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February 12, 2013

For the Record

Re: Juneau Hydropower Inc. USFS Juneau Ranger District Meeting to discuss USFS Guidance on Coastal Road, Recreation Improvements and Timber disposition with the Sweetheart Lake Hydroelectric Project

This meeting took place Wednesday January 30, 2013 1:30 PM – 2:30 PM Alaska Time.

Participants:

Marti Marshall, Juneau District Ranger, USFS
Jennifer Berger, Lands and Special Uses Program Manager, Juneau Ranger District, USFS
Barbara Stanley, Alaska Regional Energy Coordinator, USFS
Ed Grossman, Recreation Program Manager, USFS
Kriss Hart, Western Marine Construction
Duff Mitchell, Juneau Hydropower Inc.
Jim Holeman, for Juneau Hydropower, Inc.
Robert Johnson, for Juneau Hydropower, Inc. Aquatics.

ADFG, NPS, FERC representatives invited, but unavailable

Agenda

1. Coastal Road in relation to the Semi-Remote Recreation LUD.
2. Recreation improvements, trail improvements and recreation infrastructure guidance.
3. Timber in the proposed inundation area of the reservoir

Additional attachments:

Development Plan Map 2.5 (Dock and Ramp area); Map 2.6 Coastal Road
Coastal Road land ownership delineation between USFS and ADNR

Agenda:

Agenda Item 1. Coastal Road in relation to the Semi-Remote Recreation LUD.

Agenda Item 2. Recreation improvements, trail improvements and recreation infrastructure direction. In the Semi-Remote Recreation LUD language, it states that these types of improvements would be evaluated on a case by case basis. We would like to gauge if we are suggesting items that are welcomed...or perhaps not.

Agenda Item 3. Timber in the proposed inundation area of the reservoir. We would like to discuss the advantages and disadvantages of removal and receive some guidance.

Documents provided: Selected sections of USFS Tongass Land Management and Resource Plan (TLMP) relevant land use designations TLMP standards and guidelines.

Coastal road maps

The meeting was teleconferenced and recorded. The meeting started promptly at 1:30 PM and ended approximately at 2:25 PM.

Agenda Item 1. Coastal Road in relation to the Semi-Remote Recreation LUD.

JHI has reviewed the Semi Remote recreation management prescriptions as well as the Wetland and Beach and Estuary Fringe standards and guidelines. Both standards and guidelines prefer not to have roads built in these areas. The majority of the proposed Dock and Coastal Road/buried Transmission line are on State of Alaska property (16.8 acres) JHI would like to discuss and receive some guidance as we go forward with developing this road.

JHI presented scope of discussion on the appropriateness of the coastal road and the forest road in relation to the pertinent Land Use Designation language. Also presented maps developed by JHI surveyor and engineer.

Discussion: JHI would propose that the Coastal Road would become the “trail” in the area. JHI would offer this as a public trail without motorized traffic. JHI would not want motorized activity and wanted to be leaning the right direction

Marti Marshall, it would be premature to weigh in on this at this point. At Lake Dorothy there is public access by foot, but not motorized.

Jen Berger asked if JHI would be having a full time caretaker at the facility. Duff Mitchell responded that was the JHI intention to have a caretaker 24/7 . Jen Berger stated that certainly makes a difference.

JHI would need to use the road for access with some form of motorized access, but not open the road up for other motorized use.

Discussed coastal road with regards to buried transmission but with forest alternative would be overheard due to expense and constructability.

Covered Scenery guidelines. Using the local rock with a reverse slope road and building the road to blend with the beachscape.

Kriss Hart discussed how the road could be built to look more like a natural beachscape from a boaters view and how the road could be made meandering such that could blend better with the

beachscape. The road rock can also be laid in a manner that it would attract the natural beach and that after a couple of years it would like it was blended naturally.

JHI goal is to meet the Scenery and recreational viewpoint to blend the road in aesthetically.

Beach and Estuary guidelines. Duff Mitchell discussed that JHI is within guidelines for the dock and ramp aspects of the development under the Beach and Estuary Guidelines but the guidelines state that roads are discouraged unless other feasible alternatives exist. Feasible? Under what definition? Construction feasible, technically feasible, economic feasible.

