



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, PORTLAND DISTRICT
PO BOX 2946
PORTLAND OR 97208-2946

JUL 01 2016

Planning, Programs and Projects
Management Division

Dear Deer Island Drainage Improvement Company Member:

As you know, the U.S. Army Corps of Engineers (Corps) and the Bonneville Power Administration (BPA) are proposing to construct the Columbia Stock Ranch, Section 536 environmental restoration project to provide aquatic habitat in the Lower Columbia River.

We received six letters from the residents on Deer Island expressing concerns about this proposal and we believe that potential resolution of the concerns expressed in these letters requires additional dialogue with the Deer Island community.

To support this dialogue, we are inviting you to a meeting of information exchange and problem-solving. Our goals are three-fold: 1) to ensure that the Corps and BPA understand the community's concerns; that 2) the project goals and technical information developed by the Corps and BPA are understood by the residents; and, 3) through this dialogue, that we can develop acceptable solutions for a successful project.

The meeting will be July 8, 3-5 p.m. in the Armstrong Room of the St. Helens Public Library, 375 S. 18th Street, St. Helens, Oregon 97051. Additional meetings will be added as needed.

The meeting on July 8 will include detailed review of the hydraulics and hydrology of the current condition and proposed project and a presentation of historic properties. This will be followed by an open discussion and questions. Time permitting, we will consider additional topics as requested by attendees and at closing we will review follow-up actions for the Corps and BPA.

The information presented by the Corps and BPA at the meeting, the comment letters received to date and agency responses will be posted to the Corps' Portland District web site at <http://www.nwp.usace.army.mil/Media/Announcements> for public reference and for those unable to attend the meeting.

Thank you in advance for your interest and we welcome your participation in the meeting.

Sincerely,

A handwritten signature in cursive script that reads "Laura L. Hicks".

Laura L. Hicks
Chief, Planning and Project
Management Branch

DEER ISLAND DRAINAGE IMPROVEMENT COMPANY

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May 20, 2016

U.S. Army Corps of Engineer District, Portland
Attn: CENWP-PM-E / Kristine Lightner
PO Box 2946
Portland, OR 97208-2946

Re: Project CENWP-PM-E-16-03
Columbia Stock Ranch Project
Deer Island Drainage Improvement Company
Comments on proposed Project

Dear Sir or Madam:

Deer Island Drainage Improvement Company ("the Company" or "DIDICO") is drainage improvement company organized under Oregon Revised Statutes Chapter 554 for the purpose of providing flood control, drainage and irrigation water for the lands within its boundary. It is a successor to the Deer Island Drainage District which was organized under ORS Chapter 547, under which the levees, canals and other improvements were built.

Deer Island Drainage Improvement Company is a directly interested party to the proposed habitat restoration project located on the Columbia Stock Ranch (USACE project CENWP-PM-E-16-03). The Company controls and maintains the current system of levees and drainage control structures within DIDICO. The Company is responsible for the control of water on approximately 3670 acres of which the Columbia Stock Ranch includes 437 of those acres. This proposed project is going to change the overall makeup and design of DIDICO infrastructure and operations. Before Deer Island Drainage Improvement Company will be able to sign off on the proposed changes there are some issues that will need to be addressed.

The Deer Island Drainage Improvement Company cannot consent to the

proposed project to breach the levee at this time.

Here is some history of the Deer Island Flood Control Project and the Deer Island Drainage Improvement Company. Since the system was constructed in 1942 by The United States Army Corps of Engineers, it has performed very well. The levee system has held back every major Columbia River flood this region has experienced since 1942. During this time the Levee has sustained damages that would need to be repaired after the flooding event subsided, but it has never failed. The high water DIDICO and its incorporated landowners have experienced have come from localized events of rain water and seepage. The major flooding events (as in 1996) have come from Tide Creek and Merrill creek runoff. These events are localized and originate within the Levee system and usually coincide with the Columbia River experiencing a high flow that closes the Company's system of gravity drainage gates and culverts. When this occurs the only means that Company has to vacate the water is through a pumping station located at the north end of the Deer Island Slough. The DIDICO infrastructure for the most part is original, almost 75 years old. The pumps and electrical service were updated in 1999 but the pump house and pipes are all original.

Below are the issues the Deer Island Drainage Improvement Company requests to be observed and mitigated and are directly associated with the planned habitat restoration project on the Columbia Stock Ranch (USCACE project CENWP-PM-E-16-03). The proposal as presented would breach the existing levee and build a new section of levee to separate the Columbia Stock Ranch from the rest of the lands within the Company.

1: Compensation for lost revenue and habitat project expenses:

The Company anticipates no reduction in the cost of maintenance coupled with a reduced assessment base from which to fund that maintenance. In addition, the boundary change itself would impose significant costs upon the Company.

By statute DIDICO assesses the land within the Company boundaries for all of its revenue. This revenue is used for all Company expenses, including debt service, if any, levee, canal and equipment maintenance and pumping costs.

This raises the question of whether the lands outside the new levee would remain part of the Company. If that land is to be removed from the Company and no longer pay assessments, it will increase the financial burden on the owners of the property remaining within the boundary. Currently the Columbia Stock Ranch has an assessable acreage of 437 acres which accounts for 11.9% of the total assessable acreage and therefore 11.9% of the annual budget. Though not all the acres will fall outside the Company after the habitat project is completed a majority will. The Company will also lose the assessable acreage associated with the railroad right of way which currently is owned and paid by the Oregon Department of Transportation. The Company would need some way to compensate for this lost revenue.

BPA is currently working with Columbia Land Trust, and the Drainage District manager to ensure that costs are addressed in a manner that meets the needs of the Drainage District's expenses.

2: Current Gravity Gate on Deer Island Slough to have increased capacity.

Of equal concern is the likelihood that episodic overflow from the old channel of Tide Creek would need to be pumped out of the protected lands, resulting in increased wear and tear on the pumps, as well as increased electric consumption. As mentioned earlier the Company receives its high water from local events like rainwater and seepage. The Company usually deals with these events by waiting and tolerating the high water until the gravity gates open and the water is vacated through the culverts. Pumping out the water is a last resort due to its expense.

Currently there are two gravity gates operating on the Northern part of the DIDICO. One is a 72" culvert on Deer Island Slough. The other is a 24" culvert on the Former Tide Creek Channel. Both these culverts are set to base depth of well below low Columbia River water levels (approximately 1-2' NAVD). There is also a manmade ditch that connects the Deer Island Slough and the former Tide Creek channel so during dewatering the two culverts can work in conjunction with each other. These two culverts are responsible for a vast majority of the dewatering of the DIDICO properties as they are located at the lowest elevations of the properties.

With the current USACE habitat design, the 24" culvert will be removed from operation as it falls outside the proposed new levee. It is going to be replaced with a 6'x6' square fish-friendly tide gate on the new proposed Levi still in the former Tide Creek Channel. The current 72" culvert in Deer Island Slough and the new 6'x6' culvert are to be connected by a newly dug channel across the southern edge of the Columbia Stock Ranch Property.

The new connection channel between Deer Island Slough and the old Tide Creek Channel has a bottom elevation of 9' NAVD. This is approximately 6-7' higher than our current overall drainage level. This results in several changes to the drainage capacity of the DIDICO. The Tide Creek properties, which account for approximately 15% of the after project Company acres, and are removed from the main drainage channel of the Deer Island Slough will have a large net increase in total gravity drainage capacity at all elevations. At the 9' elevation and above the entire Company will receive a large net increase in gravity drainage capacity. With the removal of the old tide gate and the cross channel elevation set at 9' the remaining properties within the Company (approximately 85%) will receive a net loss of drainage capacity and be solely reliant on one gravity culvert.

The proposed habitat project is located at river mile 76.5 where there are several feet of daily tidal fluctuation. During the spring freshet and winter high water these

tidal flows and ebbs alone can open and close the gravity gates. Within these short windows is a very opportune time for the Company to dewater. And a decrease in net dewatering capacity below 9' NAVD is going to have a negative effect on the Company's ability to do just that. When the Columbia River begins to recede after a major flood event, it has a tendency to do so slowly. When it finally recedes to a level where the gravity gates within the Company will open it will have quicker dewatering above 9' NAVD and then rapidly slow down after 9' NAVD.

The only solution the Company can see to offset this net loss in dewatering capability is to upgrade the current 72" gravity gate culvert in Deer Island Slough to a larger capacity one or multiple smaller ones. Either design to result in a net gain of drainage capacity.

The issues and potential solutions related to the change in hydraulic connection between Tide Creek and Deer Island Slough are discussed in the response to your comment #3.

3: Upgrade to existing pumping capacity

The current Company pumps are located at the north end of the Deer Island Slough. The pumps are ran during normal high water events when levels within the Company raise to the level that begins to flood landowners' basements and impedes the ability to conduct business related to agricultural activities. The pumps are always a last resort and are run as little as possible. Most normal operation of the pumps occurs during the spring freshet and also high rain and River levels coinciding.

During the construction of the Flood Control Project now part of the DIDICO; Tide and Merrill creeks were diverted within their own designated channel and routed to the south to the Columbia River. There are high banks on both sides of the channel for the distance from Highway 30 to the four gravity gates located on the Levi at the very south end of the project. During the flood of 1996 the runoff from these two creeks quickly filled the designed in-bank storage reservoir and overflowed its banks and began to fill in the properties inside the levee system. The coinciding amount of rainfall along with seepage, added to the already large amount of water within the Company. With all the gravity gates within the entire DIDICO system closed due to the height of the Columbia River, the property inside the levee began filling with the flood waters. Pumping was the only way to remove the waters to buy enough time for the river to recede, and the water to begin to flow out thru the gravity gates before inundation to the structures within Company occurred. Six Chrisofouly pumps and tractors were brought in by the Company and multiple other pumps were brought in by the Army Corps of Engineers just to try and slow down the waters rise.

The proposed habitat restoration project on the Columbia Stock Ranch will change the functions of the current water control design on the DIDICO property. The most negative of these is the loss of water storage capacity within DIDICO which is

noted in the Environmental Assessment proposed by the Army Corps of Engineers. What this means is that in the event of another "1996" flooding, the water level will rise faster and be higher than previously experienced; up to .5' per the Corp calculations. During normal year over year high water events the water levels within the Company are also going to be higher and rise faster. The only net reduction in water the Company will see is that of the rainfall that would normally fall on the 437 acres that the Columbia Stock Ranch encompassed. The Company can assume to receive the same amount of flow from Tide and Merrill Creeks, along with the same amount of seepage along a relatively same length of levee.

The Company cannot assume that the current or upgraded version of gravity gates and culverts can compensate for this increase in water or assume that they will remain open during high water. The only guaranteed way to remain neutral after the habitat project is to increase our pumping capacity. The Company in the last 15 years already paid a large amount of money to double our pumping capacity only to have it possible fall behind due to this proposed habitat project.

The major effect of the CSR project on adjacent lands is a decrease in storage volume within the Deer Island levee system. The adverse impacts of decreased storage volume include:

1. Likely increase in maximum water levels,
 - a. up to 0.5 feet for very large events where flooding is above 15 feet NAVD,
 - b. typical 0.1 to 0.3 feet for more common flooding events where water levels are between 11 feet and 15 feet NAVD
 - c. up to 0.2 feet during typical wet periods not requiring pumping (up to 12 feet NAVD) for areas adjacent to open channels
2. Water levels likely to change more rapidly

These impacts may be experienced as higher flood waters than would have otherwise been experienced, wetter fields, more frequently flooded basements, potential increase in O&M costs due to increased number of pumping cycles and decreased time from safe pump operating levels to dry.

A second major effect is the modification of the hydraulic connections within Deer Island levees, including the connection between Tide Creek and Deer Island Slough, and the configuration of gravity outlets. Adverse impacts related to these include:

1. Decreased ability to lower Tide Creek water levels via Deer Island pump station for elevations below 9 feet NAVD
2. Decrease in gravity drainage capacity between elevations 9 feet and 7 feet NAVD

Besides the many benefits from the project as proposed (e.g. replacement of 70-year old levee, improvement of Tide Creek outlet, improvement in water quality and habitat in Tide Creek, etc.), there are a number of technical measures that could reduce and/or offset the adverse impacts of the project related to decreased storage volume. Increasing pump capacity by adding more pumps is the only stand-alone measure that can be implemented to completely address increase in water surface rise at the beginning of a flood and decreasing the maximum water

level for a given high water event. An estimate based on simulations with the hydraulic model (used in the H&H analysis) suggests that the existing pump capacity would need to be doubled to achieve a no-rise outcome.

Other options that could be explored to combat the effects of decreased storage volume early during a flood include the following:

1. stand-alone, mobile pumps could be helpful in active flood fighting
2. monitoring equipment, alarm systems, and forecast training to help increase the efficiency of flood control operations
3. strategic use of the new fish-friendly gravity outlet to minimize interior water volume prior to rising flood waters
4. Maintenance or replacement of existing pump house
5. Backup generator to support pump operation in the case of power outage

Other options that could be explored to compensate for the increase in maximum water levels include the following:

1. Maintenance or replacement of existing Deer Island Slough outlet
2. Improvements to outlet capacity (e.g. installation of new side-hinge tide gate on existing 72-inch outlet in Deer Island Slough)
3. Improving conveyance capacity in existing drainage ditch network from Deer Island Stock Ranch (e.g. excavating channels to lower depth, widening channels, repairing/replacing/upgrading culverts, etc.)
4. Increasing post-event dewatering by adding a smaller pump that can be used to keep water levels low within Deer Island Slough to promote drainage, but not so low as to dry out the pump.
5. Adding resiliency to threatened structures (e.g. sealing basement, raising first floor elevation, etc.)

A potential solution to the issue of hydraulic connectivity between the Tide Creek and Deer Island Slough would be to lower the invert of the overflow channel such that a hydraulic connection is possible at lower elevations. An invert elevation set at 6 feet NAVD would be an improvement over the existing connection. This solution also increases the amount of low elevation storage, which is desirable for operating the pumps near the end of a high water event.

Lowering the invert of the overflow channel to below 7 feet preserves the existing connectivity to Tide Creek and the storage therein and reduces the degree that the CSR project is decreasing low elevation storage connected to the pump station; however, this is relatively small compared to the low elevation storage that is being removed from the system by the CSR project (the north field). An additional pump that is smaller than what the DIDIC currently has (or perhaps one with variable speed) would enable pumping for longer periods without stopping and starting pumps.

4: Deer Island Drainage Improvement Company to have full and sole control of new infrastructure

Currently the DIDICO has control of all water control structures within the Company. The Company requests that this is to continue.

The Company will especially be in total control of the proposed fish friendly tide gate located in the new Levee. After the project is completed there will be no other agency besides the Deer Island Drainage Improvement Company to have control of this tide gate.

The Company will also be in control of the new or upgraded pumps. It will be at the Company's sole discretion of when and how to run the pumps.

The Operations and Maintenance will be the responsibility of Bonneville Power Administration (BPA). BPA is currently exploring what agreements need to be in place to allow the Drainage District to be in control of the new tide gate and any other new or existing pump.

CONCLUSION

A change of this magnitude should be referred to the landowners of the Company for action at a special meeting, and may be required if a boundary change is anticipated. The Board of Directors cannot recommend approval unless provision is made for updating and upgrading the facilities and equipment of the Company to bring them up to current standards sufficient to meet and control reasonably anticipated high water events. In addition the issue of a potential boundary change with its expense and loss of revenue must be satisfactorily addressed.

The Company looks forward to cooperating with the Corps in addressing and resolving these issues.

