsewhere.

RS 20-066  
JM 20-173

14. Counterparts

This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall be deemed to be one and the same agreement. A signed copy of this Agreement delivered by facsimile, email or other means of electronic transmission shall be deemed to have the same legal effect as delivery of an original signed copy of this Agreement.

**IN WITNESS WHEREOF**, the Parties hereto have executed this Agreement as of the date first written above.

AIDEA

ODU  
[INSERT COMPANY NAME]

\_\_\_\_\_  
By: Alan Weitzner  
Its: Interim Executive Director

\_\_\_\_\_  
By:  
Its:

RS 20-066  
IM 20-123



# ACCESS TO OPPORTUNITY

>> West Susitna Access Project: Phase 2



RS 20-066  
DM 20-123

# INVESTING IN ALASKANS

The Alaska Industrial Development and Export Authority (AIDEA) is a public corporation of the State of Alaska, created in 1967 by the Alaska Legislature "in the interests of promoting the health, security, and general welfare of all the people of the state, and a public purpose, to increase job opportunities and otherwise to encourage the economic growth of the state, including the development of its natural resources, through the establishment and expansion of manufacturing, industrial, energy, export, small business, and business enterprises..."

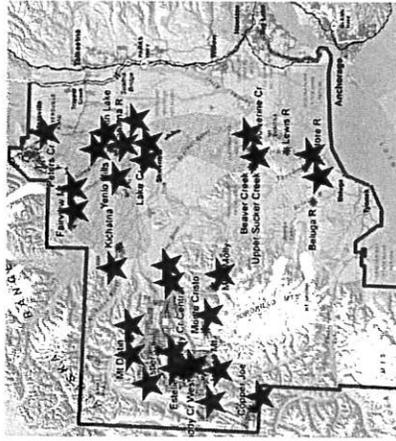
## PUBLIC-PRIVATE PARTNERSHIP

>> In 2019 AIDEA and the Matanuska-Sustinna Borough (MSB) signed a Memorandum of Understanding that provided a partnership framework for a phased feasibility analysis of the West Sustinna Access.

>> Today AIDEA and MSB, along with Alaska Operations LLC, are the initial public and private partners in Phase 2 of the West Sustinna Access Project. Other private entities may participate in future development efforts.

>> The project will touch on land use planning. Alaska's Legislature directed land use plans are required for the utilization of state-owned land. Alaska Statute 38.04.065: (a) Except as provided in (d) and (h) of this section, the commissioner shall, with local governmental and public involvement under AS 38.05.945, adopt, maintain, and, when appropriate, revise regional land use plans that provide for the use and management of state-owned land.

>> The process under which this project will go forward assures meaningful participation in the planning for access and road development. Local governments, state and federal agencies, area land owners and the public will be involved at each step along the way as any regional land use plan is adopted.



\*The stars represent hardrock and gold placer mining activities.

# PROJECT BENEFITS

The anticipated benefits of this project west of the Sustinna River include the delivery of many new opportunities for Alaskans. The state's economy will enjoy growth and jobs from the extraction of minerals, oil and gas development, agricultural production, harvest of timber resources, harnessing of alternative energy, and recreation access.

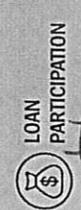
## WEST SUSTINNA ACCESS PROJECT: PHASE 2

>> The West Sustinna Access Project is being proposed to advance to Phase 2 of a multi-phase project to examine the feasibility of an all-season access road to the Yentna Mining District.

>> The road corridor will enable access to the MSB and state-owned natural resources for multiple user groups.

>> Phase 1, led by HDR Alaska, was completed in the fall of 2019 and narrowed the project footprint, and established a preferred route leading to the Yentna Mining District. Digital data was acquired and a high level field reconnaissance was conducted. Phase 1 results are available at [aidea.org](http://aidea.org) under 2020 AIDEA Board Meetings.

>> Phase 2 of the project builds on the 2014 West Sustinna Roads to Resources study led by the Alaska Department of Transportation and Public Facilities.



RS 20-066  
IM 20-123

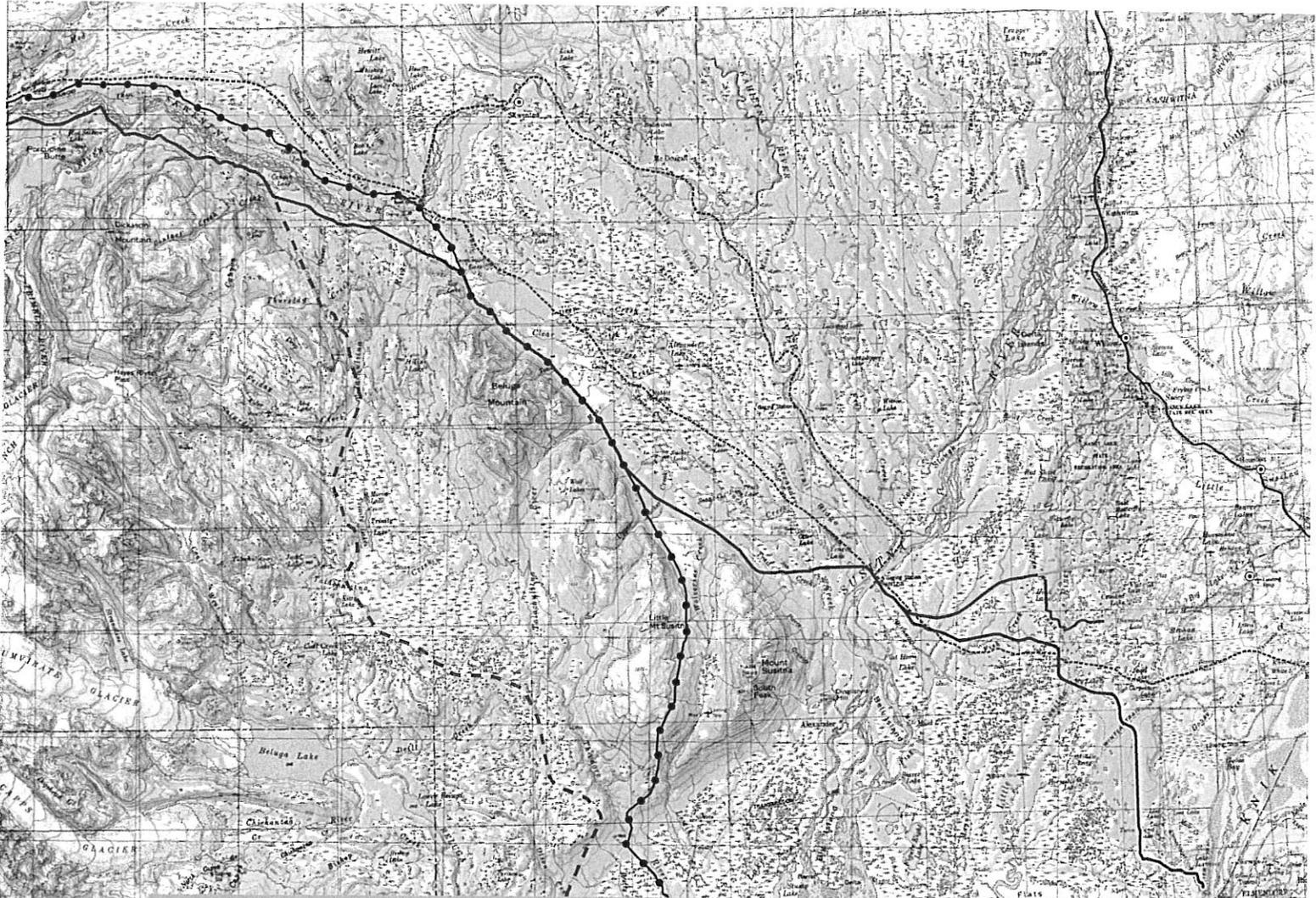
Routes shown on this map are adapted from the 2014 Roads To Resources study.

**WEST SUSITNA ACCESS PROJECT**

OVERVIEW

**LEGEND**

<b>Project Features</b>	
—	South Route
—	Port Mackenzie Route
—	Port Mackenzie Railroad Corridor
—	Existing MSB Clearing
—	EWR Rail Connection
—	East-West Route
<b>Existing Features</b>	
.....	Iditarod Trail Historic Routes
—●—	Proposed Donlin Pipeline
—	Highway



## NEXT STEPS

>> AIDEA in conjunction with MSB and private industry partners will begin phase 2 in July 2020. Phase 2, which would further develop the engineering, has two objectives: 1) preliminary engineering adequate to determine an approximate project cost, and 2) collection of wetland field data to fully evaluate the route

planning and impacts. Phase 2 will accomplish these goals under a fixed-price contract with a private engineering consultant.

## SCHEDULE

- >> July 2020: Phase 2 Begins
- >> December 2020: Phase 2 Concludes

*RS 20-066  
DM 20123*

Amended: 06/16/20

Adopted: 06/16/20

**MATANUSKA-SUSITNA BOROUGH  
RESOLUTION SERIAL NO. 20-066**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH ADVISING THE ASSEMBLY OF A DRAFT MEMORANDUM OF UNDERSTANDING AGREEMENT BETWEEN THE BOROUGH, ALASKA INDUSTRIAL DEVELOPMENT AND EXPORT AUTHORITY (AIDEA) AND AK OPERATIONS LLC. FOR PHASE II OF THE WEST SUSITNA ACCESS PROJECT.

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WHEREAS, the Matanuska-Susitna Borough, AIDEA, and AK Operations LLC want to cooperate on Phase II of the West Susitna Access Project; and

WHEREAS, building on the results of Phase I, AIDEA has requested a proposal for Phase II to perform preliminary engineering, develop cost estimates, and map wetlands in consideration of a road-only corridor to the West Susitna area to promote economic development; and

WHEREAS, this Phase II agreement is for information gathering only and does not obligate the borough to provide funds for these services.

NOW, THEREFORE BE IT RESOLVED, that the Assembly hereby approves the Manager to execute an agreement in support of these efforts.

ADOPTED by the Matanuska-Susitna Borough Assembly this 16 day  
of June, 2020.

VERN HALTER, Borough Mayor

ATTEST:

LONNIE R. McKECHNIE, CMC, Borough Clerk

(SEAL)

YES: Hale, Nowers, McKee, Leonard, Mayfield, and Sumner

NO: Boeve

MEMORANDUM OF UNDERSTANDING PHASE 2

The Memorandum of Understanding Phase 2 ("MOU") is made effective as of this 8<sup>th</sup> day of July, 2020, by and between the Matanuska-Susitna Borough ("MSB"), the Alaska Industrial Development and Export Authority ("AIDEA"), and AK Operations LLC ("AKO") each a "Party" and collectively the "Parties." att.

The Parties recite that:

A. The purpose of this MOU is to clarify rights, roles, responsibilities, and expectations of each Party for the phased feasibility analysis, due diligence and development of the West Susitna Access Road (the "Project").

B. In 2014, the Alaska Department of Transportation and Public Facilities (DOT&PF) Roads to Resources program completed an extensive natural resources inventory and access corridor study known as the West Susitna Reconnaissance Study for Access to Resource Development Opportunities. The purpose of the study was to identify multiple resource development opportunities that can be accessed by one transportation corridor, thereby attracting multiple private sector investments across resources.

C. Under AS 38.04.065, the Commissioner of the Department of Natural Resources, with local, governmental, and public involvement under AS38.05.945, may adopt, maintain, and when appropriate, revise regional land use plans that provide for the use and management of State of Alaska-owned lands, and to identify important land resources that can be used for the maximum public benefit.

D. AIDEA's purpose is to promote, develop, and advance the general prosperity and economic welfare of the people of Alaska. One of the ways in which AIDEA pursues the fulfillment of this purpose is by supporting and encouraging the development of natural resources in Alaska. AIDEA has the statutory authority to finance, develop, and own and operate facilities and improvements, including roads and related infrastructure, that are intended for use in connection with the extraction, transportation and production of timber, metals, minerals, hydrocarbons, petroleum products and other resources (each a "Resource" and collectively known as "Resources").

E. On October 23, 2019, MSB and AIDEA entered into a Memorandum of Understanding for Phase 1 of the Project to identify proposed and alternative transportation corridors, gather digital data, conduct field reconnaissance, and define the next phases of the Project.

F. MSB continues to explore the possibility of building a multi-user transportation corridor within the MSB to the Little Susitna River and further west within the MSB in advancing the work initiated by DOT&PF. The Parties acknowledge that such road(s) and infrastructure could and may be used, subject to the appropriate permits and agreements, to access MSB's Resources, provide public access, as well as enhancing MSB's fire suppression activities.

G. AKO is a Resource owner in the Yentna Mining District area within the MSB seeking to investigate the viability of permitting and constructing an all-season multi-user industrial access road to the area in collaboration with MSB, AIDEA and other Resource owners.