JHI believes that under all three feasibilities that the coastal road will be preferred to the visual scarring that the forest road alternative would have. If we add in the burying of cable, the collocation of the road with the power line and using the coastal road as the trail, then it starts to look like the coastal road is a better alternative.

Barb Stanley. We know that JHI did some work in this in the EA regarding the alternatives, but the USFS is going to need a more in-depth analysis between the two routes. The computer generated depiction is not that good.

Jennifer Berger. Are you still considering the forest road alternative.

Duff Mitchell. We need to submit one alternative with our application with FERC but before we get there we need to clear the issue with the USFS. We have not talked Wetlands yet, but the forest alternative could impact 25 acres of wetlands. Under the wetlands guidelines it reads: "Avoid alteration of, or new construction on, wetlands wherever there is a practicable, environmentally preferred alternative considering the functions of wetlands as well as other non-wetland ecosystems in the project area. Practicable alternatives take into consideration costs, existing technology, and logistics in light of overall project purposes.

So we have according to the guidelines a coastal road that is kind of discouraged by scenery and beach estuary guidelines and we also have language which says that we should avoid building infrastructure on wetlands.

We are kind of in the middle. One guideline says one thing and another says another but conflict against each other.

The term practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes." We went over this verbally with these guidelines but a

A suggestion and a go forward plan is that we put together an alternative analysis between the coastal road and the forest road that that identifies the advantages and disadvantages of each alternative and correlates the alternatives by highlighting the language from the TLMP guidance.

I think we can hire someone or get some help to perform a better visual analysis to improve the computer rendering that we submitted with the EA. And then cost out what some of the differences between the two.

Marti Marshall, I am glad to hear you say that because it would impossible for us to support anything without that comparison. Yes.

Duff Mitchell. I also think that would be good because of the conflicting language kind of goes back to an always evaluate the matter on a case by case basis. I will prepare the document- an analysis as a draft and see if that work and we review it and then we can decide if it needs more work. We will do more. Perhaps it will justify the coastal road, but we will conduct the analysis fairly..I plan on making the analysis agnostic in the outcome even though today we feel that the coastal road is the preferred alternative.

It would be an important analysis for the public to review.

A discussion ensued that FERC in their comments in the application asked JHI to state our alternative and not demonstrate two alternatives. And sometimes a FERC staff will come back and ask, but they will want to know what JHI's preferred proposal is.

Kriss Hart sounds good. I think we have gone through the analysis but now we need to put it on paper.

Duff Mitchell. I agree we have done much of the analysis and now we need to put this analysis in a publicly reviewable document.

Barb Stanley. A table on what the coastal road and the forest road alternative will look like. So it is easy to compare and contrast.

Duff Mitchell Koren Bosworth has already done the Wetland aspect so we can expand the table to include these other aspects and put that it into our analysis.

Agenda Item Conclusion. JHI will prepare an alternative analysis between the coastal road and forest road alternative listing out the advantages and disadvantages to each alternative compared to the TLMP language. This analysis will include a better visual analysis than the computer generated visual analysis submitted with the EA. This analysis will be provided to the USFS and allow other agencies to review.

Agenda Item 2. Recreation improvements, trail improvements and recreation infrastructure direction. In the Semi-Remote Recreation LUD language, it states that these types of

improvements would be evaluated on a case by case basis. We would like to gauge if we are suggesting items that are welcomed...or perhaps not.

Duff Mitchell introduced some guiding TLMP language and wanted to clarify USFS position on additional recreation facilities since under the Semi Remote Recreation these items are to be determined on a case by case basis.

Game trails become quite muddy during the salmon season. We have volunteered to use some good rock to firm up these trails, help reduce erosion and perhaps make them safer. However we

My feeling is that these would be totally appropriate. This is also considering that the project could increase the number of fish and that could increase the number of users.

Ed Grossman- Need a detailed plan because Fish and Game in the past has pointed the finger of who is responsible for trail maintenance out there. Our position is that the fishery has created the need for improvements. Also there is a bear human interaction situation that is not good. A plan would need to be designed. Also, long term maintenance needs to be addressed. The hydro company in Skagway has a maintenance agreement with the USFS for some facilities.

Kriss Hart. Recondition and improve the trails on the close side and do not improve the trails on the far side and use signage it would be a plan. We will only look at trails on the north side and the signs are in sounds like the guidance. .