Very truly yours,

DEER ISLAND DRAINAGE IMPROVEMENT COMPANY

Chase Christensen, President

DEER ISLAND STOCK RANCH TRUST
65640 ISLAND DRIVE
DEER ISLAND, OR 97054

May 24, 2016

U.S. Army Corps of Engineer District, Portland
Attn: CENWP-PM-E / Kristine Lightner
PO Box 2946
Portland, OR 97208-2946

Re: Project CENWP-PM-E-16-03
Draft Environmental Assessment for the Columbia Stock Ranch Section 536 Ecosystem
Restoration Project

Attention District Engineer,

I have been appointed the communication liaison, (Point person), for Deer Island Stock Ranch Trust (DISRT), which owns Deer Island (2305 acres), the property east of the Corps Columbia Stock Ranch project. I'm one of five trustees for DISRT, but as the point person, the only member who will be commenting on the report from DISRT's point-of-view.

Deer Island will be the property most heavily impacted by the proposed project. We foresee potential for significant and negative financial impact due to the proposed changes in hydrologic design. Until there is a complete plan "in-place" to address these issues, DISRT will not be able to support the Columbia Stock Ranch Restoration Project. To clarify our position, please see the following questions and comments:

1. Per the USACE/BPA report, the new flood control design will cause an increased amount of flood water to inundate Deer Island and surrounding properties (approximately 6"). This means less above-water-level, useable property for agricultural purposes and an increased use and wear and tear and electrical expense for the pump system. What are the Corps plans to offset loss of property use and added expenses that the property owners will likely experience?

The major effect of the CSR project on adjacent lands is a decrease in storage volume within the Deer Island levee system. The adverse impacts of decreased storage volume include:

1. Likely increase in maximum water levels,
 - a. up to 0.5 feet for very large events where flooding is above 15 feet NAVD,
 - b. typical 0.1 to 0.3 feet for more common flooding events where water levels are between 11 feet and 15 feet NAVD
 - c. up to 0.2 feet during typical wet periods not requiring pumping (up to 12 feet NAVD) for areas adjacent to open channels
2. Water levels likely to change more rapidly

These impacts may be experienced as higher flood waters than would have otherwise been

experienced, wetter fields, more frequently flooded basements, potential increase in O&M costs due to increased number of pumping cycles and decreased time from safe pump operating levels to dry.

A second major effect is the modification of the hydraulic connections within Deer Island levees, including the connection between Tide Creek and Deer Island Slough, and the configuration of gravity outlets. Adverse impacts related to these include:

1. Decreased ability to lower Tide Creek water levels via Deer Island pump station for elevations below 9 feet NAVD
2. Decrease in gravity drainage capacity between elevations 9 feet and 7 feet NAVD

Besides the many benefits from the project as proposed (e.g. replacement of 70-year old levee, improvement of Tide Creek outlet, improvement in water quality and habitat in Tide Creek, etc.), there are a number of technical measures that could reduce and/or offset the adverse impacts of the project related to decreased storage volume. Increasing pump capacity by adding more pumps is the only stand-alone measure that can be implemented to completely address increase in water surface rise at the beginning of a flood and decreasing the maximum water level for a given high water event. An estimate based on simulations with the hydraulic model (used in the H&H analysis) suggests that the existing pump capacity would need to be doubled to achieve a no-rise outcome.

Other options that could be explored to combat the effects of decreased storage volume early during a flood include the following:

1. stand-alone, mobile pumps could be helpful in active flood fighting
2. monitoring equipment, alarm systems, and forecast training to help increase the efficiency of flood control operations
3. strategic use of the new fish-friendly gravity outlet to minimize interior water volume prior to rising flood waters
4. Maintenance or replacement of existing pump house
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Other options that could be explored to compensate for the increase in maximum water levels include the following:

1. Maintenance or replacement of existing Deer Island Slough outlet
2. Improvements to outlet capacity (e.g. installation of new side-hinge tide gate on existing 72-inch outlet in Deer Island Slough)
3. Improving conveyance capacity in existing drainage ditch network from Deer Island Stock Ranch (e.g. excavating channels to lower depth, widening channels, repairing/replacing/upgrading culverts, etc.)
4. Increasing post-event dewatering by adding a smaller pump that can be used to keep water levels low within Deer Island Slough to promote drainage, but not so low as to dry out the pump.
5. Adding resiliency to threatened structures (e.g. sealing basement, raising first floor elevation, etc.)

A potential solution to the issue of hydraulic connectivity between the Tide Creek and Deer Island Slough would be to lower the invert of the overflow channel such that a hydraulic connection is possible at lower elevations. An invert elevation set at 6 feet NAVD would be an improvement over the existing connection. This solution also increases the amount of low elevation storage, which is

desirable for operating the pumps near the end of a high water event.

Lowering the invert of the overflow channel to below 7 feet preserves the existing connectivity to Tide Creek and the storage therein and reduces the degree that the CSR project is decreasing low elevation storage connected to the pump station; however, this is relatively small compared to the low elevation storage that is being removed from the system by the CSR project (the north field). An additional pump that is smaller than what the DIDIC currently has (or perhaps one with variable speed) would enable pumping for longer periods without stopping and starting pumps.

2. The proposed Columbia Stock Ranch Project will remove 437 acres from the assessment base for the Drainage District while increasing the costs. There will be less funds to pay for the reduced ability of the surrounding lands to de-flood, thereby causing additional use of the pump systems. It seems appropriate that the Corps install a more energy efficient and larger capacity pump system to offset the increased expenses and reduced assessment base imposed on landowners by the proposed project.

Discussions are on-going with the Drainage District.

3. The proposed Columbia Stock Ranch levee added to the old levee is the same length as the current levee. The proposed levee will also have a larger tide gate. The property owners, (members of the Dike District), will have the same amount of work to maintain the dikes, but with less funds for the job.

Per section 1.5 Project Sponsor and Land Owner, BPA would be responsible for "all operation and maintenance of project features and hydrologic structures following implementation". The new levee is a project feature. It seems appropriate per the stated intention, and the fact that the Corps/BPA are building the new levee and not the Dike District, that BPA is responsible for maintaining the new levee, and all costs associated with it including increased wear and tear on the Dike District pumps and their maintenance, associated electrical expenses and levee recertification.

BPA is currently working with Columbia Land Trust, and the Drainage District manager to ensure that costs are addressed in a manner that meets the needs of the Diking District's expenses.

4. What reparation work will the Corps be doing on the dike road (Haul road), after heavy equipment usage?

The haul road is no longer required for project purposes. The original concept outlined for the construction of the set-back levee was to utilize material from the Deer Island upland disposal site. Material from the upland disposal site is no longer required to construct the set-back levee, and as such, the haul road from the disposal site has been eliminated.

Any other construction route that utilizes Highway 30 or any portion of the road on top of the existing levee, will be repaired to the *same* or better condition as it was prior to construction.

5. The seepage berms are expected to be 5 feet in depth and extend outward by 250 feet. Will there be any affect to the Deer Island Slough? After the construction of the berms, how will the disturbed ground be repaired?

Construction of the seepage berms is restricted to the open fields west of Deer Island Slough and construction will not require disturbance of the Slough or the adjacent forested banks. After construction the disturbed land will be leveled out and seeded.

6. Is the Corps anticipating that they'll need to use private land for construction of the landward side of the levees? If so, what reparation is planned for disturbed ground?

The Corps is not anticipating using any land outside of the Columbia Land Trust property boundary for the construction of the set-back levee. The Corps and BPA will need an easement for flowage from the overflow channel.

7. Will the Corps be building fences to protect the project area from livestock?

No fences are anticipated at this time.

8. At what point will the Corps be providing an easement for adjacent landowners to access HWY 30 via the new levee?

Access from the newly constructed set-back levee to Highway 30 is currently under consideration. The specification for construction will also provide for emergency use by residents if requires, during construction.

9. Per section 2.1, CSR project area is described as being "on Deer Island". The western edge of Deer Island is defined by Deer Island slough. The project area is located adjacent to the Island but west of Deer Island Slough, not on Deer Island.

Noted, this has been corrected in the Final EA.

10. Per section 4.9, Deer Island is described as one of the few, large remaining Islands in the lower Columbia River. This is true but no part of the CSR project is located on the Island so this statement doesn't seem relevant to the report. The paragraph continues to describe the Population of Deer Island. This small community is also not located on Deer Island, but west of Highway 30 from the Island. The CSR project, the small town of Deer Island and the Island are distinct entities, whose boundaries don't cross. The report doesn't make these distinctions clear.

Noted, this has been corrected in the Final EA.

Thank you for your review and attention to our questions and comments! We look forward to working with you to resolve these issues.

Respectfully,

Susan Kem
Trustee of DISRT

Gary Loomis

May 21, 2016

District Engineer
U.S. Army Corps of
Engineers Attn: CENWP-
PM-E/Joyce Casey
P.O. Box 2946
Portland, Oregon 97208-2946

What follows are my comments on the Draft Environmental Assessment for the Columbia Stock Ranch Section 536 Ecosystem Restoration Project:

I own 488 acres neighboring the proposed Columbia Stock Ranch project (CSR) within the Deer Island Drainage Improvement Company (Diking District). As an avid fisherman and fishing industry professional, chairman of Coastal Conservation Association and founder/president of Fish First, I have spent almost thirty years working for salmon recovery and I, in the overall, favor restoring rearing habitat for juvenile salmonids in the Columbia River estuary.

However, the Columbia Stock Ranch project is a waste of taxpayer and electric ratepayer dollars. I believe this is so for these and other reasons:

- 1) The project is not worth doing for this amount of money without bringing in fresh water via Tide and/or Merrill creeks to draw the fish in.

Noted, this is outside the scope of the study and the real estate available. In the future if interested parties come forward, additional improvements could be investigated.

- 2) The project needs additional assessment on the height of the proposed setback levee. I will not allow my excluded land to be flooded by the CSR's 15ft setback levee. Considering that in 1996, the Columbia River crested at 19.78ft, will the CSR's proposed 15ft levee be sufficient to protect my lands and those of my neighbors during the next high water event? How much additional money would it cost to bolster the CSR's setback levee enough to protect my property and those of my neighbors?

The new setback levee will be constructed to a height of 32 feet NAVD which is equivalent to that of the existing levee, thereby preserving the existing level of protection. Construction of the setback levee to an elevation greater than 25 feet NAVD, approximately equivalent to the 100-year flood level on the Columbia River, will be done prior to breaching the existing levee. There is a window during the summer and fall of the second construction season in which the existing levee will be breached and the new setback levee will be brought to the final elevation prior to the winter flood season.

- 3) According to the hydrology and hydraulics analysis, the CSR project is expected to increase water levels and interior flooding within the remaining Diking District. This is likely to have a negative economic impact on the remaining Diking District members and our properties. Will the CSR's setback levee guarantee that the excluded Diking District properties will not experience increased water levels, seepage, and interior flooding?

The major effect of the CSR project on adjacent lands is a decrease in storage volume within the Deer Island levee system. The adverse impacts of decreased storage volume include:

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5. Adding resiliency to threatened structures (e.g. sealing basement, raising first floor elevation, etc.)

A potential solution to the issue of hydraulic connectivity between the Tide Creek and Deer Island Slough would be to lower the invert of the overflow channel such that a hydraulic connection is possible at lower elevations. An invert elevation set at 6 feet NAVD would be an improvement over the existing connection. This solution also increases the amount of low elevation storage, which is desirable for operating the pumps near the end of a high water event.

Lowering the invert of the overflow channel to below 7 feet preserves the existing connectivity to Tide Creek and the storage therein and reduces the degree that the CSR project is decreasing low elevation storage connected to the pump station; however, this is relatively small compared to the low elevation storage that is being removed from the system by the CSR project (the north field). An additional pump that is smaller than what the DIDIC currently has (or perhaps one with variable speed) would enable pumping for longer periods without stopping and starting pumps.

Total seepage volume into the Deer Island drainage area (including the remnant Tide Creek area) is not expected to increase. Seepage rates across the new setback levee are more likely to decrease than increase considering the new levees will be constructed to a higher quality than the 70-year-old levee and will include seepage berms and a limited cutoff trench. The seepage berms will reduce foundation gradients thereby reducing seepage rates.

- 4) The CSR project indicates the CSR will be outside the Deer Island Diking District would reduce the number of total ownership shares in the District, thereby increasing the cost of operating the District for the remaining landowners. These anticipated economic impacts are not acceptable and must be addressed before the project proceeds.

BPA is currently working with Columbia Land Trust, and the Diking District manager to ensure that costs are addressed in a manner that meets the needs of the Diking District's expenses.

Sincerely,

Amy Kramis

RESPONSES AND COMMENTS

TO THE

DRAFT

ENVIRONMENTAL ASSESSMENT

FOR THE

COLUMBIA STOCK RANCH SECTION 536

ECOSYSTEM RESTORATION PROJECT

DATED: 22 April 2016 Noticed: 25 April, 2015

Comments due: May 25, 2016

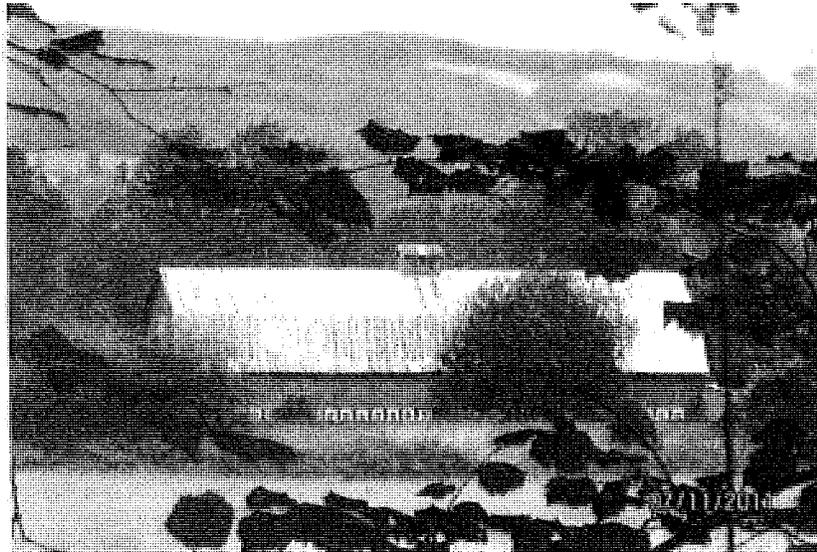
From:

John Allan Petersen

Dated: May 21, 2016



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SAVING OUR HERITAGE

By: John Allan Petersen

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COMMENTS BY JOHN ALLAN PETERSEN dated May 21, 2016