H. The Parties intend to foster partnerships with other Resource owners, both publicly and privately owned, who's commercial and business activities within the MSB will benefit from the development of road(s) and infrastructure. The Parties are committed to an open and transparent public process for all phases of major decision making on the Project.

NOW, THEREFORE, the Parties agree as follows:

1. **COOPERATION.** The Parties will work cooperatively, act in good faith, and use reasonable best efforts to coordinate activities and responsibilities with each other in pursuit of the Project. The parties will cooperate with one another and furnish each other with any information regarding the Project or the planned development of the Project that the other Party may reasonably request. MSB, AIDEA, and AKO are committed to an open public process and stakeholder engagement for the project phases and milestones. No Party, however, shall be obligated to disclose to the other Parties confidential, proprietary information or information that is required to be kept confidential under applicable law.

This MOU is non-exclusive for all Parties. Any Party may cooperate and work with any other third persons and/or entities regarding the Project. This MOU is not intended, and shall not be deemed, to create a partnership or joint venture between the Parties. No Party shall owe a fiduciary duty to any of the other Parties.

Any decision to progress the project forward past Phase II will require the authorization of all Parties and include compliance with AIDEA's statutes and finance regulations.

2. **PHASED DEVELOPMENT.** The Project will be budgeted and progressively pursued in phases to be mutually agreed by the Parties.

The objectives and goals for Phase 2 include:

- a. Investigate the viability of permitting and constructing an all-season industrial and public access road to the Yentna Mining District, terminating near the Whiskey/Bravo airstrip and potentially investigate beyond to AKO's operated Estelle Gold Project.
- b. Facilitate strategies to maximize the local economic benefit and job opportunities in the MSB as a result of responsible development of the Yentna Mining District.
- c. Establish the groundwork and collaboratively develop best management practices for the stewardship of fish and wildlife habitat, cultural and historical sites, and other assets..
- d. Provide a framework for AIDEA, MSB, AKO, and consortium to cooperatively engage with local communities and other project stakeholders to incorporate via public meetings and consultations.
- e. Identify areas requiring federal, state and local permitting, and facilitate support for obtaining such permits.

To assist in accomplishing the objectives and goals, subject to the terms of this MOU, the Parties hereby agree to pursue Phase 2 of the Project and will seek to complete all agreed tasks for Phase 2 by [December 31, 2020]. The tasks for Phase 2 are agreed to be the following:

- f. Compile & review digital/geospatial information and aerial imagery;
- g. Perform preliminary engineering analysis;
- h. Wetlands mapping and field verification of wetlands within corridor;
- i. Develop project communications program; and
- j. Define the next phase(s) of the Project.

The Parties hereby agree that AIDEA engages with HDR Alaska, Inc. (HDR) for Phase 2. The Parties have reviewed and approved detailed scopes of work and contract terms for Phase 2 of the Project and find the timeline acceptable to the Parties. The agreed scope of work are attached as Exhibit B to this MOU.

3. **BUDGET.** The Parties will establish a project budget for each phase prior to the initiation of each phase of the Project.

The budget for Phase 2 of the Project is attached as Exhibit A. The Parties agree that costs for Phase 2 of the Project shall not exceed four hundred, twenty five thousand dollars (\$425,000). The Parties shall share the costs of Phase 2 proportionately based on the following:

- a. MSB will not contribute funds to Phase 2
- b. AIDEA agrees to pay \$155,000, plus a commitment to fund up to \$7,500 in contingency funding,
- c. AKO agrees to pay \$155,000, plus a commitment to fund up to \$7,500 in contingency funding; and
- d. Funding will be raised from third party participants to pay the remaining \$100,000 prior to the commencement of Phase 2, with agreed upon Contribution Agreement form attached as Exhibit C.

Funds from AIDEA, AKO and any third party participants will contribute its share to a designated project account held and controlled by AIDEA for Phase 2 of the Project. No funds will be disbursed from the designated project account, unless otherwise agreed to in writing by the Parties, until a full balance of \$410,000 is achieved.

Any expenditures to be incurred that exceed the Phase 2 Budget will require the written approval of the Parties. Any funded amounts which have not been disbursed from the project account at the end of the term of Phase 2 shall be refunded to the Parties and to any third party participants upon their written request, unless otherwise agreed to in writing by the Parties and the third party participants.

4. **ROLES.** The Parties shall have to the following roles and responsibilities:

- a. MSB will:
  - i. Lead the designation of the proposed and alternative transportation corridors;
  - ii. Promote and communicate to MSB constituents project updates and engage project stakeholders to ensure an open and transparent public process;

- iii. Identify Resources owned by MSB along the proposed and alternative transportation corridors including fish and wildlife habitat, cultural and historical sites, tourists' attractions, and other assets.

b. AIDEA will:

- i. Engage HDR as consultant to undertake the agreed Phase 2 scope of work and lead communications between HDR and the Parties;
- ii. Manage disbursements from the designated project account;
- iii. Use commercially reasonable best efforts to raise Phase 2 funding from third party Resource owners;
- iv. Identify and approach other third party Resource owners that will benefit from the Project to participate in future phases of the Project;
- v. Determine and structure the finance plan for the Project phases.

c. AKO will:

- i. Support MSB, AIDEA and any arranged consortium;
- ii. Provide relevant resources and contribute financier contracts in investigating AIDEA supported financing options;
- iii. Provide human resources and further synergy by providing aircraft support for Phase 2 studies whilst AKO's exploration programs underway to minimize aircraft utilization costs where directed by MSB and AIDEA

- d. MSB, AIDEA and AKO will jointly prepare and facilitate strategies to maximize the local and regional economic benefits and job opportunities associated with the Project.

5. **RIGHTS.** Except as provided for under Section 9 of this MOU, each Party to this MOU shall have full access and rights to use the data, reports, studies, analysis or any other work product produced under this MOU for any purposes determined at the sole discretion of that Party.

6. **NO COMMITMENT, WAIVER, OR GRANT OF PERMISSION.** Nothing in this MOU obligates the Parties to take any specific action with respect to the Project other than Phase 2. Nothing in this MOU obligates AIDEA to provide any financing for the development of the Project. Likewise, nothing in this MOU waives any provisions of State Law or Borough Code or grants any form of permission under any law which may apply to activities beyond this MOU, including but not limited to, future approvals under MSB platting or land use regulations and governing body approval AS 44.88.095(c).

7. **TERMINATION.** The MOU may be terminated:

- a. By mutual consent of the Parties;
- b. For convenience of one Party, provided that the terminating Party notifies the other Parties of its intent to terminate at least thirty (30) days prior to the effective date of the termination; or
- c. For cause, by either Parties where the other Party fails in any material way to perform its obligations under the MOU. Termination for cause requires the terminating Party to

notify the other Parties of the intent to terminate, stating with reasonable specificity the grounds therefore, and the termination for cause shall be effective only if the other Party fails to cure the failure to perform within (30) days after receiving the notice.

Notwithstanding a termination, each Party will remain obligated to fund its share of the Phase 2 Budget, and any other approved budgets for subsequent phases of the Project, with respect to those costs that cannot be avoided or that must be incurred in closing out a contract or previously approved task order.

8. **THIRD PARTY CLAIMS.** All parties will bear its own costs (including attorney's fees) with respect to any third-party claim brought against such parties or all parties that arises from or is related to this MOU.

9. **CONFIDENTIALITY.** The Parties acknowledge that their records with respect to the Project and matters connected to it are generally available to the public for inspection upon request.

In the event MSB desires AIDEA to keep confidential any information or records that MSB provides to AIDEA, MSB must specifically request that the Executive Director of AIDEA determine that the information or records be treated as confidential and MSB must demonstrate to AIDEA that the information or records are within the categories established in AS 44.88.215 or are confidential under other applicable law. Upon MSB complying with the preceding sentence, AIDEA shall keep all such information and records confidential pursuant to the provisions of AS 44.88.215.

The Parties acknowledge that certain documents and records related to this MOU or the Project may be subject to the attorney-client privilege. Nothing in this MOU is intended or will alter the Parties' ability or authority to maintain the privilege within their own respective organizations.

10. **GOVERNING LAW; FORUM SELECTION.** This MOU and the rights of the parties under it are governed by the law of the State of Alaska. Any judicial proceeding arising out of or related to this MOU shall be filed and heard in the Superior Court for the State of Alaska, Third Judicial at Anchorage, and not elsewhere.

11. **AMENDMENTS.** Any Party may request changes to this MOU. Any changes, modifications, revisions or amendments to this MOU must be in a written instrument, which shall be effective when executed and signed by all of the Parties.

12. **THIRD PARTY BENEFICIARY RIGHTS.** The Parties do not intend to create in any other individual or entity the status of a third-party beneficiary, and this MOU shall not be construed so as to create any third-party rights.

13. **ASSIGNMENT.** No Party may assign its rights or delegate its duties under this MOU to any other person or entity without the prior written consent of the other parties to the assignment or delegation.

14. **EXPIRATION.** Unless sooner terminated as provided for in Section 7, this MOU and the Parties obligations under it expire three years after the effective date first stated above. The Parties, however, may extend this MOU by mutual written consent.

IN WITNESS WHEREOF, the parties to this MOU through their duly authorized representatives have executed this MOU effective as of the date first written above.

**ALASKA INDUSTRIAL DEVELOPMENT  
AND EXPORT AUTHORITY**

By:   
Alan Weitzner  
Interim Executive Director

**MATANUSKA-SUSITNA BOROUGH**

By:   
George Hays **HAYS**  
Acting Borough Manager

**AK OPERATIONS LLC**

By:   
Christopher Gerteisen  
North American Director

**CHAIRPERSON**

Mike Wood

**VICE CHAIR**

Howard Delo

**MSB STAFF**

Ted Eischeid



**BOARD MEMBERS**

Amber Allen

Tam Boeve

Robert Chlupach

Andy Couch

Larry Engel

Dan Mayfield

*Ex officio:* Bruce Knowles

**FISH AND WILDLIFE COMMISSION**

**Memorandum**

Date: May 20, 2020

To: Matanuska-Susitna Borough Assembly

Borough Manager John Moosey

Borough Mayor Vern Halter

RE: West Susitna Access Road proposed Phase II MOU, between the Mat-Su Borough, Nova Minerals, and the Alaska Industrial Development and Export Authority (AIDEA)

The Matanuska-Susitna Borough Fish and Wildlife Commission (MSBFWC) held a teleconferenced meeting on May 7 to discuss the implications of AK Senate Bill 204 and the proposed MOU to develop and construct a West Susitna Access road. The meeting was listened to by several members of the public who also had significant input, both in writing and over the telephone, to these agenda items. During that meeting the MSBFWC unanimously passed a motion to direct a committee of members to draft and submit a letter to borough leadership that detailed the concerns discussed at the meeting. This is that letter.

The appearance that both SB 204 and the MOU are closely related was apparent to everyone. In a letter dated March 4, 2020, and addressed to our Valley state legislative delegation, the Borough Manager and the Borough Mayor outlined many significant problems with SB 204. Quoting from the letter: "Our concern is that the state DNR will be allowed to sell land, without meeting Borough land management, platting, road construction and waterway requirements, and will not address issues created when the land is sold. The correction of these issues would then fall on the Borough, causing a tremendous amount of additional labor and very expensive operational costs to the Borough in order to correct these issues."

One very troubling section of SB 204 would eliminate the Recreational Rivers Act and ~~Phase Provision~~ [Page 60 of 102](#). This would have major implications in the construction of the access road, where 20 conventional bridges, 4 long span bridges, and 440 culverts involving lots of stream crossings would have potentially major impacts on fish habitat.

How will the fish habitat and fish producing waterways be protected in these early phases and during road construction, if construction is ultimately approved? The Borough made major gains at this past Winter, 2020, Board of Fisheries meeting to secure more salmon passage through the commercial fishery to return to their Borough natal streams. Damage or loss of this valuable habitat would directly offset these gains.

This letter would be far too long if we itemized all the concerns brought up at the MSBFWC meeting, so we'll highlight the major issues mentioned. If you wish to learn all the concerns brought up during the meeting, the material is posted on MSBFWC's webpage. Look in the May 7 meeting information under "handouts."

One concern was the lack of transparency in the Access Road MOU process. Many folks stated they had never been directly contacted about the possibility of this road being constructed. Some folks said the road route, as currently proposed, would come within close proximity of private property, some being businesses like lodges. Anticipated road traffic would have a negative effect on their operations.

Another concern was that the Phase I MOU stated that the road would have public access for all the reasons folks would travel on a rural road. The proposed Phase II MOU refers to the road as a private, industrial access road. How would this be of benefit financially to the MSB? With no explanation of this, turning the road from public to private was not acceptable to those who said if government entities were to be involved, then the road needs to have public access.