Ed Grossman. When there is pressure of fishing pressure some folks are going to work their way to the other side, but we want to not better the trails on that side to discourage it. Sticking with improvements on one side and only harden the one side.

Duff Mitchell

The roadway from the dock to the head of the tailrace is going to get you to the fishing area faster. Will naturally allow folks to avoid the mud and the roots as well as the up and down. WE are already looking at routing folks away from the powerhouse and around a berm. It will be easier to naturally direct folks to use this rather than use the bear trails that could startle bears and reduce bear human interactions.

Ed Grossman. That would be wise. Most folks visiting the area are for fishing. If we can work to harden the main trail for the majority that would be good and could help lessen problems. A lot of hard thought has gone into this thinking at the Russian River on the Kenai and you could likely find some tried and proven methods to . They have been working on this for 20 years.

The road will be a 25 foot wide trail. If we canalize traffic along the corridor, we can discourage the traffic in area that is heavily used by bears and reduce traffic in bear resting and feeding areas.

We'll take a look at the Russian river literature. If we canalize with a road, will naturally discourage traffic along the bear trails where bears rest and feed.

Ed Grossman, we have had some experience at the Mendenhall area where we thought about some of these aspects to reduce the bear interaction. We worked with Fish and Game on this and they could be a great resource to help on this.

Fish and Game

Go forward Plan on the trails.

1. More detailed plan with ADFG's input. Look at the takeaways and lessons learned from the Russian River operations related to bear human conflict

Ed Grossman added

2. USFS fisheries folks, ADFG both Sport fish and wildlife and then probably USFWS that are dealing with stream enhancements and might have some good connections or contacts with the up north. It might be a good idea to get their insights and what they are doing there.

Barb Stanley- Are there any other improvements. At one time we you were discussing a cabin in the area. What is the thinking for a recreation cabin?

Duff Mitchell, We are already going to have quarters for the caretaker but not put those facilities in the powerhouse but near the dock area. We have discussed this and our thinking is that the location of a public use cabin would be collocated in that general area if a cabin was something the USFS was interested in, we have thought of this but would consider locating a cabin at the dock area away from the creek away from the bear area near the creek. It would be near the dock so gear could be unloaded and taken to the cabin.

Barb Stanley, I am not suggesting that is something that we are fully interested in, but I would defer to Marti and Ed.

Ed Grossman. It might be something we are interested in but would need to be something that would need to include a maintenance agreement

Barbara. How this would work is that this could be incorporation into a part of the mitigation part of the agreement to take care of the trail and cabins.

Ed Grossman. It would not be that difficult for JHI. It would be a high use cabin but there are considerations with a maintenance agreement. For example human waste issues are a large aspect. Ed discussed general waste issues and specifications but that such an improvement would be highly used cabin.

High use cabins have higher human waste considerations. Pit toilets don't work for high use cabins.

Perhaps the caretaker facility is going to store waste and perhaps it could be pumped from the cabin to your waste facility already there. Maybe waste is pumped, but it would need to be thought out. Perhaps with caretaker cabin
Would need to withstand a heavy snow load. We're talking about a \$150 to 300 K structure.
It would be highly popular if this something you offer.

Marti Marshall. We would supply all the specs and standards

There was a brief discussion on specifications and standards and that a facility would need to meet codes and USFS standards.

Kriss Hart. Is this something that you are looking favorably on?

Marti Marshall, As Ed said, I think public would use it and it would be a high use cabin. Based on our ability to maintain the USFS would not be able to place a cabin on their own, but the public would be pleased. As part of the mitigation we could partner with you on this. We would need you to recognize to maintain the cabin and resolve the toilet facility which would be the greatest challenge. We would need to have a maintenance agreement and a plan to resolve this..

Ed Grossman. The system is all on line and the USFS would take care of all reservations and handling of funds.

Duff Mitchell. What about conflicts. Not to take up time, but we would want to ensure our caretaker is not dealing with enforcing who has a reservation or not.

Ed Grossman, that would be the USFS responsibility and that a legitimate reservation must carry a written reservation. If there is an issue the caretaker, if contacted would need to just contact USFS. It will likely be rented every day and it should not be an issue. That is not to say the cabin is not to be pirated, but I do not think it will be your problem.