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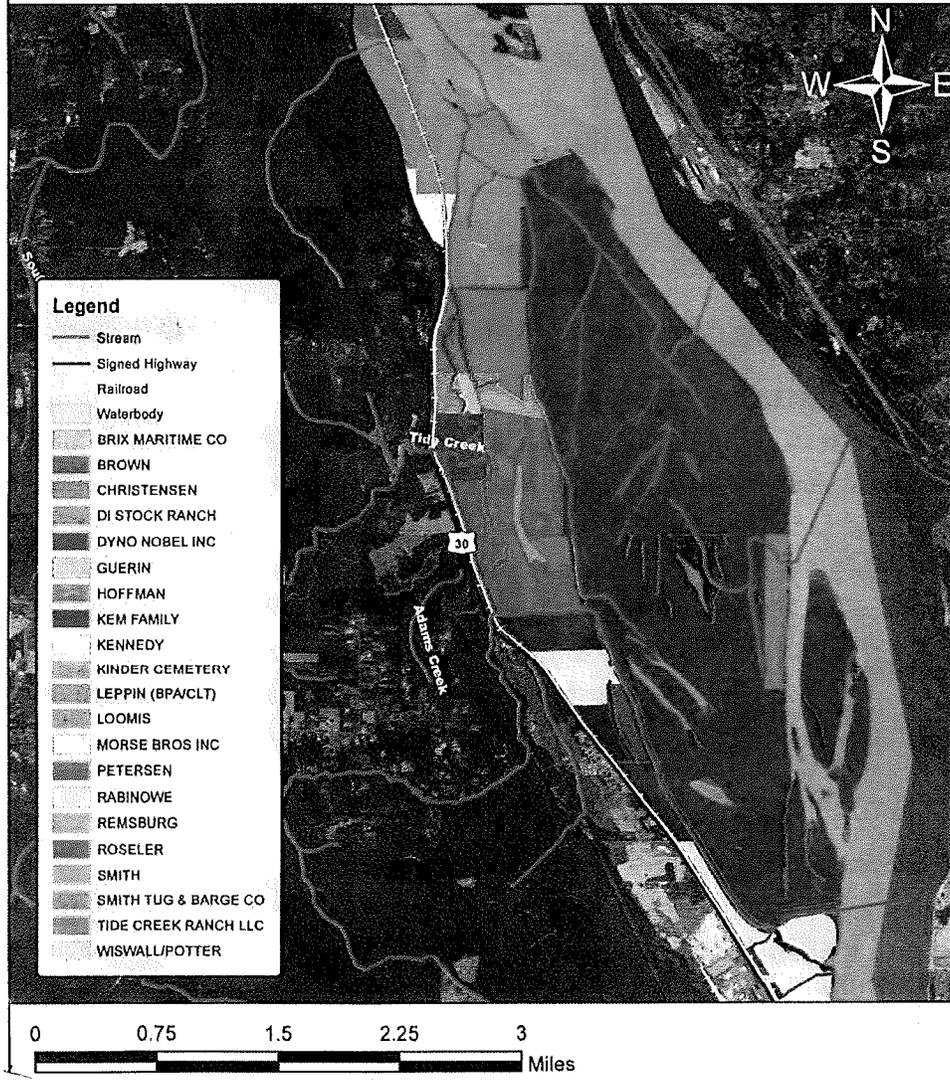
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Property Map

Prepared For:
Ed Rabinowe

Location:
Deer Island

Prepared By:
Tyler Joki
Resource Conservationist
Columbia Soil & Water Conservation District



The John Allan Petersen property:

My property is in purple on this May and known as TAX Lot 6N1W31-00-0300. Since 1974 our family has owned and operated an Oregon Corporation known as Tide Creek Rock, Inc. It is a small surface mining operation which furnishes crushed and pit run rock to customers. The rock pit is upstream alongside Tide Creek. I have worked at this operation nearly every day since 1974. I am very familiar with the Columbia Stock Ranch, was a good friend of Arnold Leppin who was the former owner of the project property and am a member of that district. I regularly attend annual meetings of the district and believe that the proposed Draft

falls short of what it is purportedly for in many respects. These deficiencies shall be set forth with detail in this document.

John Petersen Comments:

My real property close to this proposal is in the Deer Island Diking District and is within 1/2 mile of the proposal. The location of the Draft proposal constantly refers to the project as "on Deer Island". None of the property involved in the proposal is "on Deer Island". It is near the community of Deer Island and more than 400 acres of it are within the diking district of the Deer Island Drainage Improvement Company, also known as the Deer Island Diking District.

Noted, this has been corrected in the Final EA

A Partial Listing of the Negative Effects of the Proposal are in this summary:

1. FISH ENHANCEMENT:

To really help the fish if that truly is the goal the proposal should reverse the directions of Merrill Creek and Tide Creek, put a Levee for about 1/2 mile down the same, and have the outflow of these creeks enter the Columbia River where they did before the Dike District was formed. Then the fresh water from both creeks would enter the Columbia River and the fish would find fresh water and the nutrients upstream would be available to them.

It makes no sense to fill in the river banks rather than revise the 2 creeks that formerly flowed into the area where the proposal plans to dump fill alongside the river.

In the proposed holes on the intended site the fish will be trapped, which obviously is harmful, not helpful

Noted, this is outside the scope of the study and the real estate available. In the future if interested parties come forward, additional improvements could be investigated.

2. HISTORY DESTRUCTION RATHER THAN ENRICHMENT:

The Leppin property is an historical site that should be preserved. The buildings include part of the old hotel that served rail passengers in the 1880s and 1890s. The Barns and outbuildings are fine historical examples for the years from 1890 to the 1960s. The organization, Restore Oregon, is trying to save such records of Oregon history from destruction. This present project, as planned, is destructive and negative to this community and gives the impression that the preservation of history is not a priority for some federal agencies.

In addition to all the buildings which are set forth herein in detail, the proposal ruins some evidence of the railroad using this area to cross the Columbia river. Why do this? There is no valid reason. At pages 42-43 of the Draft there is admission of the many historical remains on the site.

The Columbia Stock Ranch Section 536 project boundary has been inventoried by the Corps' contractor for cultural resources, several historic properties have been recorded, including the structures. The Corps has determined that the project will have an adverse effect to historic properties located within the project boundary and is beginning coordination with the State Historic Preservation Office to discuss mitigation measures.

3. DESTRUCTION OF DEER ISLAND DRAINAGE DISTRICT BOUNDARY:

The proposed levee splits the district, The district will lose about 400 acres from its present boundaries; 1) it creates a disunity in the district and ; 2) cuts down membership; 3) it has financial impacts that cannot yet be imagined; 4) it flies in the face of the uses the property in the dike area have historically been used for; 5) it causes less participation in the goals of the district; 6) it increases the likelihood of flooding of the district and (7) likelihood of damage to the other owners' property. Before this proposal can possibly work the equipment, pumps, and hardware of the district need to be replaced and the levees need to be made higher to protect the rest of the district.

BPA is currently working with Columbia Land Trust, and the Drainage District manager to ensure that costs are addressed in a manner that meets the needs of the Drainage District's expenses.

4. DESTRUCTIVE TAX CONSEQUENSES TO ALL TAXING DISTRICTS

The buildings are listed on the Columbia County Tax statement as worth \$223,480.00. It strikes a blow at several very important taxing districts. Other Districts which will have their tax revenues reduced by the destruction of the buildings and improvements are Columbia County general fund and 3 year levy for jail operations, Columbia 4H and Extension, Col 911 Communication District, Columbia Vector Control, Rainier, Cemetery, Port of St Helens, Columbia Soil and Water District, Columbia River Fire Department, CCDA – Colco Dev. Agency, and there are bonds to pay for Columbia County, the Fire Patrol, Fire Patrol Surcharge

If the land is removed also because of a change in ownership to an exempt owner, then another blow would be loss of revenue of additional value of \$273,032.00 to the same entities, and the Deer Island Drainage Development Corporation will lose the funds they have had. In 2015-2016 this amounted to \$816.00.

Noted.

1. FISH ENHANCEMENT:

If the goal of this project is to help the fish, the proposal should reverse the directions of Merrill Creek and Tide Creek, put a Levee for about ½ mile down the same, and have the outflow of these creeks enter the Columbia River where they did before the Deer Island Drainage Improvement Company was formed. Then the fresh water from both creeks would enter the Columbia River and the fish would find fresh water and the nutrients upstream would be available to them.

It is a bad idea to fill in the river banks rather than revise the 2 creeks that formerly flowed into the area where the proposal plans to dump fill alongside the river. This is especially true if the fill is subject to flooding and erosion. The Draft does not address that aspect of the plan.

In the proposed holes on the intended site the fish will be trapped, not helped.

Noted, this is outside the scope of the study and the real estate available. In the future if interested parties come forward, additional improvements could be investigated.

The Draft Proposal does nothing for the Fish:

One must consider the overall high-level goal of this project; to establish native fish habitat for the endangered fish species (listed on table 4). A key element to draw native endangered fish species into areas like this is the supply of fresh water from local streams. Fish are drawn into these areas because they can sense the fresh water coming from local streams. A significant flaw, related to the above stated major goal in this proposal, is that fresh water from the local historic streams is not provided for in the project.

It is true that water from the Columbia will come in and out again during tidal activities and during winter/spring high water periods, and wetlands will be restored. However the streams that historically connected to the site are still not connected. What would draw a fish in hanging out in the Columbia River to this location? Why would any fish passing by decide to take a left turn and explore the Columbia Stock Ranch? What would direct them there? They couldn't "follow their nose" because the water in the Columbia Stock Ranch is the same water that they are swimming in in the Columbia River, it just happens to be going in and out during the high and low water periods.

The CSR project was evaluated by the Expert Regional Technical Group (ERTG) identified through the NOAA BiOp and has received the highest score to date for habitat restoration in the lower Columbia River.

The aquatic benefit metric to be used to evaluate alternatives is modeled after what is used in the 2008 FCRPS BiOp. That BiOp defines restoration projects in the Columbia River Basin to be assigned with survival benefit units (SBUs) for salmonids by the Expert Regional Technical Group (ERTG). The ERTG was convened in response to Reasonable and Prudent Alternative (RPA) Action No. 37 in the BiOp. ERTG is a group comprised of independent scientists with extensive education, research, and functional knowledge of the estuarine ecosystem and the processes involved in ecosystem restoration. The ERTG developed and applies a methodology that estimates changes (or benefits) to juvenile salmon as a result of individual habitat restoration actions (ERTG 2010). The ERTG developed the SBU scoring methodology per the associated Columbia River Estuary (CRE) Recovery Plan Module developed by NMFS (2011). Because the CSR project area lies within the lower Columbia River estuary (for these purposes, the estuary's tidal influence extends from the mouth of the Columbia River up to Bonneville Dam), the PDT evaluated the project using ERTG scoring. The process used to assign SBU for ecosystem restoration projects in the lower Columbia River and estuary involves scoring for three factors, (1) certainty of success, (2) potential benefits for habitat access/opportunity, and (3) potential benefits for habitat capacity/quality. Scoring Criteria has been developed for each of these three metrics ranging in a score of 1 being the lowest to 5 being the highest score. The Scoring Criteria for each of the three factors evaluated is as follows:

Certainty of Success

5 -- Restoring a natural process or landforms; proven restoration method; highly likely to be self-maintaining; little to no risk of detrimental effects; highly manageable project complexity; minimal to no uncertainties regarding benefit to fish, minimal to no exotic/invasive species expected.

4 – Largely restoring a natural process or landforms; proven restoration method; likely to be self-maintaining; minimal risk of detrimental effects; manageable project complexity; minimal uncertainties regarding benefit to fish; minimal exotic/invasive species expected.

3 – Partially restoring a natural process or landforms; proven restoration method; potentially self-maintaining; minimal risk of detrimental effects; manageable project complexity; moderate uncertainties regarding benefit to fish; exotic/invasive species expected.

2 – Partially restoring a natural process or landforms; poorly proven restoration method; unlikely to be self-maintaining; risk of detrimental effects; moderate project complexity; moderate uncertainties regarding benefit to fish; exotic/invasive species expected.

1 -- Unlikely to restore natural processes and landforms; unproven or risky restoration method; will likely require intervention to maintain; some risk of detrimental effects; excessive project complexity; excessive uncertainties regarding benefit to fish; exotic/invasive species expected.

Potential Benefit for Habitat Access/Opportunity

5 -- High connectivity of site for most species, populations and life history types coming down river at most water level stages; located in a mainstem area or a priority (TBD) reach; unencumbered access to site.

4 – Intermediate connectivity of site for most species, populations and life history types coming down river at most water level stages; located in a mainstem area or a priority (TBD) reach; unencumbered access to site.

3 – Intermediate connectivity; only accessible to a few life history types or species coming down river at most water level stages; located in a mainstem area, lower end of tributary or a priority (TBD) reach; moderate site access.

2 -- Intermediate to low connectivity; only accessible to specific life history types or one species coming down river at most water level stages; located in a mainstem area, lower end of tributary or a priority (TBD) reach; moderate site access.

1 – Low to no connectivity for any species, populations or life history types coming down river at most water level stages; located in areas far from main stem or lower ends of tributaries; poor site access.

Potential Benefit for Habitat Capacity/Quality (C/Q)

5 -- Maximum natural habitat complexity; well-developed natural disturbance regime and ecosystem functions; extensive channel and edge network and large wood; much prey resource production and export; no invasive species or nuisance predators; water quality/temperature quality excellent; site relatively large (> 100 acres).

4 – Very good natural habitat complexity; natural disturbance regime and ecosystem functions; very good channel and edge network and large wood; much prey resource production and export; minimal invasive species or nuisance predators; water quality/temperature quality very good; site moderate to large in size (30-100 ac)

3 -- Moderate habitat complexity; moderately-developed natural disturbance regime and ecosystem functions; some channel and edge network and large wood; moderate prey resource production and export; moderate potential invasive species or predators; water quality/temperature quality moderate; site intermediate in size (~30 to 100 acres).

2 – Moderate to low habitat complexity; moderately-developed natural disturbance regime and ecosystem functions; some channel and edge network and large wood; moderate to low prey resource production and export; moderate potential invasive species or predators; water quality/temperature quality moderate to low; site intermediate to small in size (≥30 acres).

1 – Low habitat complexity; poorly developed natural disturbance regime and ecosystem functions; poor channel and edge network and large wood; moderate to poor prey resource production and export; moderate to high potential invasive species or predators; water quality/temperature poor; site small in size (<30 acres).

These criteria are used to score the specific Columbia River Estuary Actions (CRE) actions involved in ecosystem restoration in the lower Columbia river and estuary, specifically actions described in the Estuary Module the ESA Recovery Plan developed by the National Marine Fisheries Service. The actions include (but are not limited to) CRE-1.4 restore and maintain ecological benefits in riparian areas; CRE-9.4 restore degraded off-channel habitats, CRE-10.1/2/3 restore hydrological connections to floodplain habitats; and CRE-15.3 remove invasive species.

The three scoring factors are multiplied by the percent of habitat restored (CRE category) resulting in the SBU value for the alternative. This technique allows for comparing different alternatives performance of habitat access and diversity for salmonids to the costs associated with each alternative.

The above stated criteria are used to evaluate the ecological benefit, measured in SBUs. Specifically for this project the CRE is 10.1 breach or lower the elevation of dikes and levees to restore natural hydrological functions and restore degraded habitat. These habitat types are particularly scarce in the Columbia River due to development over time by levees. This CRE is important to the out-migration for juvenile salmon and provides critical resting rearing and feeding habitat. Additionally, these habitats provide a significant food source for stream type salmonids that reside in the main stem by the export of detritus developed within the floodplain wetland and prey sources associated with this exported detritus. This project will benefit 13 ESUs listed salmonids. Juvenile salmon are broken into two specific life history types, stream-type and ocean-type. Stream-type salmonids primarily use the river as a migration corridor from their natal streams to the estuary and ocean spending days to weeks of their life-cycle in the river before going out into the ocean, where they will spend 2 to 5 years prior to returning to their natal stream to spawn. The ocean-type salmonids move through the river system more slowly and can spend up to several months using floodplain wetland habitats as refugia from predators and for feeding and growth prior to ocean entry where they also can spend 2 to 5 years before returning to their natal streams to spawn.