Additional concerns about the proposed MOU were discussed. There appears to be some question whether Nova Minerals is legally licensed to operate in Alaska. A member of the listening public raised the issue that there are significant cultural heritage sites in the areas which could potentially trigger federal involvement. The question of an economic analysis of cost/benefit issues was raised and whether the cost to develop a "proper" road would be offset by the benefit of the road. With government involvement, the benefits would need to be to the public and not just to a private mining company.

There was no mention in the draft MOU of how the Borough's wetlands mitigation bank would be involved in this process. A public involvement and stakeholder engagement process should be implemented, and this has not been done. Another comment was made about the MOU wording, stating that in many sections, the wording was unclear and open to interpretation, and that the wording implied a "done deal" before even being considered by the Assembly.

Here we listed a dozen or so comments raised during the meeting. There are others as well. One listener submitted her comments on virtually every page of the entire Phase II MOU. The MSB should consider additional language protecting fish, wildlife, wetlands, and other habitats in this Phase II MOU.

There are major and significant holes in this draft. The Commission agrees with the Borough Mayor that taking up this MOU as an agenda item for Assembly action needs to be postponed. We cannot support this MOU in its current form without some more specific and detailed language that would add public confidence in the MOU, especially in the areas of fish habitat and public process. These changes, properly done, would help us understand why this would be a good thing for the Borough and its citizens.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Wood", is centered on the page. The signature is written in a cursive, flowing style.

Mike Wood, MSBFWC Chair, on behalf of the MSBFWC





**MATANUSKA-SUSITNA BOROUGH**  
**Office of the Borough Manager**  
350 East Dahlia Avenue • Palmer, AK 99645  
Phone (907) 861-8689 • Fax (907) 861-8669  
[John.Moosey@matsugov.us](mailto:John.Moosey@matsugov.us)

March 4, 2020

The Honorable David Wilson, District D  
The Honorable Mike Shower, District E  
The Honorable Shelley Hughes, District F  
The Honorable Colleen Sullivan-Leonard, District 7  
The Honorable Mark Neuman, District 8

The Honorable George Rauscher, District 9  
The Honorable David Eastman, District 10  
The Honorable DeLena Johnson, District 11  
The Honorable Cathy Tilton, District 12

RE: Senate Bill 204 "An Act relating to state lands; relating to the authority of the Department of Natural Resources over state owned lands; relating to the disposal of state land; relating to the leasing and sale of state land for commercial or industrial development; repealing establishment of recreation rivers and recreation river corridors; and providing for an effective date."

Dear Mat-Su Valley Senators and Representatives,

The Matanuska-Susitna Borough (Borough) has significant concerns with the proposed Senate Bill 204. The impacts of this legislation, in many cases, would result in land being transferred to citizens, groups or companies, who were not required to meet Borough requirements, and therefore the correction of those created issues will fall on the Borough. This legislation would eliminate the requirements to follow these important and fundamental Borough standards for construction:

- Meeting mandatory construction setbacks for right-of-way and water bodies
- Meeting acceptable road widths
- Requiring DEC lot sizes for septic systems (which could contaminate water bodies)
- A determination of usable area and configuration
- Fulfilling requirements to build access roads into sub-divisions
- Adhering to significant floodplain development regulations
- Completing the installation of fish culvert construction in salmon streams
- Adhering to requirements to prevent river contamination
- Completing requirements to build new roads to Borough standards.

The scope of the potential impact to the Borough would be huge. Within the incorporated boundaries of the Borough, the State of Alaska owns 14,806,812 acres of land, which is 91% of all land in the Borough. This legislation would allow the State to sell or transfer their land without being required to meet Borough established code, policy, or requirements. In addition, Mental Health Trust has an additional 38,668 acres and the University of Alaska has 24,970 acres, which would potentially be exempt from meeting Borough requirements. By sheer volume, this gives us pause for very serious concerns.

*Providing Outstanding Borough Services to the Matanuska-Susitna Community*

Our concern is that the State DNR will be allowed to sell land, without meeting Borough land management, platting, road construction and waterway requirements, and will not address issues created when the land is sold. The correction of those issues would then fall on the Borough, causing a tremendous amount of additional labor and very expensive operational costs to the Borough in order to correct these issues. Among those issues are:

- Without requiring State development to conform to Borough platting and land use requirements, there is significant potential for damage and for future MSB intervention and expenditure of taxpayer funds to correct these issues.
  - Loss of required fish passage culvert construction and floodplain management, which are both Federal programs. If the State does construct an access road, they will be required to construct fish passage culverts to State and/or Federal standards. However, by replacing the word “SHALL” with “MAY” in this legislation, the very real results will likely be that the access road “MAY” never get built. Sec. 19.30.080
  - Incomplete or substandard road construction: Sec. 19.30.080 – Under this provision, State lands could be transferred with substandard road construction. This will place a significant burden on the taxpayers and DOT (State roads) to correct the substandard roads. Additionally, much of the remaining legislation strengthens the State’s position and provides DNR with the power to make all of these decisions without regard to Borough requirements or the fiscal burden it would place on the Borough.
  - Requirements to build access roads into newly developed subdivisions. As noted under fish passage culverts above in Sec. 19.30.080, by replacing the word “SHALL” with “MAY” in this legislation, the very real results will likely be that the access roads “MAY” never be built.
- This Bill eliminates AS 41.23.400 - 41.23.510, which establishes, manages, protects, and maintains the six recreational rivers in the Mat-Su Borough, all of which are anadromous water bodies. They are the Little Susitna River, the Deshka River, the Talkeetna River, Lake Creek, the Talachulitna River, and Alexander Creek. The removal of these recreational rivers and special purpose areas could have devastating effects on the fish and wildlife populations within these waterways. Without requiring development to conform to Borough platting requirements, there is significant potential for damage to our waterways and for future Borough intervention and expenditure of taxpayer funds to correct these issues.
- Potential trespassing issues: Sec 19.30.080 - The Borough has spent considerable time and resources over the years addressing trespassing issues on Borough and private lands, many of which were the result of poorly planned prior State land sales. When remote parcels are created without a platted or marked access route or easement, remote property owners park their vehicles along a State or Borough Right-of-Way and stage/unload along the roadway. Further, these same property owners often construct trespass access routes (trails/roads) bisecting multiple parcels of Borough and private lands. As more State land is sold, the related trespass issues multiply, and the Borough ends up with multiple trespass-related issues to clean up. This includes unnecessary damage to wetlands and waterways. This is one reason why the Borough has the platting requirements that it does, and that DNR should not exempt itself from local platting requirements and land use regulations.

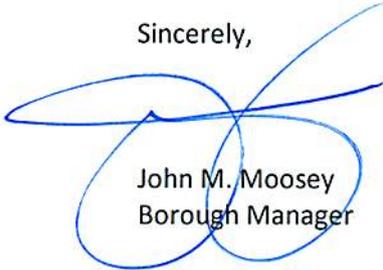
As an example, the Borough is working through the State's Municipal Entitlement Lands (MEL) program to transfer State land to the Borough. Today, there are still about 80,000 acres remaining to be transferred to the Borough from the State. At Hatcher Pass, we are currently working on surveying/platting over 6,000 acres of MEL land. The cost is approximately \$250,000 to meet the requirements established by the State. This process typically takes us 3-5 years to meet State requirements and receive a patent for the land. DNR's regulations require the Borough to meet their requirements and the State should be required to reciprocate and meet Borough requirements when disposing of State land in the Borough.

We are in favor of the State of Alaska proposals to disperse State lands for private use for economics, home ownership, or recreation. This action matches the State of Alaska messages, which have been given to us in the past, for the Mat-Su Borough to assume more responsibility for the land in our Borough. However, to exempt this action from our entire local control and requirements is just the opposite message from what we have received from the State. The transfer of any State land must meet Borough requirements rather than circumvent them.

If approved, this act will take effect immediately, which gives no entities an opportunity to address the numerous potential liabilities.

Please do not vote favorably for Senate Bill 204.

Sincerely,

A handwritten signature in blue ink, appearing to read "John M. Moosey". The signature is stylized with large loops and a long horizontal stroke extending to the left.

John M. Moosey  
Borough Manager

cc: Assembly  
John Harris

A handwritten signature in blue ink, appearing to read "Vern Halter". The signature is written in a cursive style with a prominent initial "V".

Vern Halter  
Mayor



**SB 204 FWC Committee Letter Draft**

**Background/Task:**

Action adopted by FWC at the 5/7/2020 Special FWC Meeting: **AC: Moved to draft a resolution to the Assembly in supporting the MSB letter position opposing SB 204, noting the public comments of concern at this meeting, the importance of the recreational rivers plan, with a committee of FWC members to develop, approve, and submit a draft resolution on behalf of the FWC; LE seconded.**

**Committee to be: MW, LE, RC.**

**Motion passed unanimously**

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COMMITTEE DRAFT/WORK TO DATE. NOT FINALIZED...

Matanuska-Susitna Borough

Borough Mayor, Vern Halter

Borough Manager, John M. Moosey

Cc: Borough Assembly, John Harris

RE: Senate Bill 204

RE: Non-Binding Memorandum of Understanding; Alaska Industrial Development and Export Authority, Matanuska-Susitna Borough, Nova Minerals Limited

Dear Mr. Vern Halter and John M. Mosey,

Many times, items seeking support are often on a single track and do not allow for the collation of tangential items dealing with the complete heart of a subject. This approach makes it inherently "difficult to discuss" because how factors affect factors and so on and are largely unrecognized and or acknowledged. It's like a protracted avoidance which cuts to the chaff removing the "seeming" superfluous and addressing solely the gist. Works well for human pigeon holing, however, in time, with constant avoidance, tangential factors which "make the

system work" are lost enroute towards achieving a particular gist. And therefore, it is necessary to understand how everything integrates allowing the system to work as a whole. It is with that, though seemingly laborious, with assurance it is but an abbreviated overview to enhance understanding of how the tangential complexities do relate towards a "sustaining" functional situation.

Issues dealing with fish and wildlife cannot be decision based overnight. There is a far greater complexity to perpetuating fish and wildlife, far removed from going to bed at night and awakening the next morning and assuming nothing has changed, everything status quo. To demonstrate, a multitude of examples exist, impossible to delve into all, singling out just one is propitious. "Salmon resources" in Northern Cook Inlet have always been known to be an important driver in the Matanuska-Susitna Borough(MSB). Recreational users and businesses have noted this and to substantiate, from an economic standpoint, studies; 2009 ISER report and 2019 Contribution of recreational fishing in the MSB to the local economy parallel what recreationalists and businesses have known and said for several years.

Singling out "just the salmon" life cycle, their requirements are quite interactively complex. Salmon are "assumed" to always be there. The continuance of salmon, as a species can only be perpetuated if we; recreationalists, businesses, and developers, as "stewards" recognize and acknowledge the complexities salmon life cycles have, understanding this is not an "on-off" light switch. Stewards success is not a achieved by a throw of the switch. It is only achieved by taking well orchestrated measures designed to function over long periods of time, years and decades.

Benchmark of foundational understanding:

Each Alaskan salmon specie has a unique life cycle history of which each specie has a standard benchmarks for years rearing in freshwater and for years rearing in the ocean before returning to natal streams. From the time of egg deposition to returning adult spawners each specie is different. Pink Salmon return 2 years after egg deposition, Chum Salmon 2-5 years, Sockeye Salmon 3-4 years, Coho Salmon 3-4 years and the State fish of Alaska, Chinook (king) Salmon 2-5 years. Sockeye, Coho and Chinook all have a period of time in freshwater of 1-2 years depending on the specie, before migrating into the ocean for further rearing growth, ocean rearing respective again for for each specie. THE COMMON DENOMINATOR of each as juveniles prior to seaward migration is the feeding dependency upon plankton whether it be phyto or zoo plankton. Plankton are among the first indicators of water quality and are immediately most susceptible to water quality changes. If water quality goes bonkers, plankton are first to correspondingly respond and the overall food chain trickle down affects the species having the mostest freshwater residency beginning with chinook to coho to sockeye then chum, and finally least freshwater residency, pink salmon.

Water quality can affect salmon returning to natal streams to spawn for anywhere from 2-5 years of a recruitment cycle, meaning, poor water quality can devastate an entire recruitment year. The ability of salmon to migrate into natal streams are effectually dependent on a myriad of policies relating to, where done, proper construction and related maintenance along a waterway corridor including that which is in the overall adjacent floodplain. This is inclusive of location and placements of culverts, bridges, bridge abutments and maintenance of stream bank integrity. Chemical and elemental water contamination can not only have an effect on plankton which in turn affects rearing juvenile salmon, but, as well developing salmon eggs in gravels prior to hatch out. Stream gravels need to be accounted for and optimally maintained in order for successful spawning to occur. To put in example perspective with the State fish, Chinook, having the most complex of life cycles, any hole in the adult recruitment year classes can take up to 15 years for that initial noted recruitment year void to begin recovering itself.