Marti Marshall. It should also be considered for unintended consequences. You will have more people crawling all over the place 24 hours a day. Right now, there is no camping there and it is primarily day activity. . You are inviting overnight use there. I am sure that there will be parties out there and there will be vandalism. You will have a caretaker there, but you might want to think about it and how that is handled

Kriss Hart. What about putting a cabin on the other side of the bay and put a mooring as a remote site cabin. Would it make any sense to put it away from the electrical infrastructure.

Ed Grossman. It might be harder to maintain away from the area. Especially the pleasant facilities. If the maintenance fell to you that might be acceptable.

Ed Grossman. My concern is that placing a cabin on the other side of the bay is another site not evaluated, so you would need to evaluate it as an additional site to your plan... and it might be considerable with separate facilities.

Marti Marshall. There would be other problems with maintenance, and would be on the shady side of the bay. The location of cabins is location, location, location.

Kriss Hart, this cabin will get heavy use for short duration. The Taku is going to keep usage low in the winter.

There is no doubt that a cabin will have limited use in winter. But a cabin would be heavily used for a short duration. Late April and May would be used by bear hunters and then fishing season. It could be used more as you provide a safe place to visit. Late April through August it would be heavily used and it might have more use than you probably think.

Gilbert Bay has poor anchorage and you will make it safe so usage will increase.

Duff Mitchell. I think we have clear guidance

I would like to move to agenda item 3 as we have clear guidance on the trails and cabin issues and we have a short meeting where Marti and others need to take another call at 2:30 PM.

Marti Marshall. Yes I appreciate that as all three of us need to be on that call.

Agenda Item 2 Conclusions. The USFS would like JHI to consider as part of the mitigation process, hardening trail access to and from the main fishing area in such a manner that lessens bear human interaction. This will include no hardening on the far southern side of the Sweetheart Creek. Signage will be a part of this. JHI would be responsible for maintenance. JHI will investigate and gain the lessons learned from the Russian River trail planning that implemented actions to reduce bear human interaction.

The USFS would welcome JHI proposing a plan to construct and maintain a public use cabin that would be built to code, specification, and human waste disposal by JHI as potentially a component in the mitigation process.

Agenda Item 3. Timber in the proposed inundation area of the reservoir.

Duff Mitchell. We would like to discuss the advantages and disadvantages of removal and receive some guidance for the area of the lake that will be inundated by the reservoir. We understand that the Blue lake project left the timber in. And there are advantages and disadvantages of leaving or removing trees.

Talking to fisheries and wildlife folks that leaving the trees in place leave a more firming affect on the ground and will hold the ground firm, perhaps reduce sedimentation by holding the ground and the trees, even if they died over time would be used by birds and the subsurface would be used by aquatic life .

However, we also know that trees are not free and based on comments that we will need to take a timber cruise at some point in the future. I also understand that Blue Lake is a municipal water supply and the standards are perhaps higher. However, we have aquatics sensitivity issues. I think we want to be careful of any undue turbidity and sedimentation that a logging operation could impact.

Barbara Stanley. Some history on Blue Lake and some of this we have discussed in the past. Originally Blue Lake was proposing to remove the timber. Blue Lake is the City of Sitka water supply. It was DEC from the State of Alaska that required that the timber not be removed due to concerns over the water quality.

So there are pros and cons of removing or leaving the timber standing.

Timber cruise will be needed. The USFS will probably conduct the cruise and you will be charged for the timber regardless of whether it is removed or not.

Marti Marshall. If the timber is removed where does it go. It is a challenging location. Very challenging location. Fly it to saltwater?

Barbara Stanley. Very challenging

Duff Mitchell. If we were asked to remove the timber, which is expensive and it might not be economically feasible, the plan would likely to log the timber and move it to the dam area across the lake and then haul it down the tunnel. And remove it before the tunnel is used for the hydropower facility. Due to tunnel constraints, the timber might have to be cut into shorter pieces as it might be problematic of moving 40 foot logs through the tunnel. Maybe even then, perhaps not all the timber can be removed that way. There might be tunnel issues but it might be a more reasonable means. Hauling low value timber away from the lake with helicopters would be frightening expensive timber operations.