The evaluation for CSR focused primarily on the hydrological reconnection. Alternatives were evaluated for both spatial and temporal access into 628 acres of resting, rearing, and feeding habitat for juvenile salmon while on their out-migration as well as other aquatic species. For this project, the available acreage of habitat at Trestle Bay is defined by the Extreme High Water (EHW) elevation of 10.4 feet. The type of salmonids that may benefit from this action are

ocean-type and stream-type juveniles; this report presents SBU scores for ocean-type juvenile salmonids unless otherwise noted.

The CSR product delivery team (PDT) examined the SBU calculation model to identify which variables may affect the SBU outputs. In general, four variables affect the overall SBU score for any given measure:

- Acreage: An increase in the wetted area increases a SBU score.
- Certainty of Success: An increase in the likelihood that actions taken under a certain measure increases the SBU score. For example, project with a low risk of not performing as expected would generate a higher SBU score.
- Potential for Access/Opportunity: The greater opportunity for salmonids to access the site and utilize the habitat would result in an increased SBU score.
- Potential Habitat Capacity: Greater quantities of habitat to support higher population capacities would result in a higher SBU score.

As outlined above, certain actions undertaken during a restoration project may increase or decrease SBU scores. In order to achieve the objectives of this project, focus was given to alternatives that increase Certainty of Success and Potential for Access/Opportunities scores. It was not anticipated that a project that achieved the objectives of this study would result in measurable changes to Acreage or Potential Habitat Capacity.

What happened to the Deer Island Slough

Deer Island Slough is a 6-mile-long backwater channel of the Columbia River and separates the western side of Deer Island to the adjacent floodplain. A dike was constructed about at the mid-point of the Slough and completely separates the slough into a northern and southern section, known as North Deer Island Slough and South Deer Island Slough. Water levels are regulated by tide gates located on the northernmost and southernmost ends of the two sloughs. Leaving these the same without addressing the flow of the creeks and the future flows of fresh water into the Columbia River so that the fish can go up the creeks.

What happened to Merrill Creek

Merrill Creek, nearly 8 miles in length, is a tributary of lower Tide Creek and enters Tide Creek approximately one mile upstream from Tide Creek's confluence with South Deer Creek Slough. It used to flow down river (North) It was changed so now it flows up-river (South) . What should happen is that the direction of flow should be changed back to North rather than South. Then the project might make some sense if it to help fish restoration.

What happened to Tide Creek

Today the 16-mile-long Tide Creek is a tributary of South Deer Creek Slough. It now travels up-river but before the diking company was formed and the dikes established the lower 2.2 miles of Tide Creek flowed north parallel to Deer Island Slough before entering the Columbia River west of the north confluence of Deer Island Slough. Now Tide Creek has been diverted from its historical floodplain into a constructed channel flowing south and then east before entering South Deer Island Slough at a point 2.5 miles upstream from the Slough's confluence with the Columbia River. This was the location of a railroad stop

called Hunters and a ferry terminal for the Northern Pacific Railroad from the Oregon side of the river to Kalama Washington. There will be more details about this later in these comments.

If this proposal truly wants to succeed it needs to provide a draw for the fish. The only draw that scientists know of (at this point) is the provision of fresh water from local streams. The way to accomplish this is to reconnect those streams that were disconnected in the past. The attached map shows a way to accomplish that. Redirect Merrill Creek and Tide Creek toward the north to the project area, similar to how they were before the Levees were constructed.

This solution accomplishes two things. First it provides fresh water to the project area as described above. Second, it furthers another goal which is the long term-goal of reestablishing native endangered species in Merrill Creek and Tide Creek. Currently any fish that happen to spawn in Tide Creek or Merrill Creek travel through degraded habitat forced to travel south. By connecting the streams to their historic location any fish that spawn in Merrill or Tide Creek will travel north and pass through the project site which is specifically designed for their benefit.

However, even if this is done, the problem of the loss of historical sites and losses of barns, buildings and other artifacts will be forever lost with the flooding proposed.

As now proposed the project amounts to a massive waste of a great deal of money for very little benefit to the fish and creates major impacts to the community surrounding it, and to the integrity of the history of the American west and its development through railroads, travel and agriculture.

On the following page is a map of the minimum changes that should be made to do something that helps the intended goal of fish restoration. However this does not solve the other problems with it set forth within these comments.

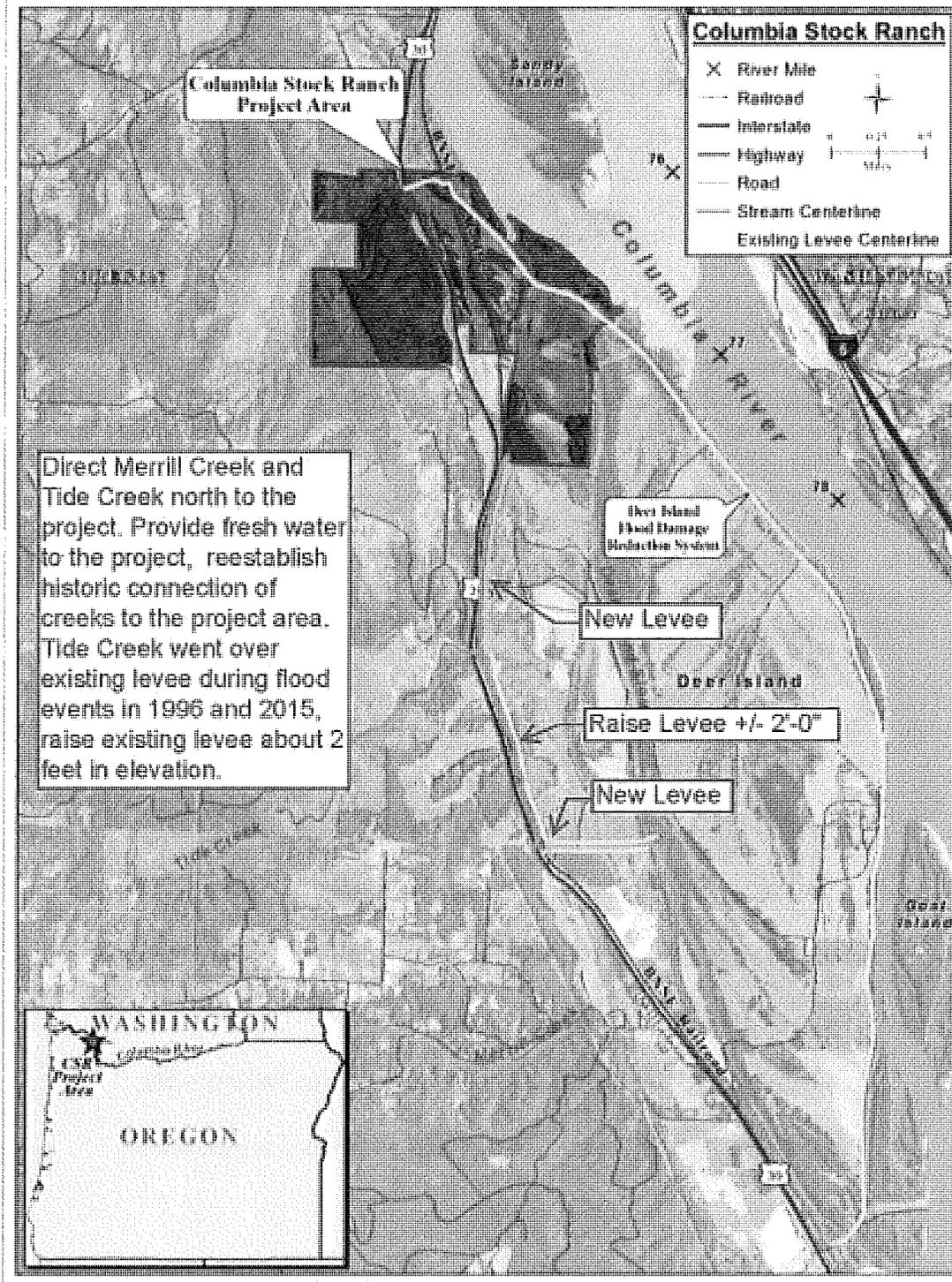


Figure 1: Deer Island and the CSR project site

These changes should be made if the project is to do anything at all for the fish.

1. HISTORY DESTRUCTION RATHER THAN ENRICHMENT:

The Draft proposal admits:

“Preliminary findings suggest that at least four cultural resources are located within the project area which may be considered potentially eligible for inclusion on the NRHP. These include the existing levee, which was constructed in 1942; the Peacher DLC farmstead, a farm complex of early-20th Century buildings and structures located immediately west of Tide Creek in the west-central portion of the project area; the John H. Jones DLC, a subsurface assemblage of early-20th Century homestead remains and debris located near the north-central portion of the project area; and an early-20th Century railroad grade stretching north-south along the project area's westside boundary (the Portland & Western Railroad). While each of the four historic site areas meet the 50-year-old 'rule of thumb' for eligibility to the NRHP, all require further evaluation and assessment to determine whether any retain significant historic qualities and meet any of the necessary criteria for NRHP eligibility. Those evaluations are expected to be completed by June 2016. An undetermined number of additional historic features and structures may also be present within the project area and require further assessment. Those assessments and evaluations are expected to be completed by June 2016.”

Pages 42- 43

The Leppin property is an historical site that should be preserved.

The buildings include part of the old hotel that served rail passengers in the 1880s and 1890s. The Barns and outbuildings are fine examples of the same for the years from 1890 to the 1960s.

The organization Restore Oregon is trying to save such records of Oregon history from destruction. Restore Oregon has a specific attempt to preserve barns. This project as planned is destructive and negative to this community.

In addition to all the buildings which are set forth herein in detail, the proposal impacts remaining historical records of the railroad using this area to cross the Columbia river. Why do this? There is no good reason.

The Buildings on the Columbia Stock Ranch

Notwithstanding the findings set forth on pages 42 and 43 of the Draft Proposal the intent is to destroy all signs of human activity at the site for the past 150 years.

I consider it a shame and a waste to destroy perfectly good houses, barns and outbuildings and fences which were on a long-time ranch operation. These could be used for various purposes and amount to a destruction of part of this county's history. Why should anyone allow such destruction at all.

The plan is set for on page 1 of the Executive Summary and page 7 of the draft.

It is stated:

“Proposed Action includes the following construction elements:
- Removal of a residential home, associated outbuildings, and fences”

And again at Page 7 :

“Residential buildings (houses, barn, out-buildings), cattle grates, and fences would be removed from the CSR project site as part of the initial construction activities. The area where the buildings are located would be used as a staging and stockpile area for the duration of construction.

More details are given later in the draft at pp. 17,

The Corps evaluated restoration opportunities in terms of maximizing restoration potential across the CSR project site. The project site was divided into four quadrants and four conceptual designs were evaluated for potential project benefits and impacts, including the No Action and Proposed Action described below. All conceptual designs included construction of a setback levee and adjoining seepage berms to minimize adverse impacts to adjacent properties, modifications to the existing levee to reconnect the Columbia River to the floodplain, as well as removal of the residential buildings, outbuildings, cattle grates and fences lines. All alternatives incorporated aspects of the final proposed design to increase restoration potential. Page 17

But set forth on pages 42-43 the Draft says:

“Initial reviews of historic General Land Office and Donation Land Claim (DLC) maps, historic aerial photographs and historic background research into the area's history, coupled with reconnaissance-level pedestrian surveys conducted by Corps archaeologists in July 2015, revealed that an undetermined number of the standing, "above ground" structures (i.e. house, barn, various outbuildings) in the existing farm complex located immediately west of Tide Creek are likely more than 50 years old. Similarly, an undetermined number of historic linear features

(i.e. levees and berms, constructed drainages, irrigation channels, diversion canals with associated tide gates, fence lines, railroad grades, roads) are likely present in selected locations throughout the project area. These structures and features, if constructed more than 50 years ago, are considered Preliminary findings suggest that at least four cultural resources are located within the project area which may be considered potentially eligible for inclusion on the NRHP. These include the existing levee, which was constructed in 1942; the Peacher DLC farmstead, a farm complex of early-20th Century buildings and structures located immediately west of Tide Creek in the west-central portion of the project area; the John H. Jones DLC, a subsurface assemblage of early-20th Century homestead remains and debris located near the north-central portion of the project area; and an early-20th Century railroad grade stretching north-south along the project area's westside boundary (the Portland & Western Railroad). While each of the four historic site areas meet the 50-year-old 'rule of thumb' for eligibility to the NRHP, all require further evaluation and assessment to determine whether any retain significant historic qualities and meet any of the necessary criteria for NRHP eligibility. Those evaluations are expected to be completed by June 2016. An undetermined number of additional historic features and structures may also be present within the project area and require further assessment. Those assessments and evaluations are expected to be completed by June 2016."

A copy of part of the controlling law is found on page 67 where it is stated:

"6.19. Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance, 5 October 2009 This executive order requires that Federal agencies shall increase energy efficiency; measure, report and reduce their greenhouse gas emissions from direct and indirect activities; conserve and protect water resources through efficiency, reuse and storm-water management; eliminate waste, recycle and prevent pollution; leverage agency acquisitions to foster markets for sustainable technologies and environmentally preferable materials, products and services; design, construct, maintain and operate high performance sustainable buildings in sustainable locations; strengthen the vitality and livability of the communities in which federal facilities are located; and inform federal employees about and involve them in the achievement of these goals. "

The draft then goes on to say:

The proposed action is in compliance with this Order because all actions would be conducted in a manner as to prevent pollution and chemical spills by following BMPs.

That statement is self-serving and flies in the face of the actual facts. The Draft proposes to destroy sustainable buildings in sustainable locations and does not intend to preserve them. This statement just blows off more than 100 years !

Here is a table of the Columbia County Tax Assessor's 2015 list of buildings on the subject property, the dates the assessor believes they were built and her classification of the buildings. (Based upon the photographic records in these Comments I show that the buildings are much older than the Assessor lists)

	1	1	123	0312	1910	1890	Two story	1132
I	2	2	121	0312	1938	1920	One story	268
I	1	3	300	0312		1960	LEAN-TO	320
I	1	4	300	0312		1960	LOFT BARN	1260
I	1	5	300	0312		1970	GP BUILDING	2400
I	1	6	300	0312		1940	LOFT BARN	792
I	1	7	300	0312		1940	MULTI-PURPOSE SHED	375
I	1	8	300	0312	1988	1988	LEAN-TO	666
I	1	9	300	0312		1950	LEAN-TO	288
I	1	10	300	0312		1950	LOFT BARN	5568
I	1	11	300	0312		1930	MULTI-PURPOSE SHED	192
I	1	12	300	0312		1930	MULTI-PURPOSE SHED	126
I	1	13	300	0312		1950	LEAN-TO	480
I	1	14	300	0312		1950	FEEDER BARN	6960
I	1	15	300	0312		1950	GP BUILDING	512
I	1	16	300	0312		1970	MACHINE SHED	2625
I	1	17	300	0312		1970	MACHINE SHED	1275
I	1	18	300	0312		1990	MACHINE SHED	800
I	1	19	300	0312		1920	GP BUILDING	512
I	1	20	300	0312		1920	MULTI-PURPOSE SHED	416

Historic Barns

Restore Oregon says: "Agriculture has driven Oregon's economy and shaped its history since before the 1840s. With an estimated 11,400 barns built prior to 1960, Oregon needs to identify and protect those rural buildings, structures, and landscapes that define its agricultural heritage. The Restore Oregon board formed the Heritage Barn Task force in 2011 to lead its efforts in that field. They say:

" Barns are iconic, easily recognized structures that are common on Oregon farms and ranches. Barns are also utilitarian structures that are often outmoded on modern farms. Because they were built for very specific purposes, they are frequently difficult to repurpose in today's agricultural operations."