So, while salmon life cycles are slow to respond to recruitment recovery when water quality goes awry, the impact of which is devastating to not only the salmon, but, to a myriad of other resident fish species, such as; rainbow trout, grayling, whitefish, to mention "just" a few.

Two, other factors have a necessary significance in salmon drainage continuance as well:

First, in the death of salmon after spawning, the breakdown of carcasses during the decaying process return vital nutrients to the watershed which correspondingly fuel plankton peaks just as some salmon species are transitioning from the in-gravel egg phases to free swimming "plankton feeding" fingerling salmon. It is within salmon death that allows the water columns to recharge with food supplies for young salmon prior to and while migrating to sea where adulthood rearing-feeding continues.

Secondly, salmon returning provide food for; nesting Eagles to feed their young, a myriad of other shore birds and bears to fatten up in preparation for the winter estivation. As noted earlier, resident fishes such as; rainbow trout, Arctic grayling, whitefish, and on and on depend on salmon for sustenance. This is not forgetting the contribution for pure recreational catching or to put larder in the freezer by humans.

While all this appeals to the "mental heart" there is a tangible economic product as well. From the 2019 economic study of, "Contribution of recreational fishing in the Matanuska-Susitna Borough to the local economy", the total economic contributions for output was 44.6 million \$\$s, labor income of 14.3 million \$\$s, with an employment of 474,000 jobs. In itself, this

demonstrates the unique significance of salmon returning year after year, not only to the Borough, but, as well for the State of Alaska. This product noticeably declines when salmon numbers decrease as was noted this previous summer.

The aspects of water quality have been presented for systems to remain providing on an annual basis for the successful return of 5 species of Pacific Salmon. All the while looking at the annual but "realizing" salmon life histories "DO NOT" occur annually. As previously described, per respective specie their annual return occurs over a period of 2 to 5 recruitment years.

It should be noted, when a recruitment year is significantly less, it leaves a void allowing non anadromous species to emigrate and propagate further impacting salmon recruitment years.

In all regards, Senate Bill 204 weakens, through its unenforceable language, standards of construction to assure the fundamentals of salmon propagation in the Matanuska-Susitna Borough with lack of already in place flood plain requirements, road construction requirements such as bridges, bridge abutments, culverts and lack of measures to maintain water quality for salmon and resident species to propagate while further affecting wildlife dependent on those species.

In addition, SB204 eliminates six designated recreational rivers within the Matanuska-Susitna Borough; Alexander Creek, Lake Creek, Little Susitna River, Deshka River, Talachulitna River, Lake Creek and Talkeetna River. These rivers were selected based on several factors of importance of which primarily they receive more public recreational use than other drainages in Upper Cook Inlet and the MSB. They are and have been for years primary summer destinations for recreational fishing, camping, floating, experiencing quality of life. And, each contributes to the recreational fishing value of total economic output contribution of \$44.6 million, \$14.3 million labor income and an employment contribution of 474,000 jobs.

More, with road construction increasing access to remote areas a corresponding complication of "all" fish and wildlife management "will" occur. Historically, the management branches are under funded and to request appropriate funding for ensuing management purposes is probably non-existent at this time and for years to come. The loose wording of SB204, "build it and they will come", fighting the ensuing fire will not be able to occur either by the Boro or taxpayers and there is unlikely any intervention by the State based on the language of SB204.

All of SB204 and Non-Binding Memorandum of Understanding is not in the best interest of sustaining adequate salmon recruitment in the MSB. Mitigations are not a salmon's best friend, once damage is done, it will be too late, all of which affects future recruitment year classes and principally results in fighting a fire well behind its advent. The proper way to support salmon is to make sure guidelines of strong designated construction principles and water quality standards are in place prior to any construction. And, anyway, in effect, how is that possible since the parties most to gain are not responsible to any damages since they are a foreign firm? All in all, the recreational fishing contribution of \$44.6 million to the MSB is jeopardized, with no way out, not to mention the lasting effect to future salmon recruitment years.

Sincerely,

Members to the Matanuska-Susitna Borough Fish and Wildlife Commission



**MATANUSKA-SUSITNA BOROUGH  
FISH & WILDLIFE COMMISSION RESOLUTION SERIAL NO. FWC20-03**

A RESOLUTION OF THE MATANUSKA-SUSITNA BOROUGH FISH AND WILDLIFE COMMISSION EXPRESSING ITS SUPPORT FOR THE MATANUSKA-SUSITNA BOROUGH LETTER DATED MARCH 4, 2020 TO THE LOCAL STATE LEGISLATIVE DELEGATION OPPOSING SENATE BILL 204 AND HOUSE BILL 258 ON STATE LAND SALES, PLATS, AND RIVERS.

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WHEREAS, the Matanuska-Susitna Fish and Wildlife Commission was created in 2007 to represent the interests of the borough in the conservation and allocation of fish, wildlife, and habitat; and

WHEREAS, the Fish and Wildlife Commission has been effective in representing these interests to political leaders, government regulators, and boards of fish and game; and

WHEREAS, the Matanuska-Susitna Borough has a vested interest in utilizing science-based standards and forward looking policies to help ensure a balance between the critical fish and wildlife resources of the region with other needs of the population, including responsible resource development; and

WHEREAS, the Matanuska-Susitna Borough is home to roughly 15% of the state's population and covers over 25,000 square miles. In addition to encompassing the two major river systems, the Matanuska and the Susitna, the borough also contains a multitude of lakes, rivers, and streams; and

WHEREAS, the Matanuska-Susitna Borough has spent over \$8 million on restoration in the borough, replacing culverts and

restoring up to 100 miles of streams; and

WHEREAS, healthy habitat not only supports our fish and wildlife, but ensures clean water for our communities and key economic opportunities for Alaskans; and

WHEREAS, the Matanuska-Susitna Borough Fish and Wildlife Commission was successful in convincing the Alaska Board of Fisheries at their February 2020 meeting to adopt a number of policies that will enhance returns of salmon to area waters; and

WHEREAS, economic studies in our region in 2007 and 2017 show the significant positive economic impact returning salmon have on the economy of the Matanuska-Susitna Borough; and

WHEREAS, in 1991 the Matanuska-Susitna Borough approved the Susitna Basin Recreation Rivers Management Plan that had been developed with extensive public input; and

WHEREAS, maintaining Alaska's aquatic habitat laws and Matanuska-Susitna Borough regulations and standards can help us avoid the long-term costs of restoration and mitigation, while supporting returning salmon and the economic and cultural benefits they bring to the citizenry of the Matanuska-Susitna Borough.

NOW, THEREFORE, BE IT RESOLVED, that the Matanuska-Susitna Fish and Wildlife Commission expresses its support for the Matanuska-Susitna Borough's March 4, 2020 letter to our local state legislative members opposing Senate Bill 204 for its negative impact on our fish and wildlife habitat, our economy, our

recreational rivers, and on our interest in maintaining local control over these issue. Furthermore, the Matanuska-Susitna Fish and Wildlife Commission recommends that the Matanuska-Susitna Assembly support a resolution opposing both Senate Bill 204 and the related House Bill 258.

ADOPTED by the Matanuska-Susitna Fish and Wildlife Commission this \_\_\_\_ day of September, 2020.

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MIKE WOOD, Chair

ATTEST:

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TED EISCHEID, Staff

(SEAL)



**FWC Questions for ADF&G  
January 24, 2019**

1. During the 2018 season most Northern Cook Inlet king salmon fisheries were either greatly restricted or closed for a large portion of the season. How successful were the Department's egg take efforts at Deception Creek and the William Jack Hernandez Hatchery? During the 2019 season how many king salmon smolt does the Department anticipate having to stock at Deception Creek? Eklutna Tailrace? and Ship Creek?

*The department's egg take at Deception Creek was not a success in 2018. Only a handful of wild origin king salmon adults returned to the Deception Creek weir site and we collected less than 19,000 eggs. With so few eggs from Deception Creek, the Division of Sport Fish decided to release all the smolt produced from those eggs in the Eklutna Tailrace in 2019, and none in Deception. The Ship Creek smolt release is the priority for 2019, since it is a primary brood collection site. WJH Hatchery currently has enough eggs for about half the planned stocking for Eklutna Tailrace but that comes at the expense of the stocked lakes Catchable king production. We are attempting to produce Catchable coho for stocked lakes in 2019 to replace the Catchable king salmon production shortfall.*

*See table 1 below.*

2. Last spring Director Brookover assured Mat-Su sportfishing interests that the Department would have the 2019 king salmon outlook out by November. What is the Department timeline for when the outlook and any season starting emergency regulations may be released?

*The forecast and emergency orders EO 2S-01-19, EO 2-KS-19-1 and EO 2-KS-20-1 were issued on Monday, January 7, 2019. The department remains committed to providing data and information to the public as quickly as possible. Early in 2018, Division of Sport Fish evaluated its process for producing the Doshka king salmon forecast and made changes resulting in a draft outlook being available for internal review in late November. With a new administration starting in December the department wanted to allow the new administration time to consider staff recommendations for management of the fisheries before they were presented to the public.*

3. At a 2018 meeting with the Mat-Su Borough Fish and Wildlife Commission Director Brookover said the Department with public help would develop a king salmon management plan proposal for Northern Cook Inlet and / or Doshka River for submission to the Alaska Board of Fisheries. This plan could help provide a more consistent and certain regulatory framework for Northern Cook Inlet king salmon management. When is the Department willing to start working on this proposal?

*The department has already begun reviewing and preparing to discuss the draft king salmon management plan prepared by the Mat-Su Borough Fish and Wildlife Commission. The department is supportive of scheduling meetings with the commission to evaluate the plan and discuss management implications, so the commission can submit a proposal by the April 10 deadline.*

4. All Upper Cook Inlet sockeye salmon and silver salmon goals were achieved during the 2018 season, and Northern Cook Inlet silver salmon sport harvest opportunities were much earlier and more robust than for the past several years. What can and is the Department willing to do to make this a more consistent occurrence?

*The department's primary objective is to manage commercial and sport fisheries following management plan provisions to meet stock-specific escapement goals. The department cannot control total run size or run-timing and both will continue to be variable. Our primary objective will continue to be achieving escapement goals, where present, in NCI and other drainages. In both 2017 and 2018, all NCI sockeye and coho salmon goals were achieved or exceeded, albeit run-timing varied dramatically between the two seasons. Total run size and run-timing significantly impact NCI sport fishing opportunity and quality.*

5. What are ADF&G's research priorities for Northern Cook Inlet? And for Upper Cook Inlet?

*The Division of Sport Fish research priorities are reflective of the following projects that support management of sport fisheries in NCI and UCI:*

- In 2019, the division of Sport Fish will estimate both king and coho salmon abundance in the mainstem Susitna River. In addition, this project provides additional inseason information such as fishwheel catch-per-unit-effort, and post-season data such as age and genetic stock composition.*
- The division also plans to continue working with the U.S. Fish and Wildlife Service on juvenile salmon studies in the Deshka River drainage. These studies include gathering physical stream data and basic fish distribution throughout the drainage. This research is testing the feasibility of using juvenile data to improve preseason run forecasting.*
- In addition to the above research projects, the Palmer Sport Fish office will continue to operate core salmon assessment projects that directly inform preseason and inseason management. These include the Deshka, Little Susitna, Fish Creek and Jim Creek weir projects, aerial index surveys of king salmon abundance, and foot index surveys of coho salmon abundance.*
- Northern pike suppression gillnetting and assessment of juvenile salmon abundance and distribution will continue on Alexander Creek. Work is also being initiated to eradicate northern pike in Kings and Anderson lakes.*

*The Division of Commercial Fisheries research priorities for NCI and UCI include:*

- Estimate annual inriver runs of sockeye salmon to the Yentna and mainstem Susitna rivers (via genetic capture-recapture). Sockeye salmon could be collected from the lower Yentna and Mainstem Susitna rivers from ongoing Chinook and coho salmon projects. Then, using samples collected at Judd, Chelatna, and Larson lake weirs, genetic capture-recapture abundance estimates for each drainage could be made. This project is not currently funded.*
- Development of better tools and models to improve inseason projections for UCI sockeye and coho salmon stocks. This project is not currently funded.*
- Quantify the effects of northern pike suppression on sockeye salmon production in Chelatna and Hewett lakes. DCF conducted northern pike suppression efforts the past two springs (2017 and 2018) on Chelatna Lake and will do so again in 2019.*

- *Quantify spawning of sockeye salmon in the mainstem Susitna River. This would be a project to review the Susitna-Watana and AKSSF radio telemetry GIS layers to quantify mainstem Susitna spawning sites for sockeye. No new field work, simply mining existing data sets to answer this frequently asked question. This project is not currently funded.*

6. If a stock of concern has been listed for a number of years, what information or criteria does ADF&G need to take this stock off the concern list?