Duff Mitchell. Barbara is it typical requirement to remove the timber?

Barbara Stanley. I do not think there is a typical project. It can go either way. Sometimes it is removed, sometimes it is not sometimes companies want to remove the timber on some project to remove floaters and trash and everything . On other projects it does not seem appear to matter so much .

Marti Marshall, Well what is the disadvantage with leaving the timber in?

Barbara Stanley. As the timber decays, it rots, and falls down stuff piles up and floats around as debris in places. That may not be a disadvantage.

Jennifer Berger. It would depend on the amount of timber in the inundation zone.
We do not know how much.
For example, at Bart Lake there just wasn't that much.

Barb Stanley. I'm thinking of Connell lake near Ketchikan, no timber was removed it was all inundated it fluctuates dramatically, it is an eyesore and it is also a prime recreation area. Lower Sweetheart Lake is not a recreation area, and gets not much recreation if any so the perhaps visuals of standing dead snags might not be that big of a deal.

Marti Marshall. Well this is part of the analysis to consider the advantages and disadvantages biologically, environmentally but also scenic considerations.

Barb Stanley. There is not an obvious practical method of removing and getting the timber out of there although it is not impossible.

Duff Koren Bosworth (who prepared the wetland and botany reports) has identified in some of her mapping in wetland analysis of what areas are to be flooded. Of course not as a timber cruise, but she mapped areas and this could be used as a basis for the analysis. We have rocky shores but there are trees to the shoreline in areas. There are alder and other species.

Marti Marshall. What is the inundation

Duff Mitchell. The inundation of the reservoir would 25 foot permanently and another 60 feet of seasonal inundation. Much of the lake is steep sloped and at high slopes with rock the impact is not great. However there is going to be flooding at the far end most eastern end of the lake and it looks like up to 30 acres of wetlands will be inundated.

Marti Marshall. Well you can probably tell we cannot provide a yea or nea today, but this is a good discussion

Duff Mitchell. I learned today that there is not a typical answer.
Sounds like more work on the advantages and disadvantages

The timber cruise issue and the analysis disposition of timber does that need to be dealt with now or later in the process?

Barbara Stanley. I think that can come later in the process.

Agenda Item 3 Conclusions.

No definitive conclusion was made on removing or retaining timber at Lower Sweetheart Lake in the inundation area. JHI should prepare an analysis listing the advantages and disadvantages, cost, environmentally, biologically and scenery considerations for review.

A timber cruise will be required to determine the volume and value of the timber that will be inundated, but that will come further time.

There was then a brief discussion on the Thursday Agenda

Agenda Item 1 Conclusion and steps forward

JHI will prepare an alternative analysis between the coastal road and forest road alternative listing out the advantages and disadvantages to each alternative compared to the TLMP language. This analysis will include a better visual analysis than the computer generated visual analysis submitted with the EA. This analysis will be provided to the USFS and allow other agencies to review.

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Meeting summary prepared by Duff Mitchell, Juneau Hydropower, Inc.

Coastal Road Exhibits attached that were provided at the meeting.

Below is relevant Tongass Land and Resource Plan (TLMP) language provided at the meeting and related to the agenda items:

Semi-Remote Recreation LUD

Goals

To provide predominantly natural or natural-appearing settings for semi-primitive types of recreation and tourism, and occasional enclaves of concentrated recreation and tourism facilities.

To provide opportunities for a moderate degree of independence, closeness to nature, and self-reliance in environments requiring challenging motorized or non-motorized forms of transportation.

Objectives

Manage recreation and tourism use and activities to meet the levels of social encounters, on-site developments, methods of access, and visitor impacts indicated for the Semi-Primitive Recreation

Opportunity Spectrum (ROS) classes. Enclaves of concentrated recreation and tourism developments within the LUD or management activities in adjacent LUDs may cause the ROS setting to become Rural.

Determine on a case-by-case basis whether roads, trails, and other areas should be closed to motorized recreation activities. If so, incorporate into off-highway vehicles (OHV) plans. If not, the use of boats, aircraft, and snow machines for traditional activities is allowed.

Permit small-scale, rustic recreation and tourism facilities, and occasional enclaves of concentrated recreation and tourism facilities.

Apply the Moderate Scenic Integrity Objective to any developments, facilities, or structures. Fish enhancement and wildlife habitat improvement may occur.