Then Restore Oregon quotes:

"Inside a barn is a whole universe, with its own time zone and climate and ecosystem, a shadowy world of swirling dust illuminated in tiger stripes by light shining through the cracks between the boards." — Carolyn Jourdan, *Heart in the Right Place*

The National Park Service of Department of the Interior of the United States on their web site says: <https://www.nps.gov/tps/how-to-preserve/briefs/20-barns.htm>

“From the days when Thomas Jefferson envisioned the new republic as a nation dependent on citizen farmers for its stability and its freedom, the family farm has been a vital image in the American consciousness. As the main structures of farms, barns evoke a sense of tradition and security, of closeness to the land and community with the people who built them.“Historic barns are preserved for a number of reasons. Some are so well built that they remain useful even after a hundred years or more. Many others are intimately connected with the families who built them and the surrounding communities. Others reflect developments in agricultural science or regional building types.

The Columbia County Assessor’s records includes a photo from above and 2 maps of the buildings on the Leppin property dated August 1990 and replaced it in 2011.

In the file are also pictures of the massive barn they call #9 and what I believe to be #2, the Horse barn.

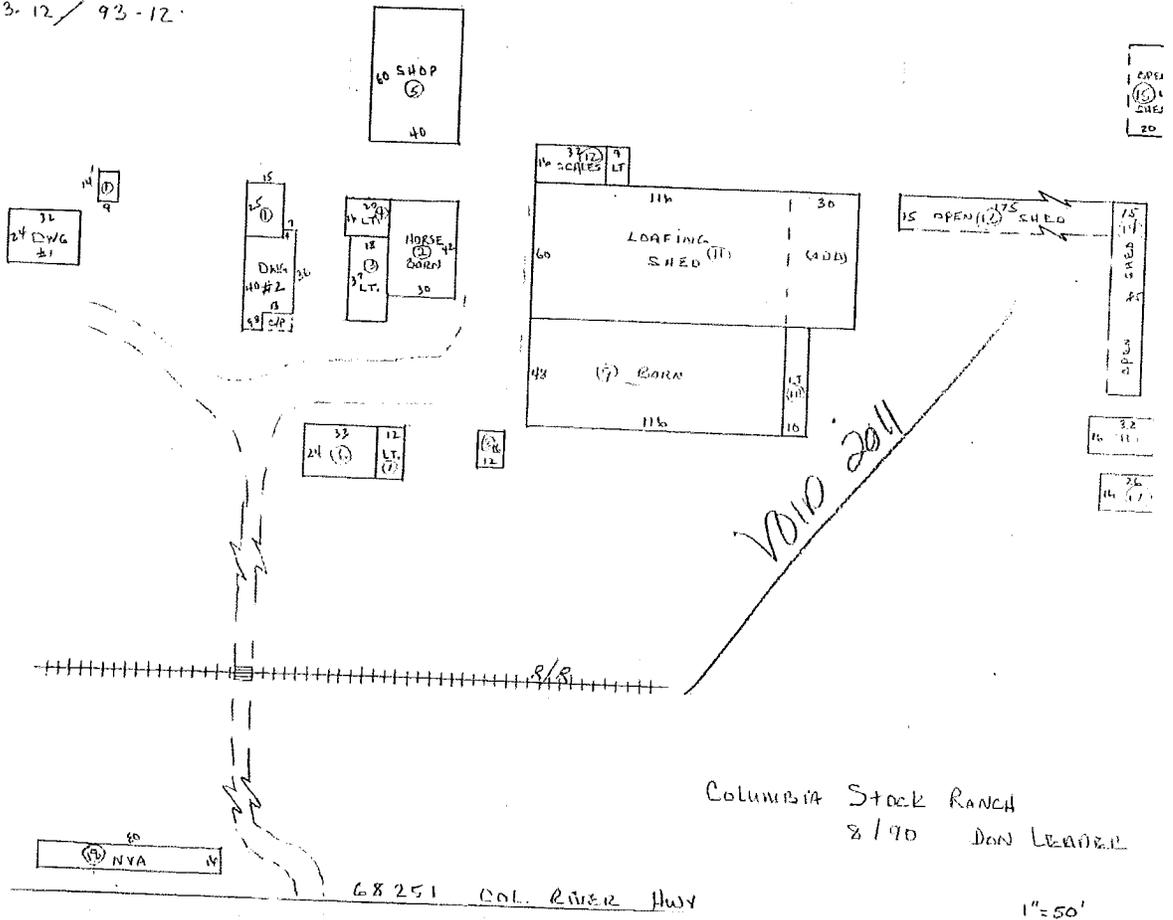
They indicate 17 buildings on the property and several of them are very old barns.

#2 is the “Horse Barn”. #9 is the “Barn” and #11 the “Loafing Shed” which I know that Arnold Leppin added to Barn #9 while he owned and farmed the property.



View from the air of the Leppin buildings with a clear view of the barns and outbuildings. The barns on the property date from at least the early 1900s . Photo located in the Columbia County Assessor's records of this property.

6-2-24 101
 3-12/93-12

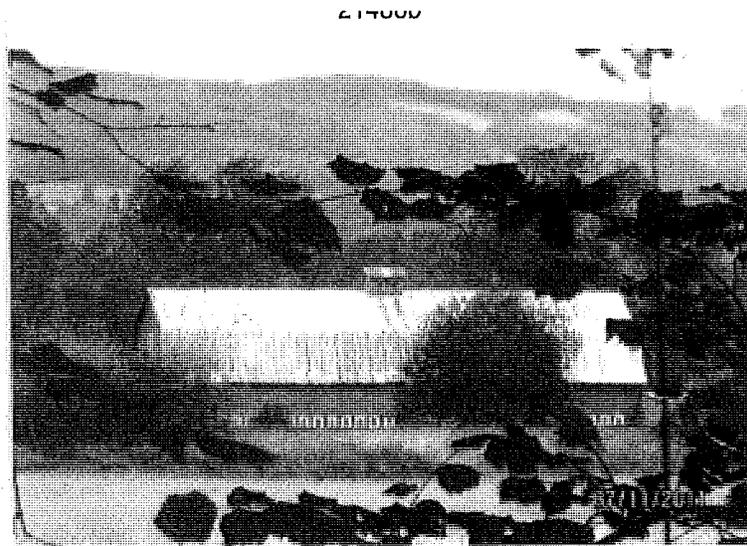


Columbia County Assessor Records contain this Map dated August, 1990 of Leppin Buildings. This map was replaced in 2011, but the buildings on the new county drawing of the location and sizes of the buildings appear the same.

On the next page are photos of the large and beautiful barn # 9. The first photo is a part of an exhibit presently being shown at the Columbia County Museum and the second is a photo taken in 2011 and in the Assessor's records. The older photo appears to be in the early part of the 1900s so it is clear that the barn n has been there for more than 50 years.



Photo from Columbia Historical Museum -Shows Barn #9 on the Leppin property, milk cans near the railroad loading dock and in the lower right side of picture the railroad line which ran alongside the large Barn # 9. Photo is clearly from the early 1900s. Below is #9 Barn today.



21488c

Barn # 9 makes the point about all the structures on the property. Based upon the photos included here from Columbia County's tax records and the Columbia Historical Museum I believe #9 Barn was in existence before 1920. I was on the property when I was a child in the 1940s. It was there then. It is massive, made of very large beams and is like a cathedral inside. Such proposed destruction is a waste of money, history, preservation of our heritage and should not be allowed.

As the National Park Service says:

" Just as many farmers built their barns before they built their houses, so too many farm families look to their old barns as links with their past. Old barns, furthermore, are often community landmarks and make the past present. Such buildings embody ethnic traditions and local customs; they reflect changing farming practices and advances in building technology. In the imagination they represent a whole way of life."

Horse Barn # 2 is in this photo along with the Grainery From county assessor's records. They are additional classic farm buildings that should not be destroyed.



21488b

The two-Story House

Note that the two-story house was built in 1890 or 1910, more than 105 years ago. Why should this all be destroyed. This was a full working ranch and upon it is the hotel which served the railroad passengers who traveled the railroad which ended on the Oregon side at Hunter's Landing. At one time the railroad ferries which hauled train passengers from Hunter's Landing (which was at the end of Sand Island and I believe was at the location of the Leppin property) from the Columbia River used this to dock, and the hotel housed passengers who travelled across the river. Such important historical places should not be destroyed and used for a "staging area" to shovel and push dirt around, including into the Columbia River. The original doors from the hotel were in the loft of one of the buildings and I believe they are still there.

These buildings are vital and important to understand the history of this community and a century of farming in the area. They were built before the turn of the century and in the 1920s, 1930s, 1940s, 1950s, 1960s, 1970s, and 1988 and 1990. Why should this visually vital and rich historical information be lost to our heritage and future generations? They all should be preserved. Once gone - gone

Homes in Columbia County, Oregon which are on the National Registry of Historic Places include the Caples house and the Cox House. The details about these are interesting since the Columbia Stock ranch main house is as old or older than the ones detailed from the National Registry as follows:

Caples, Dr. Charles G. and Lucinda McBride, Farmstead

added 2005 - - #05001060)

Also known as **Caples House DAR Museum**

925 First St. , Columbia City

Historic Significance: Person, Event

Historic Person: Caples, Dr. Charles G.

Significant Year: 1906, 1870

Area of Significance: Exploration/Settlement, Health/Medicine

Period of Significance: 1900-1924, 1875-1899, 1850-1874

Owner: **Private**

Historic Function: Agriculture/Subsistence, Domestic, Health Care

Historic Sub-function: Agricultural Outbuildings, Medical Business/Office, Secondary Structure, Single Dwelling

Current Function: Recreation And Culture

Current Sub-function: Museum

Cox-Williams House (added 1982 - - 7)
280 S. 1st St. , St. Helens

Historic Significance: Architecture/Engineering

Architect, builder, or engineer: George, Arthur

Architectural Style: Italianate, Shingle Style

Area of Significance: Architecture

Period of Significance: 1875-1899

Owner: **Private**

Historic Function: Domestic

Historic Sub-function: Multiple Dwelling, Single Dwelling

Current Function: Domestic

Other Historical Significance of the Site:

The "Leppin" Property where the Hunter's Landing, also known historically as Enterprise Landing. Hunters was the railroad ferry site on the Oregon side of the Columbia River and was also the site of the first post office in the area called "Hunters", which was established May 29, 1888.¹ Hunters was a location about two miles (3 km) south of present-day Goble, and was soon abandoned by the Northern Pacific Railroad in favor of a new ferry slip at Goble. There is no good record of when the move was made, but the Hunters post office was closed in October 1893, and Goble was platted in 1891. Hunter's Landing was the end of the railroad in Oregon. The rest of the trip was taken by ferry to Kalama and then on to Tacoma.

According to Wikipedia the history of the railroad was:

The history of the area begins with the selection of Kalama, Washington, as the beginning point for the construction of the Pacific Division of the Northern Pacific Railroad in 1870. At least by 1879, there was a landing on the Oregon side of the Columbia River across from Kalama known as Enterprise Landing.¹ Reuben, which is a post office name assigned to the location when a post office was sought in 1890 and it was found that the name "Enterprise" was already taken. The physical location is given to be about a mile south of the present day Goble. Reuben was named for the brother of the first postmaster, Reuben R. Foster. Scheduled Rail service of the Northern Pacific Railway from Tacoma to Kalama began on January 5, 1874. It connected to regular riverboat traffic on the

Columbia River. However the Northern Pacific Railroad was chartered to construct transcontinental railroad and telegraph lines between Lake Superior and Puget Sound and completing the connection required a Portland to Kalama route. In 1877, Oregon Senator John Mitchell sponsored legislation calling for the Northern Pacific to forfeit 7,000,000 acres (28,000 km²) of land grants unless they completed a line to Kalama "as far as practicable along the Oregon side of the Columbia River". The bill didn't pass congress, but on September 8, 1883, the Last spike was driven at Gold Creek, Montana to close the gap in the Rocky Mountain Division section of the Northern Pacific Railroad. A special train celebrating the opening of the transcontinental line arrived in Tacoma on September 13, 1883, which had traveled over the Portland-Hunters line. The Train Ferry Tacoma would go in service the following year.

Hunters, being the railroad ferry site, was also the site of the first post office in the area called "Hunters", which was established May 29, 1888. Hunters was a location about two miles (3 km) south of present-day Goble, and was soon abandoned by the Northern Pacific Railroad in favor of a new ferry slip at Goble. There is no good record of when the move was made, but the Hunters post office was closed to Reuben in October 1893 and Goble was platted in 1891.

What follows is a copy of the Northern Pacific Railroad No 7A Time Schedule to take effect at 2:30 a.m. Sunday January 17, 1886 which shows the stops at Portland, Linnton, Holbrook, Scappoose, Warren, Milton, Columbia, Deer Island, **HUNTERS**, and Kalama.

This schedule lists Deer Island, Hunters and then Kalama as the stations along the way in January, 1886. This was once the location of a small community called Hunters and a ferry terminal for the Northern Pacific Railroad. Hunters Station was No. 1926 on the line and the next station was Kalama Washington.

NORTHERN PACIFIC RAILROAD.

PACIFIC AND CASCADE DIVISIONS.

NO. 7A TIME SCHEDULE NO. 7A

To Take Effect at 2.30 O'clock A. M.,

SUNDAY, JANUARY 17, 1886.

For the government of Employes only. The Company reserves the right to vary therefrom at pleasure. Be positive that you have the current card, and destroy all previous numbers. Read carefully the Special Rules, and always have for reference a copy of the Transportation Rules.

T. F. OAKES,
Vice-Pres't and Gen'l Manager.

J. M. BUCKLEY,
Ass't General Manager.

PACIFIC DIVISION.

South Bound.

Pacific, or 120th Meridian Time One Hour Slower than Mountain, or 105th Meridian Time.

STATIONS.	MILES FROM PORTLAND.	CAPACITY OF SEATING IN CARS.	PASSENGER. No. 2.		FREIGHT. No. 16.	
			First Class.	Second Class.		
† Portland AR.		97	ar 2.30 pm	ar 5.25 pm		
Linnton * 7.7	7.7	44	2.05	4.55		
Holbrook * 5.2	12.9					
Scappoose * 6.4	19.3	43	1.35	4.05		
Warren * 5.1	24.4	43	1.19	3.40		
Milton * 3.4	27.8					
† Columbia 3.2	31.0	42	1.00	3.11		
Dcer Island * 2.0	33.0					
† Hunters 4.6	37.6	106	12.40 pm mtl	2.40		
† Kalama 2.6	40.2	150	11.55	lv { 1.25 mt 1 ar { 1.15		
Carrolls 3.5	44.3					
Monticello * 1.7	48.0					
Wallaces 3.2	49.7					
Cowlitz * 6.1	50.9	17	11.29	12.20 pm		
Stockport * 3.7	57.0					
Silver Lake 7.3	60.7	24	11.04	11.25		
Olequa 3.3	68.0	26	10.45 pass 16	lv } 10.45 2 pass ar } 10.35		
Sopnah * 2.6	71.3					
Mill Switch * 2.9	73.9	14	10.32	10.08		
† Whilock 6.4	76.8	30	10.25 mt 15	9.45 mt 15		
Napavine * 4.7	83.2	17	10.07	9.10		
Newaukum 2.4	87.9	33	9.55	8.46		
† Chehalis 3.9	90.8	36	9.50	8.33		
Centralia 5.5	94.2	26	9.40	8.12		
Skookum Chuck * 1.4	99.7	35	9.27	7.45		
Seato * 4.9	101.1	2	9.22	7.35		
† Tenino 9.1	106	25	lv } 9.10 ar } 9.00	lv } 7.10 ar } 7.00		
Rainier * 4.5	115.1					
Yelm Prairie 6.2	119.6	26	8.25	5.54		
Media * 5.4	125.8	15	8.10	5.25		
Hillhurst * 5.1	131.2					
Lakeview 7.7	136.8	26	7.45	4.34		
Pacific Ave. 1.0	144		7.20	3.55		
† Tacoma LV.	145.2	250	lv 7.10 am	lv 3.45 am		

* FLAG STATIONS.