*To remove a stock from SOC status, that stock should have met escapement or yield objectives over a recent four to five-year period and the escapements should fall throughout the range of the escapement goal. The policy for the management of sustainable salmon fisheries (5 AAC 39.222) defines a stock of concern (SOC) as a stock of salmon for which there is a yield, management, or conservation concern. All three levels of concern include what is referred to as a chronic inability to meet defined escapement or yield objectives. A chronic inability means the continuing or anticipated inability to meet escapement goals over a four to five-year period, which is approximately equivalent to the generation time of most salmon species.*

7. What is the juvenile Susitna sockeye salmon production from the lakes? What is Deshka Chinook smolt production?

*Juvenile Susitna sockeye salmon production from area lakes and Deshka king salmon smolt production are unknown because there is no juvenile sockeye salmon or king salmon monitoring in the Susitna drainage.*

*The department is not able to provide any estimates of juvenile sockeye salmon production largely due to budget cuts that eliminated sockeye salmon smolt or hydroacoustic fry assessment efforts, except for the following two instances:*

- 1) *In September 2018, the DCF, in cooperation with the Cook Inlet Aquaculture Association (CIAA), conducted a hydroacoustic population survey to assess fall fry production in Hewitt Lake. A total estimate of 7.3 million fish were in the lake. Threespine stickleback were the most abundant fish present at about 6.9 million (94.5%) followed by juvenile sockeye salmon at approximately 0.4 million (5.5%). The average length and weight of the age-0 sockeye salmon fry was 37.8 mm and 0.67 g. The department and CIAA have 2 more field seasons (2019 and 2020) at Hewitt Lake to assess the effectiveness of northern pike removal on increasing sockeye salmon production in the lake.*
- 2) *In 2018, CIAA released 46,000 sockeye salmon smolt into Shell creek in an effort to increase the number of mature sockeye salmon that will return to spawn in Shell Lake. CIAA estimated 32,606 smolt emigrated from Shell Lake in 2018.*

*Although no information is currently available on Deshka River king salmon smolt production, Palmer Division of Sport Fish staff are collaborating on juvenile king salmon work with the U.S. Fish and Wildlife Service. This work will inform the feasibility of estimating smolt production in the future. A proposal for Mat-Su Salmon Partnership NFHP funds has been submitted to help fund this work. To date, attempts to capture Deshka River king smolt in sufficient quantities have been unsuccessful.*

8. When Susitna stock of yield concern goes away, given the tools available now, does ADF&G have what it needs to provide in-season abundance-based management of Susitna and Yennta rivers to support the subsistence, sport, commercial and personal use fisheries?

*No, the department does not have the tools necessary to provide inseason abundance-based management of Cook Inlet commercial fisheries or of the Tyonek Subdistrict subsistence fishery. In the commercial fisheries, both the Central District Drift Gillnet Management Plan and the Northern District Salmon Management Plan contain restrictive provisions that were developed to conserve Susitna River sockeye salmon. Sockeye salmon escapement is monitored in the Susitna River drainage at weirs on Chelatna, Judd, and Larson lakes. The department will continue to monitor sockeye salmon escapement at these weirs as long as those programs remain funded. However, these programs have little use for inseason management of the commercial fisheries because the lakes are far removed from the marine waters of UCI. Unless modified by the Board of Fisheries, a conservative approach to commercial fisheries that harvest Susitna River sockeye salmon as provided in regulatory management plans would continue to be followed when the stock of concern status is removed. The department utilizes the Larson Creek weir to manage the inriver sport fishery at the mouth of Larson Creek. Currently there are no personal use salmon fisheries in the Susitna River drainage.*

9. Please provide this year's king and coho salmon escapement counts in Northern Cook Inlet Management area including systems with and without goals?

*See table 2 below.*

10. Under provisions of the Central District Drift Gillnet Fishery Management Plan (5 AAC 21.353), the Commercial Fisheries Division announced an opening for the drift fleet on August 23, 2018. The management plan specifically states that for any commercial drift fleet opening from August 16 until closed by emergency order, only Drift Gillnet Areas 3 and 4 are open for fishing [5 AAC 21.353 (f)]. A description of these areas is contained in regulation [5 AAC 21.353 (g) (3 and 4)], but essentially moves the fleet over to the west side of Cook Inlet. The announced August 23 opener contained an added provision stating that the fleet could also fish in Drift Area 1 [5 AAC 21.353 (g) (1)], which includes all waters of the Central District south of Kalgin Island. This is a major expansion of the Board of Fisheries (BOF) specified allowable fishing area for this period. Since there were no significant escapement goal concerns regarding either the Kenai or Kasilof Rivers, the Matanuska-Susitna Borough Fish and Wildlife Commission questions why the ADF&G, Commercial Fisheries Division decided to assume allocative authority by allowing one gear type to fish in an area the BOF clearly had designated as an area off-limits during the time period of the opener?

*The decision to open a 12-hour drift gillnet commercial fishing period in Drift Gillnet Area 1 on August 23 relied upon a variety of sources of information. First, nearly 125,000 sockeye salmon had passed the Kenai River sonar counter in the previous 5 days (Aug 17-21) prior to the EO being released on August 22. The Alaska Board of Fisheries has directed the department to manage all fisheries to meet escapement goals (5 AAC 21.353(e)) within the framework of stock specific or drainage specific management plans. The only time the department is to deviate from management plan provisions is if strict adherence to those provisions might lead to escapement goals being missed. When the decision was made to add Drift Gillnet Area 1 to a normal regulatory opening of Drift Gillnet Area 3 and 4 this past summer, the Kasilof River sockeye salmon BEG had already been exceeded and sockeye salmon daily passage estimates in the Kenai River continued to increase with abnormally late and strong salmon run entry, indicating it was possible the inriver goal might be exceeded if the strength of the late run entry continued. Furthermore, inseason information about coho salmon throughout UCI indicated above average abundance and that all NCI escapement goals were projected to be met or exceeded; moreover, NCI sport fishery regulations for coho salmon had been liberalized. This expansion of the drift gillnet regular period was provided to harvest any excess sockeye salmon still in the District. However, commercial fishing opportunity was limited to the drift fleet only and included only Drift Gillnet Area 1 in order to reduce the potential risk for a high harvest of coho salmon in the northern part of the Central District that would be more likely to occur if setnets or a larger area had been opened. Finally, by this date in August, nearly all NCI coho salmon would have migrated through the Central District of UCI, so limiting the drift fleet to Drift Area 1 and not*

*fishing the Upper Subdistrict set gillnet fishery would result in a much lower harvest of Kenai and Kasilof bound coho salmon.*

11. Did the low sockeye harvest indicate that Kenai sonar was counting pinks as sockeyes? What methodology have they developed in the last couple of years to refine the counts?

*No, the low sockeye salmon harvest did not indicate the Kenai River sockeye salmon sonar counter was counting pink salmon as sockeye salmon. In fact, a few days after the expanded opening into Drift Area 1, Kenai River sockeye salmon daily passage estimates decreased to the point where the sonar project was terminated for the season due to low counts. Thus, the low harvest on August 23 was corroborated with low sonar counts a few days later.*

*In the Kenai River, fishwheels are used to apportion sonar target counts to species of fish. One of the biggest challenges the department faces statewide is apportioning sonar counts to individual salmon species in river systems where multiple species are encountered. In 2018, in the Kenai River, the number of fish counts that were apportioned as pink salmon was more than 600,000 fish (from August 8 to August 28). During this same time period, 430,000 fish counts were apportioned to sockeye salmon. Fishwheels have been used in the Kenai River to apportion sonar counts since the project began in the late 1970's. In some years, gillnets have been used in conjunction with the fishwheels to corroborate species apportionment.*

*In August of 2016 the department reviewed species apportionment by conducting a study to estimate the proportion of the total sonar counts comprised of sockeye salmon at the RM 19 sonar site when pink salmon were abundant on the Kenai River. This project used a variety of fishing methods (fish wheels, anchored gillnets, drift gillnets, and beach seines) for two weeks in August to apportion sonar counts by species. It appears that the proportion of pink salmon captured in fish wheels and drift gillnets is in part determined by the location where the gear is fished. Sockeye salmon passage estimated using the standard fish wheel apportionment method was not significantly different from passage estimated using combined anchored gillnet and seine data to apportion sonar counts. The comparison of sockeye salmon passage estimates using 6 apportionment methods indicated the difference between estimates was a relatively small proportion (1.2–4.7%) of the total passage estimate, and that it was not possible to unequivocally determine which apportionment method provided the most accurate sockeye salmon passage estimate. Due to salmon behavior, land ownership issues, and various problems encountered when fishing with gillnets and seines at the Kenai RM19 sonar site, the department recommended fish wheels continue to be used for species apportionment and that modeled species proportions based on north bank fish wheel catches be used to apportion south bank DIDSON counts.*

Table 1.- 2018 and expected 2019 Chinook Southcentral Alaska king salmon smolt release information by location, 2018 and 2019.

**2018 - 2019 Chinook Smolt Summary**

	2018	2018	Number	Percentage	2019	2019	Number	Percentage
Chinook Smolt	Request	Stocked	Long/Short	of Request	Request	Planned Stocking	Long/Short	of Request
Ship Creek	365,000	389,797	24,797	6.8%	365,000	365,000		
Homer Spit	315,000	328,142	13,142	4.2%	315,000	315,000		
Ninilchik R.	150,000	150,053	53	0.0%	150,000	150,000		
Seldovia Harbor	105,000	104,890	(110)	-0.1%	105,000	105,000		
Crooked Cr	140,500	149,622	9,122	6.5%	140,500	125,000	-15,500	-11%
Deception Creek	212,000	211,168	(832)	-0.4%	212,000	0	-212,000	-100%
Eklutna	424,000	432,369	8,369	2.0%	424,000	226,748	-197,252	-47%
Fleming Spit, Cordova	105,000	107,306	2,306	2.2%	105,000	105,000		
Whittier	105,000	106,261	1,261	1.2%	105,000	105,000		
Seward Lagoon	315,000	324,509	9,509	3.0%	315,000	315,000		
<b>Total:</b>	<b>2,236,500</b>	<b>2,304,117</b>	<b>67,617</b>	<b>3.0%</b>	<b>2,236,500</b>	<b>1,811,748</b>	<b>(424,752)</b>	<b>-21.0%</b>

Table 2.- King and coho salmon weir and index counts for Northern Cook Inlet, 2018

System		Survey	SEG
<b><u>Chinook salmon</u></b>			
Knik Arm	Little Susitna River (weir)	549 <sup>a</sup>	2,300-3,900
	Little Susitna River	530	900-1,800
	Moose Creek	108	
Eastside Susitna	Chulitna River	1,125	1,800-5,100
	Clear Creek	940	950-3,400
	Goose Creek	90	250-650
	Little Willow Creek	280	450-1,800
	Montana Creek	473	1,100-3,100
	Prairie Creek	1,194	3,100-9,200
	Sheep Creek	334	600-1,200
	Willow Creek	411	1,600-2,800
	Indian Creek	326	
	Portage Creek	429	
	Kashwitna River	112	
Westside Susitna	Alexander Creek	296	2,100-6,000
	Deshka River (weir)	8,549	13,000-28,000
	Lake Creek	1,767	2,500-7,100
	Peters Creek	1,674	1,000-2,600
	Talachulitna River	1,483	2,200-5,000
	Cache Creek	154	
	Canyon Creek	169	
	Red Creek (Yentna)	390	
West Cook Inlet	Chuitna River	939	1,200-2,900
	Lewis River	0 <sup>b</sup>	250-800
	Theodore River	18	500-1,700
<b><u>Coho salmon</u></b>			
Knik Arm	Little Susitna River (weir)	7,583 <sup>a</sup>	10,100-17,700
	Fish Creek (weir)	5,023	1,200-4,400
	McRoberts Creek (Jim Creek system)	758	450-1,400
	Upper Jim Creek	1,215	
	Wasilla Creek	339	
	Cottonwood Creek	616	
Eastside Susitna	Question Creek	513	
	Birch Creek	143	
	Rabideux Creek	110	
Westside Susitna	Deshka River (weir)	12,962	10,200-24,100

<sup>a</sup> incomplete count<sup>b</sup> Main channel diverted into large muskeg; intermittent connection with Cook Inlet.