Transportation Operations: TRAN

A. Where Semi-Primitive Motorized recreation opportunities are emphasized, existing low standard roads are generally managed for use by high clearance or OHVs, snowmobiles, or motorcycles subject to an approved

Access and Travel Management Plan. ***Generally, new roads are not constructed in this area, except to link existing roads or provide access to adjacent LUDs.***

- 1. Limit the design standards of Forest development roads to those commensurate with the intended use.*
- 2. Maintain, as necessary, to provide passage of planned traffic.*
- 3. Locate and design new roads to consider Semi-Primitive recreation opportunities in this LUD.*

Transportation and Utility System LUD

Goals

To provide for, and/or facilitate the development of, existing and future major public Transportation and Utility Systems, including those identified by the State of Alaska and the Alaska Energy Authority.

Objectives

Apply this management prescription to existing major systems corridors. Use the prescription as criteria in the planning and design of future system corridors. The corridors shown on the Land Use Designations (LUD) Map (2007) do not include viable routes that may be considered during project analysis. Consideration of alternate routes that meet corridor objectives while reducing costs and/or minimizing resource impacts is encouraged. During the period before actual construction of new systems occurs, the management prescription(s) of the (initial) LUD(s) underlying the corridors will remain applicable. Upon initiation of construction, and during system operation, this management prescription will apply. The Transportation Utility System (TUS) LUD takes precedence over any underlying LUD (subject to applicable laws) regardless of whether the underlying LUD is a TUS Avoidance LUD or not. As such, it represents a “window” through the underlying LUD through which roads and/or utilities can be built.

For application of this LUD, "major systems" are defined as state and federal highways, railroads, public hydroelectric power projects and associated facilities, powerlines 66 kV or greater, and pipelines 10 inches or greater in diameter.

Allow special uses and facilities not related to transportation or utility systems, if compatible with present or future systems. If the development of systems changes the Recreation Opportunity System (ROS) setting, manage recreation and tourism opportunities in accordance with the new setting. Consider the development of recreation and tourism facilities in conjunction with the planning of state or federal highways or reservoirs.

Following construction of systems, lands in the right-of-way, if permanently cleared, will be considered unsuitable for timber production.

Transportation and utility corridors, to the extent feasible, should follow the same route. Transportation Utility Systems may dominate the seen foreground area, yet are designed with consideration for the existing form, line, color, and texture of the characteristic landscape.

Minimize and/or mitigate adverse effects to wildlife habitat and populations to the extent feasible.

Maintain the present and continued productivity of anadromous fish and other fish habitat to the extent feasible.

TLMP Standards and Guidelines

Scenery

SIO Moderate. ***Design activities to be subordinate to the landscape character of the area.*** This SIO should be accomplished within 1 year of project completion.

1. Facilities

a) Keep vegetation clearing to a minimum and within close proximity of the site.

b) Emphasize enhancement of views from recreational facilities.

c) Select materials and colors that blend with those found in the natural surroundings.

2. Transportation

a) ***Design rock sources to be minimally apparent as seen from VPRs.*** Rehabilitation is usually necessary following closure of rock source developments. It may be necessary to modify some ground-disturbing activities seen from the foreground of VPRs.

b) Corridor Treatment. Roadside cleanup of ground disturbance activities may be necessary.

c) LTFs (temporary or permanent). Perform a Scenic Integrity analysis during LTF planning and design. Consider low profile designs to minimize visibility from VPRs. For temporary LTFs, incorporate rehabilitation measures into the project analysis and contract package.

3. Timber Harvest: VAC Setting, Typical Regeneration Method, and Unit Size

a) Low VAC: Group selection (group openings less than 2 acres) or clearcut (openings approximately 5 to 10 acres)

b) Intermediate VAC: Clearcut (openings approximately 15 to 40 acres)

c) High VAC: Clearcut (openings approximately 40 to 60 acres)

Beach and Estuary Management Beach²

1. Allow facility developments that require in-water access (e.g. docks, floats or boat ramps).

a. Locate facilities more than 300 feet from the mouths of intertidal channels of known Class 1 anadromous fish streams, or tidal or subtidal beds of aquatic vegetation to avoid significant impairment.

b. Avoid filling of intertidal and subtidal areas to the extent feasible.