Speed of all trains within yard limits must not exceed 6 miles per hour.
 All trains on this card will carry passengers.
 Engineers of all trains not on schedule must sound a long blast of the whistle before approaching curves, where the view is obstructed, to warn trackmen and others of the approaching train.
 The Automatic Brakes and Safety Chains must in all cases be used on inclines at Columbia River transfer.
 All trains will take their date from Portland and Tacoma.
 All trains must register at Portland and Tacoma.

OTIS SPRAGUE, Superintendent.

3.

DESTRUCTION OF DEER ISLAND

DRAINAGE DISTRICT BOUNDARY:

The proposed levee splits the district, The district will lose about 400 acres from its present boundaries, it creates a disunity in the district and cuts down membership, it has financial impacts that cannot yet be imagined, it denigrates of the uses the property in the dike have historically been used for, it causes less participation in the goals of the district, it increases the likelihood of flooding of the district and damage to the other owners' property. If this proposal is to be allowed the district needs to be financially compensated for its losses, and the equipment, pumps, and hardware of the district and the levees need to be made higher to protect the rest of the district.

IMPACTS

The Deer Island Drainage Improvement Company

The Deer Island Drainage Improvement Company has been in operation since the dikes were installed to control flooding of the lands along the river. The lands in the district and the ownership and membership of the District are show on the map on page 2 of these comments. The effects of the proposal would be dramatic upon the District. See the letter the Company dated May 20, 2016 setting forth some of their many concerns.

First, the District boundary would be cut in 2, with over 400 acres taken out of the District. The District relies upon the acreage within it to pay for the costs of maintenance of equipment and preventing flooding and pumping the water from the area back into the Columbia River.

Second, the District would lose part of its revenue without any indication of compensation for these losses in the future.

Third, the proposal increases the likelihood of the other properties in Map, page 2 being flooded. There have been several severe events in the past 20 years that have impacted the other members' properties.

Fourth, the proposal divides up a community of interest which has been long-standing and more than 80 years in effect.

At the present time the District's revenues are \$816.00 from this property. Removal of this property would shift the burden of the taxes to support the district to the other members of the district. A copy of the Real Property Tax Statement for 2015-2016 is in the next section of this document .

The Proponent does not have the approval of the Deer Island Drainage Improvement Company also known as the Deer Island Diking District and the Deer Island Drainage District. It sent the following letter about its concerns and as a voting member of this company I approve of the contents of this letter and attending the meeting in which the concerns and comments were discussed.

DEER ISLAND DRAINAGE IMPROVEMENT COMPANY

230 Columbia Boulevard

Telephone 503-397-2141

Post Office Box 656

Chase Christensen, President

Facsimile 503-397-2144

Saint Helens, Oregon 97051

David Brian Williamson, Secretary/Treasurer

williamsonlaw@comcast.net

May 20, 2016

U.S. Army Corps of Engineer District, Portland
Attn: CENWP-PM-E / Kristine Lightner
PO Box 2946
Portland, OR 97208-2946

Re: Project CENWP-PM-E-16-03
Columbia Stock Ranch Project
Deer Island Drainage Improvement Company
Comments on proposed Project

Dear Sir or Madam:

Deer Island Drainage Improvement Company ("the Company" or "DIDICo") is drainage improvement company organized under Oregon Revised Statutes Chapter 554 for the purpose of providing flood control, drainage and irrigation water for the lands within its boundary. It is a successor to the Deer Island Drainage District which was organized under ORS Chapter 547, under which the levees, canals and other improvements were built.

Deer Island Drainage Improvement Company is a directly interested party to the proposed habitat restoration project located on the Columbia Stock Ranch (USCACE project CENWP-PM-E-16-03). The Company controls and maintains the current system of levees and drainage control structures within DIDICo. The Company is responsible for the control of water on approximately 3670 acres of which the Columbia Stock Ranch includes 437 of those acres. This proposed project is going to change the overall makeup and design of DIDICo infrastructure and operations. Before Deer Island Drainage Improvement Company will be able to sign off on the proposed changes there are some issues that will need to be addressed.

The Deer Island Drainage Improvement Company cannot consent to the proposed project to breach the levee at this time.

Here is some history of the Deer Island Flood Control Project and the Deer Island Drainage Improvement Company. Since the system was constructed in 1942 by The United States Army Corps of Engineers, it has performed very well. The levee system has held back every major Columbia River flood this region has experienced since 1942. During this time the Levee has sustained damages that would need to be repaired after the flooding event subsided but it has never failed. The high water DIDICO and its incorporated landowners have experienced have come from localized events of rain water and seepage. The major flooding events (as in 1996) have come from Tide Creek and Merrill creek runoff. These events are localized and originate within the Levee system and usually coincide with the Columbia River experiencing a high flow that closes the Company's system of gravity drainage gates and culverts. When this occurs the only means that Company has to vacate the water is through a pumping station located at the north end of the Deer Island Slough. The DIDICO infrastructure for the most part is original, almost 75 years old. The pumps and electrical service were updated in 1999 but the pump house and pipes are all original.

Below are the issues the Deer Island Drainage Improvement Company requests to be observed and mitigated and are directly associated with the planned habitat restoration project on the Columbia Stock Ranch (USCACE project CENWP-PM-E-16-03). The proposal as presented would breach the existing levee and build a new section of levee to separate the Columbia Stock Ranch from the rest of the lands within the Company.

1: Compensation for lost revenue and habitat project expenses:

The Company anticipates no reduction in the cost of maintenance coupled with a reduced assessment base from which to fund that maintenance. In addition, the boundary change itself would impose significant costs upon the Company.

By statute DIDICO assesses the land within the Company boundaries for all of its revenue. This revenue is used for all Company expenses, including debt service, if any, levee, canal and equipment maintenance and pumping costs.

This raises the question of whether the lands outside the new levee would remain part of the Company. If that land is to be removed from the Company and no longer pay assessments, it will increase the financial burden on the owners of the property remaining within the boundary. Currently the Columbia Stock Ranch has an assessable acreage of 437 acres which accounts for 11.9% of the total assessable acreage and therefore 11.9% of the annual budget. Though not all the acres will fall

outside the Company after the habitat project is completed a majority will. The Company will also lose the assessable acreage associated with the railroad right of way which currently is owned and paid by the Oregon Department of Transportation. The Company would need some way to compensation for the lost revenue.

BPA is currently working with Columbia Land Trust, and the Diking District manager to ensure that costs are addressed in a manner that meets the needs of the Diking District's expenses.

2: Current Gravity Gate on Deer Island Slough to have increased capacity.

Of equal concern is the likelihood that episodic overflow from the old channel of Tide Creek would need to be pumped out of the protected lands, resulting in increased wear and tear on the pumps, as well as increased electric consumption. As mentioned earlier the Company receives its high water from local events like rainwater and seepage. The Company usually deals with these events by waiting and tolerating the high water until the gravity gates open and the water is vacated through the culverts. Pumping out the water is a last resort as it is very expensive.

Currently there are two gravity gates operating on the Northern part of the DIDICO. One is a 72" culvert on Deer Island Slough. The other is a 24" culvert on the Former Tide Creek Channel. Both these culverts are set to base depth of well below low Columbia River water levels (approximately 1-2' NAVD). There is also a manmade ditch that connects the Deer Island Slough and the former Tide Creek channel so during dewatering the two culverts can work in conjunction with each other. These two culverts are responsible for a vast majority of the dewatering of the DIDICO properties as they are located at the lowest elevations of the properties.

With the current USACE habitat design the 24" culvert is going to be removed from operation as it falls outside the proposed new levee. It is going to be replaced with a 6'x6' square fish-friendly tide gate on the new proposed Levi still in the former Tide Creek Channel. The current 72" culvert in Deer Island Slough and the new 6'x6' culvert are to be connected by a newly dug channel across the southern edge of the Columbia Stock Ranch Property.

The new connection channel between Deer Island Slough and the old Tide Creek Channel has a bottom elevation of 9' NAVD. This is approximately 6-7' higher than our current overall drainage level. This results in several changes to the drainage capacity of the DIDICO. The Tide Creek properties, which account for approximately 15% of the

after project Company acres, and are removed from the main drainage channel of the Deer Island Slough will have a large net increase in total gravity drainage capacity at all elevations. At the 9' elevation and above the entire Company will receive a large net increase in gravity drainage capacity. With the removal of the old tide gate and the cross channel elevation set at 9' the remaining properties within the Company (approximately 85%) will receive a net loss of drainage capacity and be solely reliant on one gravity culvert.

The proposed habitat project is located at river mile 76.5 where there are several feet of daily tidal fluctuation. During the spring freshet and winter high water these tidal flows and ebbs alone can open and close the gravity gates. Within these short windows is a very opportune time for the Company to dewater. And a decrease in net dewatering capacity below 9' NAVD is going to have a negative effect on the Company's ability to do just that. When the Columbia River begins to recede after a major flood event, it has a tendency to do so slowly. When it finally recedes to a level where the gravity gates within the Company will open it will have quicker dewatering above 9' NAVD and then rapidly slow down after 9' NAVD.

The only solution the Company can see to offset this net loss is dewatering capability is to upgrade the current 72" gravity gate culvert in Deer Island Slough to a larger capacity one or multiple smaller ones. Either design to result in a net gain of drainage capacity.

The issues and potential solutions related to the change in hydraulic connection between Tide Creek and Deer Island Slough are discussed in the response to your comment #3.

3: Upgrade to existing pumping capacity

The current Company pumps are located at the north end of the Deer Island Slough. The pumps are only run during normal high water events when levels within the Company raise to height that begins to flood landowners' basements and impedes the ability to conduct business related to agricultural activities. The pumps are always a last resort and are run as little as possible. Most normal operation of the pumps occurs during the spring freshet and also high rain and River levels coinciding.

During the construction of the Flood Control Project now part of the DIDICO; Tide and Merrill creeks were diverted within their own designated channel and routed to the south to the Columbia River. There are high banks on both sides of the channel for the distance from Highway 30 to the four gravity gates located on the Levi at the
Page - 31 - John A. Petersen Comments to Corps of Engineers Environment Assessment for the Columbia Stock Ranch Section 536, Ecosystem Restoration Project CEMW-PM-E-160-03 Dated 4-22-2016

very south end of the project. During the flood of 1996 the runoff from these two creeks quickly filled the designed in-bank storage reservoir and overflowed its banks and began to fill in the properties inside the levee system. The large amount of rainfall along with seepage added to the already large amount of water within the Company. With all the gravity gates within the entire DIDICO system closed due to the height of the Columbia River, the property inside the levee began filling with the flood waters. Pumping was the only way to remove the waters to buy enough time for the river to recede, and the water to begin to flow out thru the gravity gates before inundation to the structures within Company occurred. Six Chrisofouly pumps and tractors were brought in by the Company and multiple other pumps were brought in by the Army Corps of Engineers just to try and slow down the water rise.

The proposed habitat restoration project on the Columbia Stock Ranch is going to change the functions of the current water control design on the DIDICO property. The most negative of these is the loss of water storage capacity within DIDICO as is stated within the Environmental Assessment put for by the Army Corps of Engineers. What this means is that in the event of another "1996" flooding event the water level may rise faster and be higher than previously experienced; up to .5' per the Corp calculations. During normal year over year high water events the water levels within the Company are also going to be higher and rise faster. The only reduction in water the Company will see is that of the rainfall that would normally fall on the 437 acres that the Columbia Stock Ranch encompassed. The Company can assume to receive the same amount of flow from Tide and Merrill Creeks, along with the same amount of seepage along a relatively same length of levee.

.The Company cannot assume that the current or upgraded version of gravity gates and culverts can compensate for this increase in water or assume that they will remain open during high water. The only guaranteed way to remain neutral after the habitat project is to increase our pumping capacity. The Company in the last 15 years already paid a large amount of money to double our pumping capacity only to have it possible fall behind due to this proposed habitat project.

The major effect of the CSR project on adjacent lands is a decrease in storage volume within the Deer Island levee system. The adverse impacts of decreased storage volume include:

1. Likely increase in maximum water levels,
 - a. up to 0.5 feet for very large events where flooding is above 15 feet NAVD,
 - b. typical 0.1 to 0.3 feet for more common flooding events where water levels are between 11 feet and 15 feet NAVD

- c. up to 0.2 feet during typical wet periods not requiring pumping (up to 12 feet NAVD) for areas adjacent to open channels

2. Water levels likely to change more rapidly

These impacts may be experienced as higher flood waters than would have otherwise been experienced, wetter fields, more frequently flooded basements, potential increase in O&M costs due to increased number of pumping cycles and decreased time from safe pump operating levels to dry.

A second major effect is the modification of the hydraulic connections within Deer Island levees, including the connection between Tide Creek and Deer Island Slough, and the configuration of gravity outlets. Adverse impacts related to these include:

1. Decreased ability to lower Tide Creek water levels via Deer Island pump station for elevations below 9 feet NAVD
2. Decrease in gravity drainage capacity between elevations 9 feet and 7 feet NAVD

Besides the many benefits from the project as proposed (e.g. replacement of 70-year old levee, improvement of Tide Creek outlet, improvement in water quality and habitat in Tide Creek, etc.), there are a number of technical measures that could reduce and/or offset the adverse impacts of the project related to decreased storage volume. Increasing pump capacity by adding more pumps is the only stand-alone measure that can be implemented to completely address increase in water surface rise at the beginning of a flood and decreasing the maximum water level for a given high water event. An estimate based on simulations with the hydraulic model (used in the H&H analysis) suggests that the existing pump capacity would need to be doubled to achieve a no-rise outcome.

Other options that could be explored to combat the effects of decreased storage volume early during a flood include the following:

1. stand-alone, mobile pumps could be helpful in active flood fighting
2. monitoring equipment, alarm systems, and forecast training to help increase the efficiency of flood control operations
3. strategic use of the new fish-friendly gravity outlet to minimize interior water volume prior to rising flood waters
4. Maintenance or replacement of existing pump house
5. Backup generator to support pump operation in the case of power outage

Other options that could be explored to compensate for the increase in maximum water levels include the following:

1. Maintenance or replacement of existing Deer Island Slough outlet
2. Improvements to outlet capacity (e.g. installation of new side-hinge tide gate on existing 72-inch outlet in Deer Island Slough)

3. Improving conveyance capacity in existing drainage ditch network from Deer Island Stock Ranch (e.g. excavating channels to lower depth, widening channels, repairing/replacing/upgrading culverts, etc.)
4. Increasing post-event dewatering by adding a smaller pump that can be used to keep water levels low within Deer Island Slough to promote drainage, but not so low as to dry out the pump.
5. Adding resiliency to threatened structures (e.g. sealing basement, raising first floor elevation, etc.)

A potential solution to the issue of hydraulic connectivity between the Tide Creek and Deer Island Slough would be to lower the invert of the overflow channel such that a hydraulic connection is possible at lower elevations. An invert elevation set at 6 feet NAVD would be an improvement over the existing connection. This solution also increases the amount of low elevation storage, which is desirable for operating the pumps near the end of a high water event.