## MATANUSKA-SUSITNA BOROUGH

### Fish & Wildlife Commission

#### Planning and Land Use Department

#### Planning Division

350 East Dahlia Avenue • Palmer, AK 99645

Phone (907) 861-7833 • Fax (907) 861-7876

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### **Final Question List for Dec. 5 ADFG joint meeting with FWC**

Written Responses Requested

1. What evidence is there that Turnagain Arm salmon stocks are in better health than Susitna River Drainage salmon stocks? or Knik Arm drainage salmon stocks? Is there any reason to believe that commercial harvest rates of Turnagain Arm sockeye salmon stocks are lower than harvest rates of Susitna sockeye salmon stocks? or Knik Arm sockeye salmon stocks?
2. What triggers the Department in allowing more nets for commercial harvest on the Eastside of the Northern District after it has issued an emergency order seeking to reduce the Northern District harvest of Susitna Sockeye?
3. For several years now the Department has been expanding the number of nets allowed to some Northern District set netters in early August by emergency order. Important Northern District sport coho salmon fisheries have had to be restricted or closed after the emergency order allowing more Northern District nets targeting coho salmon. How does the Department determine if the emergency order will be issued to allow additional Northern District commercial nets in August?
4. From guided logbook data, during the month of May how many guided anglers fished the Susitna River drainage? and how many king salmon did they harvest from the Susitna River drainage during the month of May for each year of the guided logbook program?

*Providing Outstanding Borough Services to the Matanuska-Susitna Community*

*Ted Eischeid, Planner II*

*Supporting [Environmental Planning](#) and the MSB [Fish & Wildlife Commission](#).*

*[Ted.Eischeid@matsugov.us](mailto:Ted.Eischeid@matsugov.us) Ph. 907.861-8606, MSB Cell 795-6281*

5. How did the 2019 management of commercial Cook Inlet salmon fisheries impact returns in the Northern District and Mat-Su Drainages?
  
6. Why is the Department recommending fishing for King Salmon only 4 days a year on the Parks Highway streams?
  
7. What are the effects of King Salmon fishing in early May and early June in Unit 2 and Talkeetna River? How many fish would be harvested if a king fishery was allowed in unit 2 during May?
  
8. At the January 24, 2019 meeting between ADF&G and the Mat-Su Borough Fish and Wildlife Commission, the question was asked about what criteria the department would use to delist a stock of concern. ADFG's written reply was, "To remove a stock from SOC status, that stock should have met escapement or yield objectives over a recent four or five-year period and the escapements should fall throughout the range of the escapement goal...."

At the recent BOF workshop, when a BOF member brought up that escapement goals had not been met consecutively over the past four or five recent years for all indicator systems the department monitors for the Susitna drainage and questioned what criteria the department was using to delist Susitna/Yentna sockeye, he was told that each system is unique and must be examined on a case-by-case basis.

Which approach do you want? Why?

9. ADF&G is making major changes in their king salmon management scheme for the Susitna drainage. Rather than continuing to manage on a drainage by drainage basis, the department plans to divide the area into four "sub-basins:" the Yentna; Deshka; Talkeetna; and Eastside Susitna Rivers and manage each sub-basin as a unit.

One puzzling aspect is that the "new" recommended escapement goals don't appear to be related to the original goals for each system contained in that sub-

basin. Also, several areas are being downgraded from having a “biological escapement goal” or BEG, to having a “sustainable escapement goal” or SEG.

How did you arrive at the proposed sub-basin escapement goals and how will these sub-basins be managed compared to the previous individual drainages management scheme? Which “indicator systems” would be monitored within each sub-basin to see if escapement goals are being met?

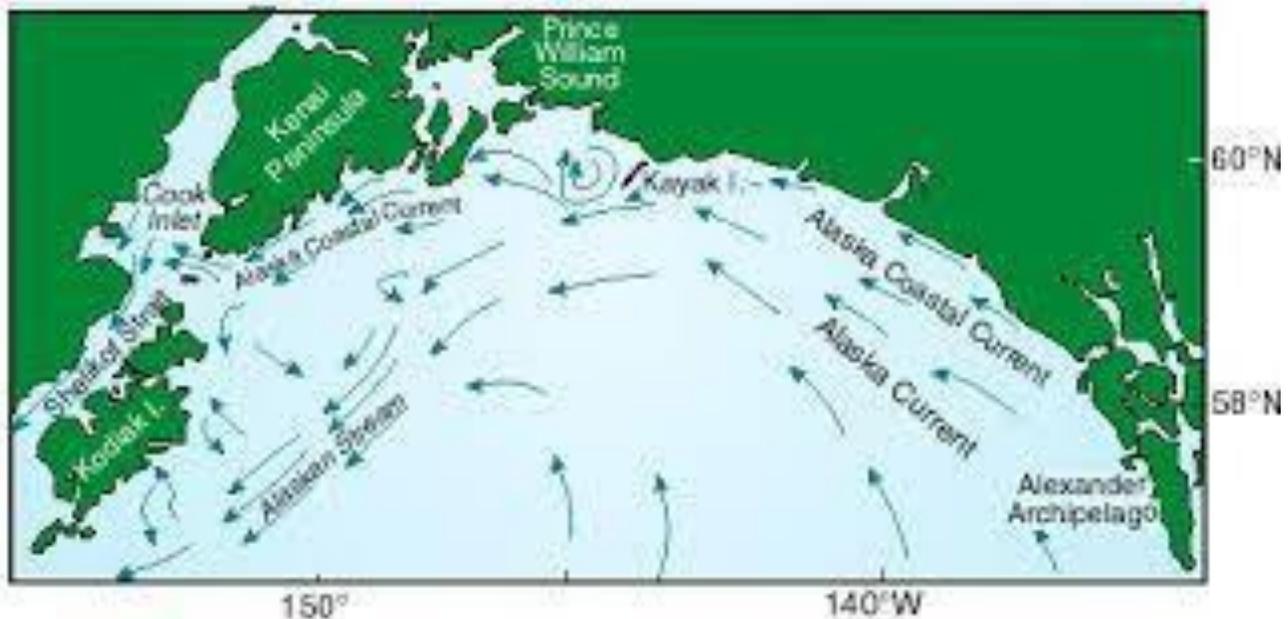
10. The entire Northern Cook Inlet King Salmon Fishery (except Eklutna) was closed preseason and remained closed in 2019. Is this likely to occur again in 2020?
  
11. When can we expect the 2020 Northern King Salmon outlook to be announced? And what is the timeline for 2020 season starting king salmon emergency orders (if any)?
  
12. What are divisional salmon research and management project priorities for Upper Cook Inlet? And please identify any programs that are likely to be eliminated because of reduced funding.
  
13. How many salmon streams have lost their salmon stocks - reds, silvers or kings? (In the last 40 years or whenever record keeping was started.)
  
14. How many stocks have not or are not being monitored to stock numbers?

*The next question results from a preamble topic discussion of Cook Inlet water circulation.*

Below are two maps showing water circulation, one for the northern Gulf of Alaska, the other for Cook Inlet. Please study them carefully. I pulled each from arenas of; State and Federal agency reports and also from oil industry studies which needed this type of information in case of needed response to potential oil spills. These maps will be used to build question or questions from, as related to salmon homing back to natal streams in Upper Cook Inlet (UCI).

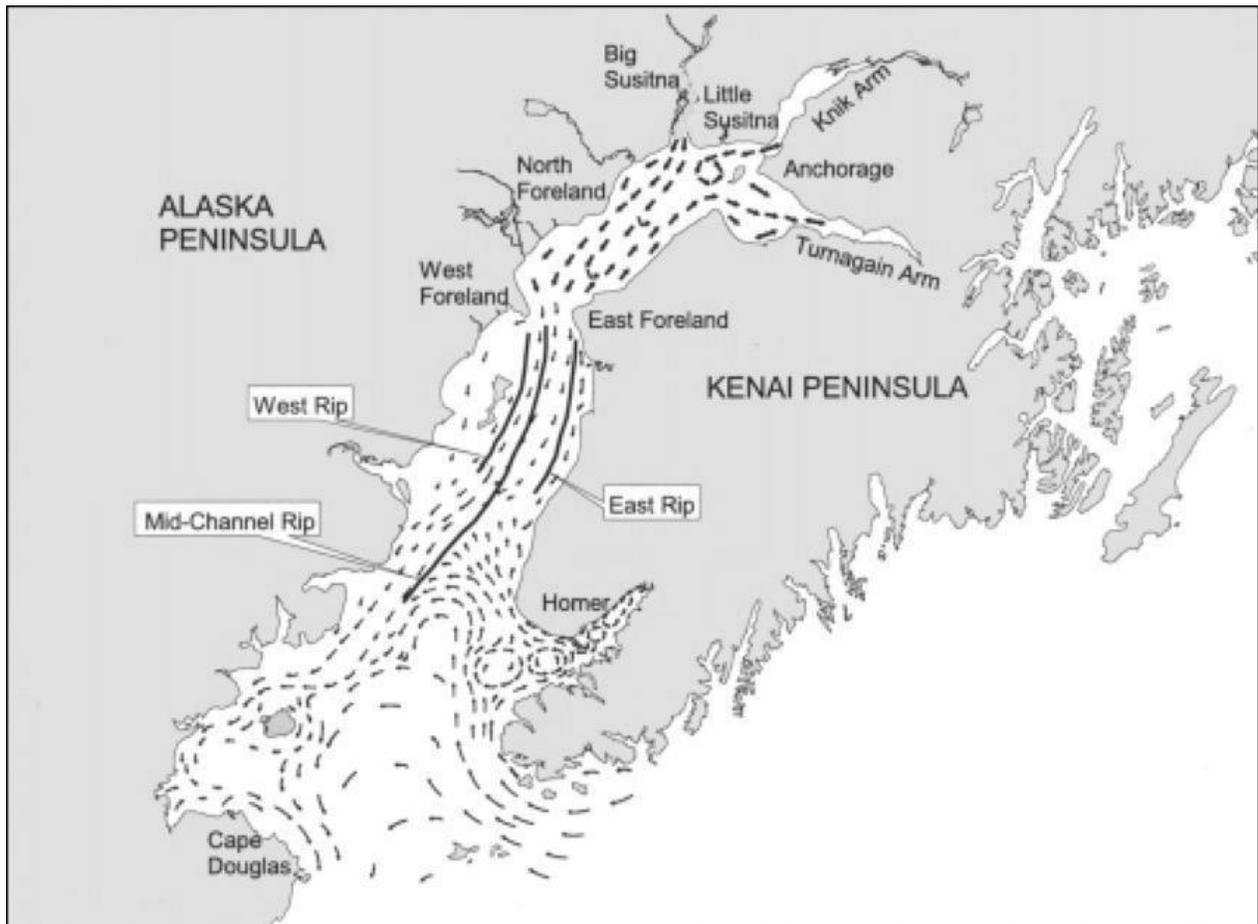
Bullet statement: Salmon can olfactorally detect concentrations as low as parts per billion (ppb) and parts per trillion (ppt).

The water circulation map of the northern Gulf, for our perusal, specifically of the northwestern Gulf where Gulf waters encroach into lower Cook Inlet water. This occurs at the lowest end of the Kenai Peninsula where it primarily influences Kachemak Bay and and up into Cook Inlet between the "lower mid rip" and Anchor Point.



The better defined Cook Inlet water circulation map below shows the "lay" of "mid channel rip", "west rip" and "east rip". With an average summer flow discharge into Cook Inlet of 51,000 cubic feet per second (!!!), no other drainage emptying water into Cook Inlet even comes close or near to the outer foul poles of a baseball park as the discharge from the Susitna River. "So", Cook Inlet water is primarily composed of Susitna watershed waters. Studying the flow map, Susitna water is in the upper inlet side to side until the "eastern most" circulation hits the "east forelands" and deflects northeasterly back up the inlet into Turnagain Arm, farther continuing north to just west of Fire Island where Knik and Matanuska Rivers combine with the northerly circulation flowing Susitna influenced water to form a "gyre" just west of Fire Island. The silt seen

looking across at ebbing and low tide of Turnagain Arm is due to silt deposition resulting from the settling out of silt from the northeasterly "backwash" of the Susitna River water. Below the "east forelands" there is a slight holding up of Susitna circulating water due to The Kenai River discharge making a slight hydro-barrier to Susitna water. Because the Susitna water circulation is so dominant paralleling Kenai-Kasilof River discharges, its influence is much like an upward backwash or huge lengthy eddy of Kenai-Kasilof water moving north along the beach above the "east forelands" where eventually both Susitna and Kenai water have more mixing. As a side note, this explains why "most", not all, salmon migrating into the Kenai River drainage occurs at high tide because at low tide the appropriate "natal" smells of the Kenai are simply not as prevalent due to the unending circulation push of Susitna water towards the lower inlet pushing Kenai-Kasilof water towards the beach. In addition to salmon coming in with the high tide, the tide pushes Kenai water northerly along the beach and slows Susitna water circulation and the combining with other waters in the immediate area.