8. Road construction is discouraged in the beach and estuary fringes. Where feasible alternatives are not available, road corridors may be designated.

11. Other permitted activities (e.g.) powerlines, fish camps) may be allowed in beach and estuary fringe where feasible alternative locations are not available.

Wetlands

1. Objectives

A. ***Avoid alteration of, or new construction on, wetlands wherever there is a practicable, environmentally preferred alternative considering the functions of wetlands as well as other non-wetland ecosystems in the project area.*** Practicable alternatives take into consideration costs, existing technology, and logistics in light of overall project purposes. (Consult 40 CFR 230.3 [q].)

40 CFR 230.3 [q] The term practicable means available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

From Transportation and Utility System LUD

Recreation Use Administration: REC3

TOURISM *Recreation Settings*

A. Prior to the construction of a TUS, provide recreation settings and opportunities consistent with the initial LUD.

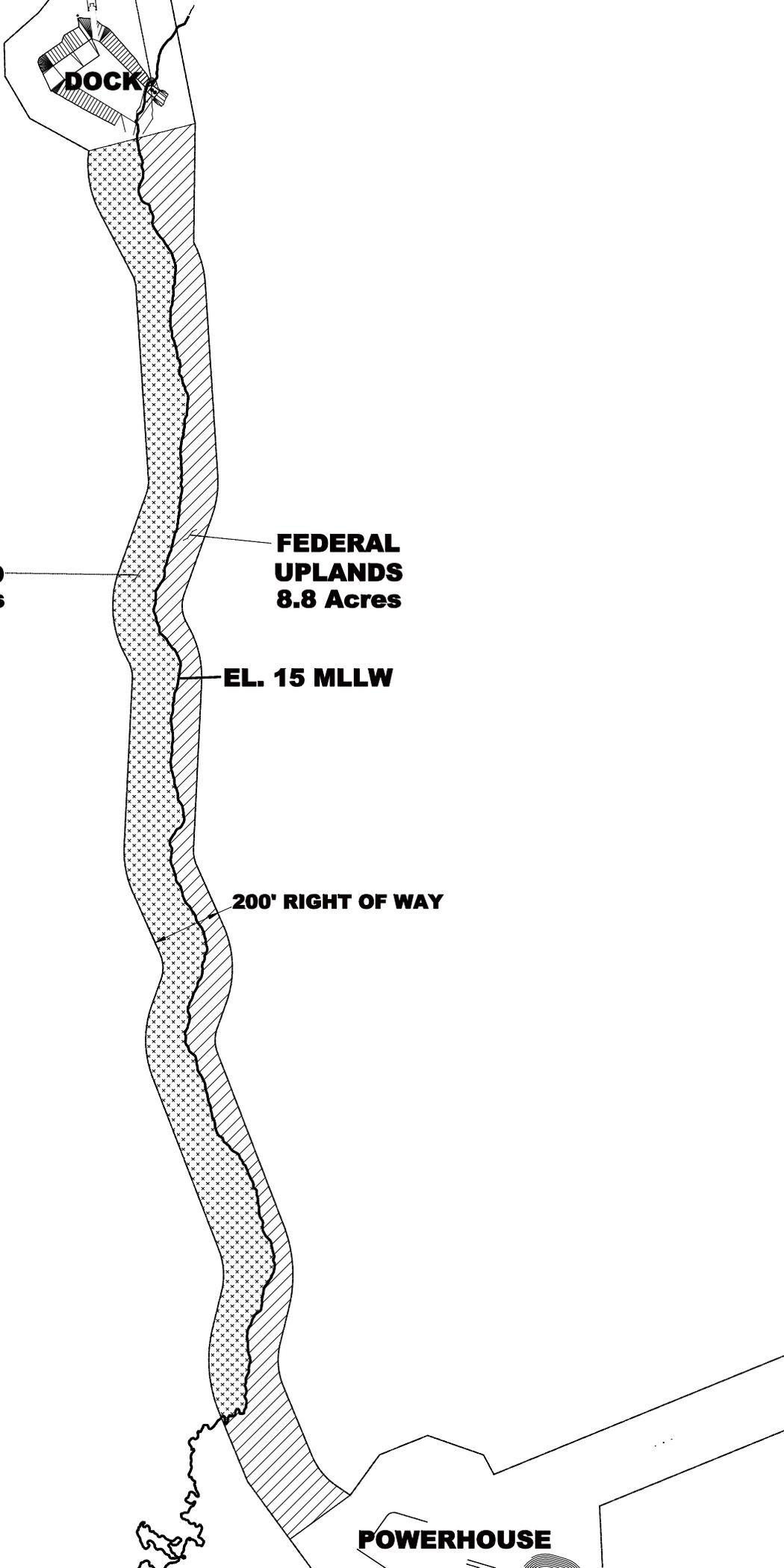
1. For any new investment in recreation facilities, consider the potential effects to those facilities by TUS development.