Lowering the invert of the overflow channel to below 7 feet preserves the existing connectivity to Tide Creek and the storage therein and reduces the degree that the CSR project is decreasing low elevation storage connected to the pump station; however, this is relatively small compared to the low elevation storage that is being removed from the system by the CSR project (the north field). An additional pump that is smaller than what the DIDIC currently has (or perhaps one with variable speed) would enable pumping for longer periods without stopping and starting pumps.

4: Deer Island Drainage Improvement Company to have full and sole control of new infrastructure

Currently the DIDICO has control of all water control structures within the Company. The Company requests that this is to continue.

The Company will especially be in total control of the proposed fish friendly tide gate located in the new Levi. After the project is completed there will be no other agency besides the Deer Island Drainage Improvement Company to have control of this tide gate.

The Company will also be in control of the new or upgraded pumps. It will be at the Company's sole discretion of when and how to run the pumps.

The Operations and Maintenance will be the responsibility of Bonneville Power Administration. BPA is currently exploring what agreements need to be in place to allow the Diking District to be in control of the new tide gate and any other new or existing pump.

CONCLUSION

A change of this magnitude should be referred to the landowners of the

Company for action at a special meeting, and may be required if a boundary change is anticipated. The Board of Directors cannot recommend approval unless provision is made for updating and upgrading the facilities and equipment of the Company to bring them up to current standards sufficient to meet and control reasonably anticipated high water events. In addition the issue of a potential boundary change with its expense and loss of revenue must be satisfactorily addressed.

The Company looks forward to cooperating with the Corps in addressing and resolving these issues.

Very truly yours,

DEER ISLAND DRAINAGE IMPROVEMENT COMPANY

Chase Christensen, President

=====

4.

DESTRUCTIVE TAX CONSEQUENCES

TO ALL TAXING DISTRICTS

The buildings are listed on the Columbia County Tax statement as worth \$223,480.00. It strikes a blow at several very important taxing districts. Other Districts which will have their tax revenues reduced by the destruction of the buildings and improvements are Columbia County general fund and 3 year levy for jail operations, Columbia 4H and Extension, Col 911 Communication District, Columbia Vector Control, Rainier, Cemetery, Port of St Helens, Columbia Soil and Water District, Columbia River Fire Department, CCDA – Colco Dev. Agency, and there are bonds to pay for Columbia County, the Fire Patrol, Fire Patrol Surcharge and the Deer Island Drainage District.

If the land is removed also because of a change in ownership to a tax-exempt owner, then another blow would be loss of revenue of valuation of an additional \$273,032.00 to the same entities.

REAL PROPERTY TAX STATEMENT
JULY 1, 2015 TO JUN 30, 2016
COLUMBIA COUNTY, OREGON
230 STRAND STREET
ST. HELENS, OR 97051

21488 - 1272

ACCOUNT NO:
21488

PROPERTY DESCRIPTION

CODE: 0312
MAP: 6N2W24-00-00101
ACRES: 486.99
SITUS: 68251 COLUMBIA RIVER HIGHWAY RAIN

21488 - 1272 - 005039 - 465560
COLUMBIA LAND TRUST
1351 OFFICERS' ROW
VANCOUVER, WA 98661

VALUES	LAST YEAR	THIS YEAR
REAL MARKET LAND	262,673	273,032
STRUCTURES	182,140	223,480
TOTAL RMV	444,813	496,512
TOTAL ASSESSED VALUE	327,451	337,272
EXEMPTIONS		0
NET TAXABLE:	327,451	337,272
TOTAL PROPERTY	5,062.62	4,810.44

NW REGIONAL ESD	49.07
RAINIER 13 SCHOOL	1,833.41
EDUCATION TOTAL:	1,882.48
COLUMBIA COUNTY	445.06
JAIL OPERATIONS - 3 YEAR LEVY	195.52
COLUMBIA 4H & EXTENSION	18.21
COL 9-1-1 COMM DISTR	179.26
COLUMBIA VECTOR	40.44
RAINIER CEMETERY	18.89
PORT OF ST HELENS	28.03
COLUMBIA SWCD	31.91
COLUMBIA RIVER FIRE	652.50
CCDA - COLCO DEV AGENCY	50.32
GENERAL GOVT TOTAL:	1,660.14
COLUMBIA COUNTY	83.10
FIRE PATROL	321.22
FIRE PATROL SURCHARGE	47.50
DEER ISLAND DRAINAGE	816.00
BONDS - OTHER TOTAL:	1,267.82

POTENTIAL ADDITIONAL TAX LIABILITY

If a mortgage company pays your taxes, This statement is for your records only.

To view Assessment and Tax data go to www.co.columbia.or.us

County offices closed every Friday due to funding shortfall

Questions: VALUATION (503) 397-2240 TAX PAYMENT (503) 397-0060

COL HEALTH DIST REFUND APPLIED -10.53
2015 - 2016 TAX (Before Discount) 4,799.91

PAYMENT OPTIONS			
Date Due	3% Option	2% Option	Trimester Option
11/16/15	4,655.60	3,132.29	1,603.48
02/16/16			1,603.48
05/16/16		1,603.48	1,603.48
Total	4,655.60	4,735.27	4,810.44

TOTAL DUE (After Discount and Pre-payments) 4,655.60

↑ Tear Here PLEASE RETURN THIS PORTION WITH YOUR PAYMENT Tear Here ↑
2015 - 2016 PROPERTY TAXES COLUMBIA COUNTY REAL ACCOUNT NO. 21488

PAYMENT OPTIONS	Discount	Date Due	Amount	Date Due	Amount	Date Due	Amount
Full Payment Enclosed	3%		4,655.60			05/16/16	
or 2/3 Payment Enclosed	2%	11/16/15	3,132.29			05/16/16	1,603.48
or 1/3 Payment Enclosed	0%	11/16/15	1,592.95	02/16/16	1,603.48	05/16/16	1,603.48

(UNPAID DELINQUENT TAX INCLUDED IN PAYMENT)

DISCOUNT IS LOST & INTEREST APPLIES AFTER DUE DATE

Mailing address change on back

Enter Payment Amount
\$

21488 - 1272 - 005039 - 465560
COLUMBIA LAND TRUST
1351 OFFICERS' ROW
VANCOUVER, WA 98661

MAKE PAYMENT TO:
COLUMBIA COUNTY TAX COLLECTOR
230 STRAND STREET
ST. HELENS, OR 97051

0510000214880000159295000031322900004655608

Conclusions:

I knew Arnold Leppin well. He was a neighbor and friend. He regularly got rock products from Tide Creek Rock, Inc. while he was farming the ranch that is the subject of the Draft proposal. I do not believe that he nor his predecessors in title would like this proposal.

- 1. The entire matter should be set for a series of public hearings in Columbia County, Oregon where taxing districts and concerned citizens can voice their comments about this proposal and resolutions can be developed for the good of all.**
- 2. The notice requirements of the federal laws for such a project may not have been complied with as I found that the public certainly was not aware of the implications of this project.**
- 3. Many more need to be made aware, particularly the United States Parks and any organization that is interested in historical preservation.**
- 4. The concerns of the Company and the owners of land most closely associated with this property need to be carefully addressed.**
- 5. A huge outlay of federal monies should not be spent in the name of “fish restoration” when the benefit likely is so small and the other damages created are so vast.**
- 6. Reimbursement should be planned for future losses as a result of this planned Project.**

Respectfully submitted:

John Allan Petersen

References:

Columbia County Assessor, Columbia County Courthouse, St Helens, Oregon 97951

Columbia County Museum, Association Courthouse, Columbia County, St Helens, Oregon
97051 curator@colcomuseum.org

ColumbiaRiverImages.com *Lewis & Clark's Columbia River - "200 Years Later" "Deer Island, Oregon"* ColumbiaRiverImages.com/about_this_site.html © 2016, Lyn Topinka, "**ColumbiaRiverImages.com**", All rights reserved.

Department of the Interior of the United States, The National Park Service of Department of the Interior of the United States web site <https://www.nps.gov/tps/how-to-preserve/briefs/20-barns.htm>

Jourdan,, Carolyn , *Heart in the Right Place* 2008 Algonquin Books.

"Inside a barn is a whole universe, with its own time zone and climate and ecosystem, a shadowy world of swirling dust illuminated in tiger stripes by light shining through the cracks between the boards." —

National Register of Historic Places

<http://www.nationalregisterofhistoricplaces.com/or/columbia/state.html>

Oregon Geographic Names (McArthur and McArthur, 2003), Merrill Creek was named after George Merrill who settled on Deer Island in 1851 and filed a Donation Land Claim. Merrill Creek rises in the hills west of Deer Island.

Restore Oregon <http://restoreoregon.org/heritage-barns/>

U.S. Bureau of Land Management's General Land Office (GLO) website (2012) shows George and Ann Merrill being granted title to 640.68 acres of T5N R1W, sections 4, 5, 8, 9, 16, and 17, on June 16, 1868 (1850 Oregon-Donation Act).

Wikipedia, the free encyclopedia https://en.wikipedia.org/wiki/Goble,_Oregon

Ed Rabinowe

RECEIVED

MAY 4 2016

May 21, 2016

District Engineer
U.S. Army Corps of Engineers
Attn: CENWP-PM-E/Joyce Casey
P.O. Box 2946, Portland, Oregon 97208-2946

Regarding the Draft Environmental Assessment for the Columbia Stock Ranch Section 536
Ecosystem Restoration Project:

I will not approve the CSR project as currently designed.

Our primary concern at Big Meadow Farm is the change in drainage elevations caused by the new fish friendly tide gate on the old Tide Creek channel. This tide gate will raise the water level in the channel. The channel drainage rate is poor now and this project will only make it worse. As the water level rises, the overflow first impacts my hayfield and second impacts the basement of our home. The project does not include any effort to improve flow, drainage, or base level in the impacted channel virtually guaranteeing that water level here would remain high through June. A wet hay field during June is unacceptable. A flooded basement is never acceptable.

Drainage within the Tide Creek basin can certainly be described as poor during high water conditions, when groundwater levels and seepage is high, and the Columbia River stage prevents drainage through the gravity outlets. Even at low flow conditions, the slope of Tide Creek is low, prone to stagnant water and ponding. This is not helped by the relatively small culvert currently located at the outlet of Tide Creek, a 24-inch, 250-foot-long culvert through the levee.

The proposed fish-friendly tide gate is designed to provide several functions beside opportunity for fish passage. The new tide gate (6'x6' concrete box culvert with side hinge gate) will allow Columbia River water to flush in and out of the remnant Tide Creek channel, allowing for nutrient exchange and fresh water mixing. This is generally expected to improve the water and habitat quality along the remnant Tide Creek.

The fish-friendly operation features of the tide gate are in operation only during low and normal flow levels, currently defined by elevations with channel banks, assumed to be 9 feet NAVD. Above this elevation, the gate closes and then function as a gravity outlet. In the event of forecasted flooding, the fish-friendly function of the tide gate can be disengaged at an even lower elevation so the water levels preceding a flood are actually lower than what they would be currently.

The proposed tide gate is also designed to provide increased relief for flooding conditions. The outlet capacity through the 6'x6' culvert is as much as 30 times greater than the existing outlet, able to drain more than 500 acre-feet of water during a single low tide cycle. This outlet capacity is more than enough to drain the entirety of water contained in the remnant Tide Creek channel and any connected ditches in a matter of hours. During winter floods, the expected effect of this new tide gate is interior water levels receding faster than they currently do, with slight decrease in the duration of high water level events.

The major effect of the CSR project on adjacent lands is a decrease in storage volume within the Deer Island levee system. The adverse impacts of decreased storage volume include:

1. Likely increase in maximum water levels,
 - a. up to 0.5 feet for very large events where flooding is above 15 feet NAVD,
 - b. typical 0.1 to 0.3 feet for more common flooding events where water levels are between 11 feet and 15 feet NAVD
 - c. up to 0.2 feet during typical wet periods not requiring pumping (up to 12 feet NAVD) for areas adjacent to open channels
2. Water levels likely to change more rapidly

These impacts may be experienced as higher flood waters than would have otherwise been experienced, wetter fields, more frequently flooded basements, potential increase in O&M costs due to increased number of pumping cycles and decreased time from safe pump operating levels to dry.

A second major effect is the modification of the hydraulic connections within Deer Island levees, including the connection between Tide Creek and Deer Island Slough, and the configuration of gravity outlets. Adverse impacts related to these include:

1. Decreased ability to lower Tide Creek water levels via Deer Island pump station for elevations below 9 feet NAVD
2. Decrease in gravity drainage capacity between elevations 9 feet and 7 feet NAVD

Besides the many benefits from the project as proposed (e.g. replacement of 70-year old levee, improvement of Tide Creek outlet, improvement in water quality and habitat in Tide Creek, etc.), there are a number of technical measures that could reduce and/or offset the adverse impacts of the project related to decreased storage volume. Increasing pump capacity by adding more pumps is the only stand-alone measure that can be implemented to completely address increase in water surface rise at the beginning of a flood and decreasing the maximum water level for a given high water event. An estimate based on simulations with the hydraulic model (used in the H&H analysis) suggests that the existing pump capacity would need to be doubled to achieve a no-rise outcome.

Other options that could be explored to combat the effects of decreased storage volume early during a flood include the following:

1. stand-alone, mobile pumps could be helpful in active flood fighting
2. monitoring equipment, alarm systems, and forecast training to help increase the efficiency of flood control operations
3. strategic use of the new fish-friendly gravity outlet to minimize interior water volume prior to rising flood waters
4. Maintenance or replacement of existing pump house
5. Backup generator to support pump operation in the case of power outage

Other options that could be explored to compensate for the increase in maximum water levels include the following:

1. Maintenance or replacement of existing Deer Island Slough outlet
2. Improvements to outlet capacity (e.g. installation of new side-hinge tide gate on existing 72-inch outlet in Deer Island Slough)
3. Improving conveyance capacity in existing drainage ditch network from Deer Island Stock Ranch (e.g. excavating channels to lower depth, widening channels, repairing/replacing/upgrading culverts, etc.)
4. Increasing post-event dewatering by adding a smaller pump that can be used to keep water levels low within Deer Island Slough to promote drainage, but not so low as to dry out the pump.

5. Adding resiliency to threatened structures (e.g. sealing basement, raising first floor elevation, etc.)

A potential solution to the issue of hydraulic connectivity between the Tide Creek and Deer Island Slough would be to lower the invert of the overflow channel such that a hydraulic connection is possible at lower elevations. An invert elevation set at 6 feet NAVD would be an improvement over the existing connection. This solution also increases the amount of low elevation storage, which is desirable for operating the pumps near the end of a high water event.

Lowering the invert of the overflow channel to below 7 feet preserves the existing connectivity to Tide Creek and the storage therein and reduces the degree that the CSR project is decreasing low elevation storage connected to the pump station; however, this is relatively small compared to the low elevation storage that is being removed from the system by the CSR project (the north field). An additional pump that is smaller than what the DIDIC currently has (or perhaps one with variable speed) would enable pumping for longer periods without stopping and starting pumps.

My second concern is the value of the entire project to the salmon. I have worked in fish conservation for the last 25 years and directly for salmon in this area since we moved here over 12 years ago. My range of experience and knowledge on this subject tells me that this project will have a random and minor effect on salmon smolts. There is no compelling reason for the smolts to follow current through the breaks in the dike and rest in the area proposed. A few fish will always stray in, but without an incoming flush of fresh water they will not seek out the area.