15. Can Andy Barclay log onto a combination map of Cook Inlet water circulation, which is provided, and overlay that with the map(s) used in his 2016 "Cook Inlet coho salmon gene projects update" the additional genetic information since With additional genetic information from draft reports, from draft reports?

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16. What is the turn-around time from the point of collection rough analysis of samples taken for genetic purposes of stock ID during the Bristol Bay and Cook Inlet test fisheries, respectively, to be made available to fish managers?

17. Modeling for escapement of the Kenai-Kasilof areas, the models used are; spawner abundance adult return yields, return-per-spawner, classic Ricker model, Markov Table, Beverton-Holt model, Hockey Stick model, Brood Interaction model, Cushing Model, and Autoregressive Ricker model. Since none of these are used in UCI (?), modeling for UCI is dependent on "indicated escapement index" or an "escapement estimate" is used. At what point or criteria that it takes, does one say, the system does not work?

# MATANUSKA-SUSITNA BOROUGH DIRECTORY OF ORGANIZATIONS

## MSB Fish and Wildlife Commission

## Board Expiration

<b>Mayfield</b>	<b>Dan</b>		<b>Board Position</b>	SPT Member 1 - Assembly Representative
<b>Company Representing</b>			<b>Term</b>	10/16/2018 to 12/31/2021
PO Box 520705			<b>Type of Term</b>	1 Full & Partial
Big Lake	AK	99652	<b>Member Title</b>	
<b>Home</b>	(907) 892-7406	<b>Work</b>	<b>Cell</b>	(907) 861-7845 <b>E-mail</b> dan.mayfield@matsugov.us

Wood	Michael	E.	<b>Board Position</b>	SPT Member 2 - Sport Fishing Representative
<b>Company Representing</b>			<b>Term</b>	1/12/2016 to 12/31/2021
PO Box 773			<b>Type of Term</b>	1 Full
Talkeetna	AK	99676	<b>Member Title</b>	
<b>Home</b>	(907) 354-5815	<b>Work</b>	<b>Cell</b>	(907) 354-5815 <b>E-mail</b> mollyhops@mac.com

Engel	Larry	J	<b>Board Position</b>	SPT Member 3 - Hunting Representative
<b>Company Representing</b>			<b>Term</b>	2/20/2007 to 12/31/2021
16341 East Vera Way			<b>Type of Term</b>	5 Full
Palmer	AK	99645	<b>Member Title</b>	
<b>Home</b>	(907) 745-4132	<b>Work</b>	<b>Cell</b>	<b>E-mail</b> larryengel@gci.net

Delo	Howard		<b>Board Position</b>	SPT Member 4 - At-Large
<b>Company Representing</b>			<b>Term</b>	9/21/2010 to 12/31/2021
PO Box 520707			<b>Type of Term</b>	4 Full
Big Lake	AK	99652-0707	<b>Member Title</b>	
<b>Home</b>	(907) 892-8796	<b>Work</b>	<b>Cell</b>	<b>E-mail</b> hodelo@mtaonline.net

<b>Allen</b>	<b>Amber</b>		<b>Board Position</b>	SPT Member 5 - At-Large
<b>Company Representing</b>			<b>Term</b>	8/6/2019 to 12/31/2020
4150 E Wickersham Way			<b>Type of Term</b>	1 Partial
Wasilla	AK	99654	<b>Member Title</b>	
<b>Home</b>	(907) 715-1085	<b>Work</b>	<b>Cell</b>	(907) 892-6872 <b>E-mail</b> fish@millersriverboat.com

# MATANUSKA-SUSITNA BOROUGH DIRECTORY OF ORGANIZATIONS

## MSB Fish and Wildlife Commission

## Board Expiration

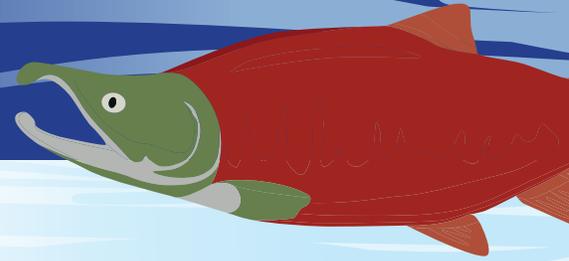
<b>Chlupach</b>	<b>Robert (Bob)</b>	<b>S</b>	<b>Board Position</b>	SPT Member 6 - At-Large
<b>Company Representing</b>				<b>Term</b> 8/6/2019 to 12/31/2020
PO Box 931				<b>Type of Term</b> 1 Partial
Willow	AK	99688	<b>Member Title</b>	
<b>Home</b> (907) 841-1025	<b>Work</b>	<b>Cell</b>	<b>E-mail</b>	bchlupach@gmail.com

Couch	Andrew	N.	<b>Board Position</b>	SPT Member 7 - At-Large
<b>Company Representing</b>				<b>Term</b> 4/3/2012 to 12/31/2020
PO Box 155				<b>Type of Term</b> 4 Full
Palmer	AK	99645	<b>Member Title</b>	
<b>Home</b> (907) 746-2199	<b>Work</b> (907) 746-2199	<b>Cell</b>	<b>E-mail</b>	fishing@fish4salmon.com

<b>Boeve</b>	<b>Tamara</b>	<b>J</b>	<b>Board Position</b>	SPT Member 8 - Assembly Representative
<b>Company Representing</b>				<b>Term</b> 10/1/2019 to 12/31/2020
350 E Dahlia Ave				<b>Type of Term</b> 1 Partial
Palmer	AK	99645	<b>Member Title</b>	
<b>Home</b> (907) 354-6744	<b>Work</b>	<b>Cell</b>	<b>E-mail</b>	tamboevedistrict7@gmail.com

<b>Knowles</b>	<b>T. Bruce</b>		<b>Board Position</b>	SPT Member 9 - Previous Member, Non-Voting
<b>Company Representing</b>				<b>Term</b> 4/5/2016 to 12/31/2020
5400 W Keri Cir				<b>Type of Term</b> 2 Full
Wasilla	AK	99654	<b>Member Title</b>	
<b>Home</b> (907) 232-5873	<b>Work</b>	<b>Cell</b>	<b>E-mail</b>	bigfish@mtaonline.net

# Wetlands Help Salmon & Communities Thrive



## Healthy, functioning wetlands benefit everyone



**Individuals** rely on wetlands for fishing and recreation opportunities, and wetlands provide natural erosion and flood control that benefits landowners



**Businesses** and **local economies** benefit from flood control and rely on fisheries, hunting, tourism, and outdoor recreation opportunities that wetlands provide



The **Matanuska-Susitna Borough** benefits and saves money from wetlands that provide natural stormwater management, flood control, and filtration of pollutants to our watersheds and water supply

## Thriving salmon and healthy habitats make vibrant communities in the Mat-Su

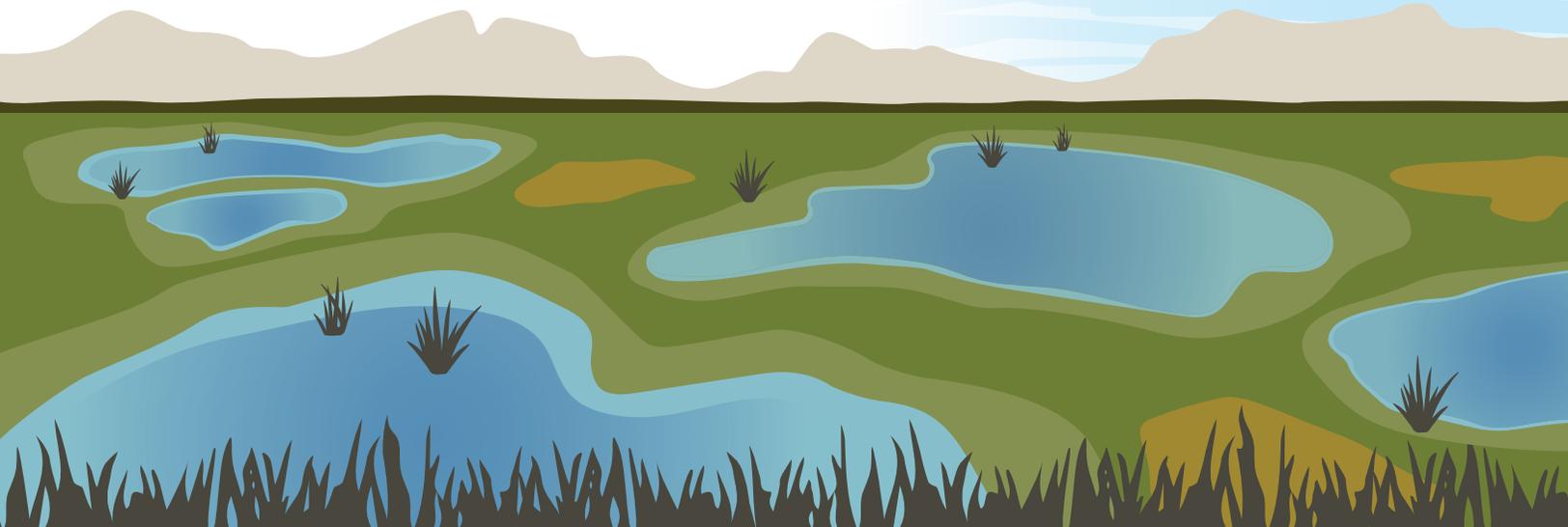
The Mat-Su is a special place where vibrant communities and resilient wild salmon are closely linked. Generally, salmon numbers remain strong here; however, human use and development may be impacting habitat quality and causing localized declines in salmon numbers.

Other parts of the world have already seen the decline or extinction of salmon populations. We have a unique opportunity in the Mat-Su to safely develop our economy while ensuring the survival of wild salmon, an important natural and cultural resource that supports our communities and economies.

## What are wetlands?

Wetlands are areas of land that are covered by or saturated with water, such as marshes or bogs. Surface water may be present seasonally or permanently. Wetlands are an important part of a watershed, connecting surface and subsurface waters of rivers, streams, lakes, and oceans.

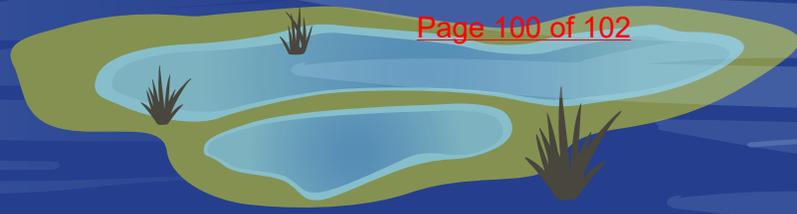
Approximately 25% of the Matanuska-Susitna Borough's 25,258 square mile land mass is wetlands.<sup>1</sup> This vast amount of wetlands is one reason why the Mat-Su has such abundant salmon resources, as wetlands provide habitat for juvenile salmon rearing.



The Matanuska-Susitna Basin Salmon Habitat Partnership believes that thriving fish, healthy habitats, and vibrant communities can co-exist in the Mat-Su Basin. Because wild salmon are central to life in Alaska, the partnership works to ensure quality salmon habitat is safeguarded and restored. This approach relies on collaboration and cooperation of diverse stakeholders to get results.

[www.matsusalmon.org](http://www.matsusalmon.org)  
[MatSuSalmon@tu.org](mailto:MatSuSalmon@tu.org)

# What Services Do Wetlands Provide?



Wetlands provide important economic, ecological and cultural services to the Mat-Su. Key services wetlands provide include:

## Fish and wildlife habitat

- Provide important feeding and sheltered rearing habitat for salmon and other fish species
- Provide safe and healthy waterways important to spawning salmon
- Provide an ideal environment for the development of organisms that attract and feed many species, including salmon
- Support salmon-bearing waters by storing and releasing cooler water that helps regulate water temperature, stream flows and lake levels
- Support biodiversity by providing food, water and shelter for mammals and birds

## Erosion and flood control

- Stabilize shorelines and reduce erosion by distributing the flow of stream or river currents and holding soil together with plant roots
- Reduce flood water levels and flood-related damages to homes and businesses by acting like giant sponges
  - » Wetlands absorb, store and slowly release surface water, rain, snowmelt, and flood waters over time
  - » Vegetation slows the movement of water over floodplains, helping reduce erosion on adjacent lands

## Water quality improvement and management

- Protect and improve water quality by acting as giant environmental filters
  - » Wetlands slowly filter fertilizer, sediments, heavy metals, and pollutants before water seeps into rivers, streams, and underground aquifers
- Provide wellhead protection by replenishing and purifying groundwater/drinking water
- Manage stormwater and increased amounts of surface water runoff due to paved surfaces, which helps reduce the impacts of runoff, such as increased sedimentation and water pollution that disrupt water flow and affect fish habitat and egg development

## Economic benefits

All of these services provide economic benefits. For example, when wetlands purify groundwater and manage stormwater, our communities avoid the costs associated with the construction and continuous management of water and stormwater treatment facilities, saving millions of dollars.<sup>2</sup>

For example, in Minnesota, “the cost of replacing the natural flood control function of 5,000 acres of drained wetlands was found to be \$1.5 million annually.”<sup>3</sup>

## National and local protections for wetlands

*“The lack of state regulations combined with the broad scope of federal regulations make the need for local conservation and protection efforts all the more important.”*

-Matanuska-Susitna Borough *Wetlands Management Plan*

### Clean Water Act Section 404

Federal law requires a permit be obtained from the U.S. Army Corps of Engineers (USACE) before a wetland can be developed, filled or dredged. The USACE only has jurisdiction over wetlands if they are connected to navigable waters.