B. When TUSs are developed, consider construction of recreation facilities in conjunction with the planning of state and federal highways and reservoirs.

1. Manage the changed recreation setting with appropriate ROS guidelines.

2. If necessary, discourage or restrict recreation use to prevent damage to facilities or to provide for public safety.

3. Manage recreation use in a manner compatible with adjacent LUDs.



DOCK

**STATE
TIDELAND
10.8 Acres**

**FEDERAL
UPLANDS
8.8 Acres**

EL. 15 MLLW

200' RIGHT OF WAY

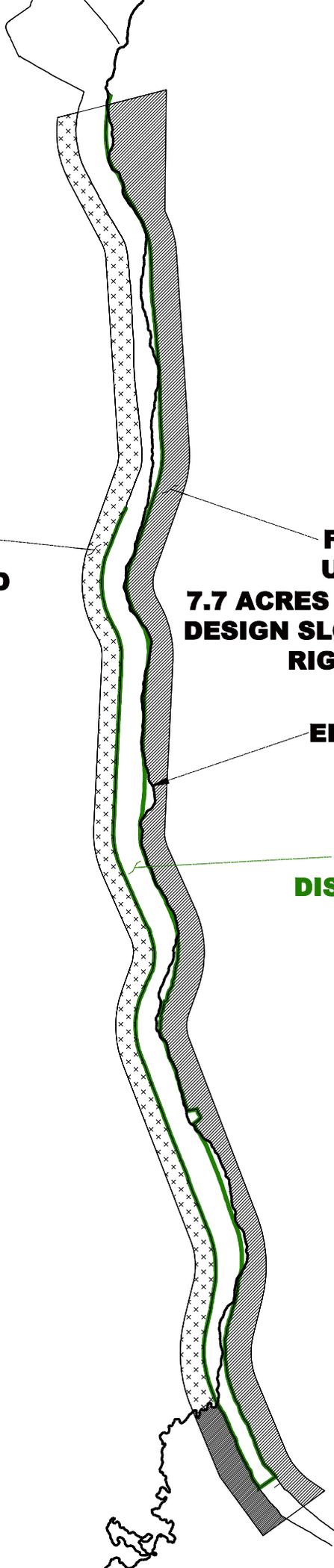
POWERHOUSE

**STATE
TIDELAND
5.1 ACRES OUTSIDE OF ROAD
DESIGN SLOPE LIMITS BUT
IN RIGHT OF WAY**

**FEDERAL
UPLANDS
7.7 ACRES OUTSIDE OF ROAD
DESIGN SLOPE LIMITS BUT IN
RIGHT OF WAY**

EL. 15 MHW

**ROAD
DISTURBED
AREA**



C/L

100' PROJECT RIGHT OF WAY

100' PROJECT RIGHT OF WAY

PROJECT FOOTPRINT

FEDERAL UPLANDS
MHW AND ABOVE

STATE TIDELANDS
MHW TO MLLW

APPX
EL. 15

FILL TO APPX. EL. 25'
CAN VARY DEPENDING ON CONSTRUCTION
STAGE AND EXCESS EXCAVATION MATERIAL AMOUNT

10.0'

12.5'

12.5'

3.0%

3.0%

2:1

6" OF CRUSHED 2" MINUS
OVER CLEAN GRAVEL AND ROCK BASE

2:1 FILL OR FLATTER
TO DISPOSE OF EXCESS EXCAVATION

6" TRANSMISSION LINE
4' DEEP SELECT BACKFILL
WARNING TAPE 1' BELOW RD.