The CSR project was evaluated by the Expert Regional Technical Group (ERTG) identified through the NOAA BiOp and has received the highest score to date for habitat restoration in the lower Columbia River.

The aquatic benefit metric to be used to evaluate alternatives is modeled after what is used in the 2008 FCRPS BiOp. That BiOp defines restoration projects in the Columbia River Basin to be assigned with survival benefit units (SBUs) for salmonids by the Expert Regional Technical Group (ERTG). The ERTG was convened in response to Reasonable and Prudent Alternative (RPA) Action No. 37 in the BiOp. ERTG is a group comprised of independent scientists with extensive education, research, and functional knowledge of the estuarine ecosystem and the processes involved in ecosystem restoration. The ERTG developed and applies a methodology that estimates changes (or benefits) to juvenile salmon as a result of individual habitat restoration actions (ERTG 2010). The ERTG developed the SBU scoring methodology per the associated Columbia River Estuary (CRE) Recovery Plan Module developed by NMFS (2011). Because the CSR project area lies within the lower Columbia River estuary (for these purposes, the estuary's tidal influence extends from the mouth of the Columbia River up to Bonneville Dam), the PDT evaluated the project using ERTG scoring. The process used to assign SBU for ecosystem restoration projects in the lower Columbia River and estuary involves scoring for three factors, (1) certainty of success, (2) potential benefits for habitat access/opportunity, and (3) potential benefits for habitat capacity/quality. Scoring Criteria has been developed for each of these three metrics ranging in a score of 1 being the lowest to 5 being the highest score. The Scoring Criteria for each of the three factors evaluated is as follows:

Certainty of Success

5 -- Restoring a natural process or landforms; proven restoration method; highly likely to be self-maintaining; little to no risk of detrimental effects; highly manageable project complexity; minimal to no uncertainties regarding benefit to fish, minimal to no exotic/invasive species expected.

4 -- Largely restoring a natural process or landforms; proven restoration method; likely to be self-maintaining; minimal risk of detrimental effects; manageable project complexity; minimal uncertainties regarding benefit to fish; minimal exotic/invasive species expected.

3 – Partially restoring a natural process or landforms; proven restoration method; potentially self-maintaining; minimal risk of detrimental effects; manageable project complexity; moderate uncertainties regarding benefit to fish; exotic/invasive species expected.

2 – Partially restoring a natural process or landforms; poorly proven restoration method; unlikely to be self-maintaining; risk of detrimental effects; moderate project complexity; moderate uncertainties regarding benefit to fish; exotic/invasive species expected.

1 -- Unlikely to restore natural processes and landforms; unproven or risky restoration method; will likely require intervention to maintain; some risk of detrimental effects; excessive project complexity; excessive uncertainties regarding benefit to fish; exotic/invasive species expected.

Potential Benefit for Habitat Access/Opportunity

5 -- High connectivity of site for most species, populations and life history types coming down river at most water level stages; located in a mainstem area or a priority (TBD) reach; unencumbered access to site.

4 – Intermediate connectivity of site for most species, populations and life history types coming down river at most water level stages; located in a mainstem area or a priority (TBD) reach; unencumbered access to site.

3 – Intermediate connectivity; only accessible to a few life history types or species coming down river at most water level stages; located in a mainstem area, lower end of tributary or a priority (TBD) reach; moderate site access.

2 -- Intermediate to low connectivity; only accessible to specific life history types or one species coming down river at most water level stages; located in a mainstem area, lower end of tributary or a priority (TBD) reach; moderate site access.

1 – Low to no connectivity for any species, populations or life history types coming down river at most water level stages; located in areas far from main stem or lower ends of tributaries; poor site access.

Potential Benefit for Habitat Capacity/Quality (C/Q)

5 -- Maximum natural habitat complexity; well-developed natural disturbance regime and ecosystem functions; extensive channel and edge network and large wood; much prey resource production and export; no invasive species or nuisance predators; water quality/temperature quality excellent; site relatively large (> 100 acres).

4 – Very good natural habitat complexity; natural disturbance regime and ecosystem functions; very good channel and edge network and large wood; much prey resource production and export; minimal invasive species or nuisance predators; water quality/temperature quality very good; site moderate to large in size (30-100 ac)

3 -- Moderate habitat complexity; moderately-developed natural disturbance regime and ecosystem functions; some channel and edge network and large wood; moderate prey resource production and export; moderate potential invasive species or predators; water quality/temperature quality moderate; site intermediate in size (~30 to 100 acres).

2 – Moderate to low habitat complexity; moderately-developed natural disturbance regime and ecosystem functions; some channel and edge network and large wood; moderate to low prey resource production and export; moderate potential invasive species or predators; water quality/temperature quality moderate to low; site intermediate to small in size (≥30 acres).

1 – Low habitat complexity; poorly developed natural disturbance regime and ecosystem functions; poor channel and edge network and large wood; moderate to poor prey resource production and export;

moderate to high potential invasive species or predators; water quality/temperature poor; site small in size (<30 acres).

These criteria are used to score the specific Columbia River Estuary Actions (CRE) actions involved in ecosystem restoration in the lower Columbia river and estuary, specifically actions described in the Estuary Module the ESA Recovery Plan developed by the National Marine Fisheries Service. The actions include (but are not limited to) CRE-1.4 restore and maintain ecological benefits in riparian areas; CRE-9.4 restore degraded off-channel habitats, CRE-10.1/2/3 restore hydrological connections to floodplain habitats; and CRE-15.3 remove invasive species.

The three scoring factors are multiplied by the percent of habitat restored (CRE category) resulting in the SBU value for the alternative. This technique allows for comparing different alternatives performance of habitat access and diversity for salmonids to the costs associated with each alternative.

The above stated criteria are used to evaluate the ecological benefit, measured in SBUs. Specifically for this project the CRE is 10.1 breach or lower the elevation of dikes and levees to restore natural hydrological functions and restore degraded habitat. These habitat types are particularly scarce in the Columbia River due to development over time by levees. This CRE is important to the out-migration for juvenile salmon and provides critical resting rearing and feeding habitat. Additionally, these habitats provide a significant food source for stream type salmonids that reside in the main stem by the export of detritus developed within the floodplain wetland and prey sources associated with this exported detritus. This project will benefit 13 ESUs listed salmonids. Juvenile salmon are broken into two specific life history types, stream-type and ocean-type. Stream-type salmonids primarily use the river as a migration corridor from their natal streams to the estuary and ocean spending days to weeks of their life-cycle in the river before going out into the ocean, where they will spend 2 to 5 years prior to returning to their natal stream to spawn. The ocean-type salmonids move through the river system more slowly and can spend up to several months using floodplain wetland habitats as refugia from predators and for feeding and growth prior to ocean entry where they also can spend 2 to 5 years before returning to their natal streams to spawn.

The evaluation for CSR focused primarily on the hydrological reconnection. Alternatives were evaluated for both spatial and temporal access into 628 acres of resting, rearing, and feeding habitat for juvenile salmon while on their out-migration as well as other aquatic species.

For this project, the available acreage of habitat at Trestle Bay is defined by the Extreme High Water (EHW) elevation of 10.4 feet. The type of salmonids that may benefit from this action are ocean-type and stream-type juveniles; this report presents SBU scores for ocean-type juvenile salmonids unless otherwise noted.

The CSR product delivery team (PDT) examined the SBU calculation model to identify which variables may affect the SBU outputs. In general, four variables affect the overall SBU score for any given measure:

- Acreage: An increase in the wetted area increases a SBU score.
- Certainty of Success: An increase in the likelihood that actions taken under a certain measure increases the SBU score. For example, project with a low risk of not performing as expected would generate a higher SBU score.
- Potential for Access/Opportunity: The greater opportunity for salmonids to access the site and utilize the habitat would result in an increased SBU score.
- Potential Habitat Capacity: Greater quantities of habitat to support higher population capacities would result in a higher SBU score.

As outlined above, certain actions undertaken during a restoration project may increase or decrease SBU scores. In order to achieve the objectives of this project, focus was given to alternatives that increase Certainty of Success and Potential for Access/Opportunities scores. It was not anticipated that a project that achieved the objectives of this study would result in measurable changes to Acreage or Potential Habitat Capacity.

This is a large sum of taxpayer dollars to be spent on a few random fish. I think it is a waste and abuse of

funds. There are many alternatives for a more results oriented, cost effective project. This project meets legal requirement but falls short on results.

Sincerely,



7/21/16

RWCEIVED

MAY 14 2016

To the United States Corps of Engineers

From Lynn Tweedt-Rabinowe

RE: CENWP-PM-E-16-03, draft Environmental Assessment for Columbia Stock Ranch.

I have read the referenced document. At first blush, I would have to say that I am shocked at its tone. The preparer of the document, the Corp of Engineers, has always been in my experience a servant of our nation's need for civil engineering support and management of construction projects. I have a history as a consultant to the COE having published a newsletter for one of their Society of American Military Engineers chapters. I don't recall the group ever having an "agenda" to push. They walked a noble line, doing their job to the best their abilities. That's why I'm shocked.

Reading this document, I am clearly seeing an agenda on the part of the COE. I think their view of the project and presentation of the background material reflects that agenda and is colored. The entire document/project is tainted by a serious conflict of interest. The question I ask myself is, "Why would the COE care a hoot if BP opted for a No Action alternative?" Yet, they seem to.

Their concern is referenced at every possible turn by commentary that, for the COE, the No Action Alternative would result continuing negative impact on the subject property by virtue of heretofore incompetence, neglect, and utter carelessness.

Similarly the sponsor of the proposed project, Bonneville Power, has the same choice; take the Action Alternative immediately and seemingly make things right or do nothing and allow the incompetence, neglect, and carelessness to continue. Incompetence, neglect, and carelessness? By whom?

Apparently, if we are to believe the writing, the ranchers, agriculturists, miners, and farmers who have served as stewards of the subject land in the recent century have left it a grim wasteland, an area devoid of wildlife and vegetation. The only thing which might turn the situation around would be the COE's and BP's intervention. Following their logic through to the bitter end, the described superhero-like effort would best begin immediately if not sooner, lest our fates be sealed by the flatulence produced by grazing cattle which will contribute immeasurably to our ultimate doom from global warming.

I reply to all of this in the current vernacular, "Seriously?"

Granted, BP is in a tight spot because they labor under some court order to find places which might be transformed into shoreline resting spots for baby salmon making their way to the sea.

The way this document is written, BP can boast of this project as one which might not only save the fish, and goodness knows we all love the fish, but will reverse a the course of the terrible mistreatment of our Mother Earth perpetrated by unthoughtful agriculturists. Words such as 'restore' and 'natural' and 'recreation' are used. This kind of vocabulary is music to ears of environmental do-gooders and the wishful-thinking crowd, folks who share a view that agri-business and farming are bad industries, users and takers, giving nothing back to the land.

What the COE on behalf of BP doesn't say clearly is they plan to demolish a ranch homestead, breach dikes, take land out of agricultural use, displace herds of elk, destroy habitat for deer, birds, aquatic species, scrape down swaths of land, build more dikes, re-direct waterways, dump their unusable tailings in the Columbia River waterway, move railroads, build bridges, and so on and so forth. Perhaps I missed the 'recreational' opportunities part of the plan; odd, since BP has a current hunting ban on the subject property.

The outlined upheaval is all okay, however, because they will re-plant bushes and trees that are "native" to this area and get rid of the good forage grass that was obviously maliciously planted by evil ranchers. After all this is done, maybe the animals will return to enjoy the crappy native quack grass and "proper" scrub bushes, and in 50 years, so their timeline goes, BP and the COE will be able to learn if the fish actually did decide to rest for a time in the pre-selected motels for baby salmon. This is okay because we know that natural is better, right? It doesn't matter if it takes 5+ years of carefully sequenced destruction, scraping, digging and re-construction with unavoidable impact and upset to wildlife habitat because the end justifies the means?

I'll be kind and reply to this in the words of my neighbor and friend, "What a colossal waste of money!" I have other words of my own to describe such foolishness, but I'm thinking they have no place here. It might be helpful to note that I and my neighbors work tirelessly to provide improved habitats and feeding opportunities for birds, aquatic, and mammalian species that share our farm and ranchlands.

Yes, BP grossly overpaid for the stock ranch when they made the purchase several years back after the death of one of our local rancher pioneers. Whose fault is that? Certainly not mine, nor that of my neighbors here in Deer Island. In so doing, BP squandered a great deal of money paid over the years by those of us who pay electric bills. And, that's sad indeed.

Now they seem to want to proceed with this project and spend lots more money? Our own fish experts and those of who know the land here are confident that the project is misguided and doomed to failure for a variety of reasons. Nevertheless, even if the project isn't expected to create or improve the ecosystem for salmon, I am sure that BP will, if they decide on the Action Alternative, pay our Dike District and of agencies their proper due, reimburse the county for lost tax revenue and similar. Or, will they? I'm sure they will be good neighbors and not compromise our properties and livelihoods. Or, will they? I'm sure they will help recover our losses if we suffer a taking or damage as a result of their project. Or, will they?

What is proposed is a massive effort, time-consuming and resource-consuming. Yet there is no way of knowing if or when it might be successful. But, wait! We all know that in this enlightened era of progressive thinking, my concern doesn't matter. It is always safe to say that any well-intentioned effort, regardless of outcome, is a wonderful thing. Or, is it?

So we have a plan, drafted and developed by a conflicted group for a sponsor that is burdened to do something, nay anything, to make a good appearance. So we have a disruptive, invasive, destructive plan that is also at the center deeply insulting to our culture and history. It makes no sense to anyone. And, we're all okay with this?

I think not.

A handwritten signature in cursive script, appearing to read "Lynn and Ed Rabinowe". The signature is written in dark ink and is somewhat stylized.

Please see our responses to Mr. Rabinowe's letter dated May 21, 2106 (Enclosure 1). Additionally, BPA is currently working with Columbia Land Trust, and the Drainage District manager to ensure that costs are addressed in a manner that meets the needs of the Drainage District's expenses.

Lynn Tweedt-Rabinowe, along with her husband, Ed Rabinowe, purchased Big Meadow Farm over 12 years ago. Their home and property located within the diking district property. They operate a small agri-business raising hay, goats, sheep, and other livestock.

Lynn Tweedt-Rabinowe is a licensed kennel operator providing boarding/kenneling services for locals when they travel and need a home-away-from-home for their pets. She is a nationally recognized breeder/owner-handler of top quality Golden Retrievers and Wirehaired Pointing Griffons, maintaining small colonies of dogs at Big Meadow. Tweedt-Rabinowe is an AKC Breeder of Merit and a well-known contributor and spokesperson for numerous groups focusing on individual rights to keep, raise and enjoy animals.

Ed Rabinowe, is engineer and businessman who has owned and operated numerous successful enterprises in his career. His design-build, construction management firm and job shop activity frequently provided support for clients in the chemical, oil refinery, food products, and other industries. He has served as president of fishing enthusiast organizations and clubs including Diablo Valley Flyfishers and the Columbia County Coastal Conservation Association.

The Rabinowe family has tenants who have lived in a cabin home on the property for almost 10 years.

The Rabinowe family has no interest in moving their home and livelihoods. It is important to note that attempting to relocate a kennel operation would be a tremendous burden, if not an impossible undertaking.

Learn more about Big Meadow Farm at <http://www.citrine.net>

And, on Facebook, find Big Meadow Farm, Citrine Kennels – Golden Retrievers, and Citrine Kennels – Wirehaired Pointing Griffons.