- Other agencies involved in or overseeing the permit review process: the Environmental Protection Agency (EPA), the National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), Alaska Department of Environmental Conservation (ADEC), Alaska Department of Fish & Game’s Division of Habitat, and the Matanuska-Susitna Borough (MSB)
- USACE has decreased required mitigation plans for developments in recent years, reducing protections for wetlands

### State of Alaska:\*

- No regulations that apply to the Mat-Su

### Mat-Su Borough:

- An ordinance regulating development along waterbodies and in floodplains requires a 75-foot setback for built structures from shorelines
- An ordinance regulating floodplain development requires all structures to conform to the minimum standards of development and obtain Flood Hazard Insurance
- The Su-Knik Wetlands Mitigation Bank is comprised of undeveloped, borough-owned wetlands. Landowners and developers can mitigate development of private wetlands by paying to protect banked wetlands.
- MSB Wetlands Management Plan provides guidance for developers and landowners<sup>1</sup>

### Local governments:\*

- No direct control over wetlands through regulation, mitigation, or enforcement

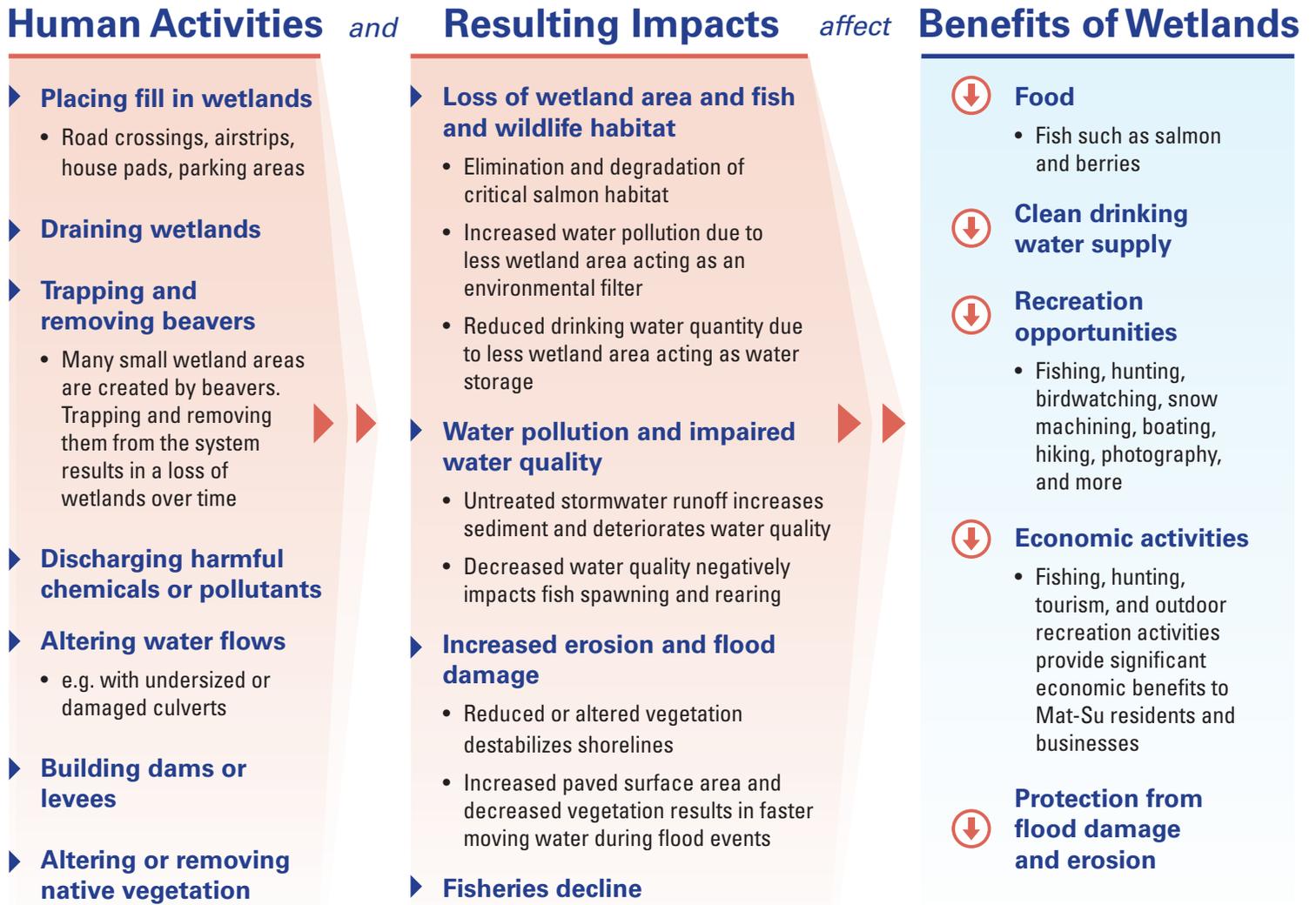
\* = gap in regulation

# What Challenges Do Wetlands Face?

Page 101 of 102  
 “As development continues, the demands for groundwater and surface water will increase. Undisturbed wetlands are critical to maintaining water supplies, balances, and quality.”

-Matanuska-Susitna Borough Wetlands Management Plan

Human activities and climate change cause the majority of challenges that wetlands face. Predominant stressors to wetlands include biological, chemical, and physical alterations to habitat. In the Mat-Su Basin, loss of wetlands is most often caused by urban development, jeopardizing these natural assets that support the Mat-Su way of life. In particular, the loss and filling of wetlands can have a range of detrimental impacts on salmon populations.



## 💰 Economic benefits of healthy salmon populations in the Mat-Su

Commercial and sportfishing support thousands of jobs and millions of dollars in earned wages in the Mat-Su.

**Commercial:** \$0.6-\$2.1 million annual earnings between 2004-2012 for Mat-Su resident permit holders only (*does not include supporting industries*)<sup>4</sup>

**Sportfish:** \$31-\$64 million annual earnings for Mat-Su residents (*includes supporting industries*)<sup>4</sup>

Residents also benefit economically from fishing by saving money at the grocery store.

# Best Practices

The best approach is conservation!

*“Avoiding negative impacts to wetlands through careful planning and management is vital to maintaining their functions and values,” and “maintaining current wetland functions will be less expensive than fixing a degraded system.”*

- Matanuska-Susitna Borough Wetlands Management Plan

In many places in the Mat-Su Basin, salmon and their habitats are healthy so protective measures, like reservations of water, sustainable land management, voluntary land protection, and individual behaviors can prevent degradation. In other places, restoration is necessary to re-establish functioning wetlands and productive habitat.

*“Today, the survival of Pacific salmon depends upon our ability to manage harvests and protect, maintain, and improve salmon ecosystems in harmony with human development.”*

- ADF&G Alaska's Wild Salmon

## GOAL: Conserve wetlands

### Public and private land recommendations

- |   |   |   |
|---|---|---|
| <ul style="list-style-type: none"><li>• Develop/follow protection mechanisms<ul style="list-style-type: none"><li>» Tax incentives to protect wetland habitat</li><li>» Development setbacks or buffers</li><li>» Land swaps</li><li>» Set minimum flow rates and stream and lake levels to maintain viable aquatic systems</li><li>» Floodplain development</li></ul></li><li>• Encourage voluntary conservation easements and/or purchase wetlands from sellers</li></ul> | <ul style="list-style-type: none"><li>• Enhance degraded wetlands</li><li>• Mitigation options<ul style="list-style-type: none"><li>» On-site mitigation</li><li>» Mitigation banks: These banks “restore, enhance, or otherwise permanently preserve wetlands in perpetuity and generate credits which may be used to offset unavoidable wetland impacts”<sup>5</sup> in another location</li><li>» In-lieu fee programs: compensatory mitigation for impacts or unavoidable losses to wetlands due to development or other projects</li></ul></li></ul> | <ul style="list-style-type: none"><li>• Due to potential declines in water quality from already-filled wetlands, consider limited to no additional filling of wetlands, or provide compensatory mitigation, in the following heavily impacted watersheds:<sup>6</sup><ul style="list-style-type: none"><li>» Wasilla Creek Watershed</li><li>» Cottonwood Creek Watershed</li><li>» Lucile Creek Watershed</li><li>» Meadow Creek Watershed</li></ul></li><li>• Avoid discharging warmed roadside ditch water directly into a stream; re-infiltrate ditch water on the downhill side of a road running parallel to a stream to reduce the risk of elevating stream temperatures<sup>7</sup></li></ul> |
|---|---|---|

### Are all wetland types created equal?

A variety of wetland types exist, and they all have different characteristics and functions depending on their location in the landscape. Individual wetlands contribute to the overall functioning of an entire watershed. Wetland development should be evaluated on both an individual basis and considering the collective health of a watershed.

### How much filling of wetlands is too much?

“Substantial declines in water quality may be expected after more than five percent of wetlands in a boreal watershed have been filled,”<sup>1</sup> though additional research is needed to confirm this. In some Mat-Su watersheds, around 10% of wetlands have already been filled. Many of these waterbodies have been designated as having “impaired” water quality.

### Are some wetlands more critical for salmon populations than others?

Some wetlands directly support salmon populations while others do not; however, some wetlands may indirectly support salmon by contributing to the overall health of a watershed. In Alaska, individual wetlands and their ecological roles regarding salmon need to be continually identified and assessed.

### References:

1. *Wetlands Management Plan*. Matanuska-Susitna Borough. 2012. <https://www.matsugov.us/environment/wetlands>
2. [matsu2050.org](http://matsu2050.org)
3. *Wetland Functions and Values*. U.S. Environmental Protection Agency. <http://www.epa.gov/watertrain>
4. *The Economic Geography Of Salmon*. Cultural Research North. [http://www.matsusalmon.org/dev/wp-content/uploads/2015/12/David\\_Holen-Mat-Su-Salmon-Symposium-2015.pdf](http://www.matsusalmon.org/dev/wp-content/uploads/2015/12/David_Holen-Mat-Su-Salmon-Symposium-2015.pdf)
5. *A Comprehensive Inventory of Impaired Anadromous Fish Habitats in the Matanuska-Susitna Basin, with Recommendations for Restoration, 2013*. Alaska Department of Fish & Game. [http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2013-2014/uci/anadromous\\_fish.pdf](http://www.adfg.alaska.gov/static/regulations/regprocess/fisheriesboard/pdfs/2013-2014/uci/anadromous_fish.pdf)
6. Gracz, Mike. *Wetland Loss Assessment by Wetland Type and Watershed in an Expanded Core Area of the Matanuska-Susitna Borough*. <http://matsusalmon.org/wp-content/uploads/2018/08/MatSuWetlandLoss2018-7.pdf>
7. Haserodt, Megan. *Effects of Roads on Groundwater Flow Patterns in Peatlands and Implications for Nearby Salmon Streams on the Kenai Peninsula, AK*.

### Additional information:

- <http://greatlandtrust.org/priorities/habitat-conservation/>
- *Appendix 5.3 Wetland Habitats: Featured Species-associated Wetland Habitats: Freshwater Grass Wetland, Freshwater Sedge Wetland, Bog, and Salt Marsh (Estuarine)*. [https://www.adfg.alaska.gov/static/species/wildlife\\_action\\_plan/appendix5\\_wetland\\_habitats.pdf](https://www.adfg.alaska.gov/static/species/wildlife_action_plan/appendix5_wetland_habitats.pdf)
- *Conserving Salmon Habitat in the Mat-Su Basin: The Strategic Action Plan of the Mat-Su Basin Salmon Habitat Partnership, 2013*. <http://matsusalmon.org/wp-content/uploads/2012/10/2013-Strategic-Action-Plan.pdf>
- <https://www.fisheries.noaa.gov/national/habitat-conservation/coastal-wetlands-too-valuable-lose>
- *Alaska's Wild Salmon*. Alaska Department of Fish & Game. [https://www.adfg.alaska.gov/static/home/library/pdfs/ak\\_wild\\_salmon.pdf](https://www.adfg.alaska.gov/static/home/library/pdfs/ak_wild_salmon.pdf)