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DEPARTMENT OF
WATER RESOURCES

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Attorneys for The Good Neighbors

STATE OF IDAHO

DEPARTMENT OF WATER RESOURCES

IN THE MATTER OF APPLICATION FOR TRANSFER 89232 IN THE NAME OF GOOD TIMBER RANCH, LLC

DECLARATION OF COUNSEL IN SUPPORT OF GOOD NEIGHBORS' MOTION TO STAY

I, Anna Trentadue, hereby swear under penalty of perjury as follows:

1. I am one of the attorneys for the Protestants (the "Good Neighbors") in this contested case and have personal knowledge of the issues discussed herein. I am competent to testify.

2. Attached hereto as **Exhibit A** is a true and correct copy of *Notice of intent to sue Good Timber Ranch LLC, Nathan Godfrey, Jared Smith, and the Jared Smith Revocable Living Trust over violations of the Clean Water Act and their Nationwide Permit #27 at Good Timber Ranch in Victor, Idaho* that was served upon Good Timber Ranch LLC, their registered agent Andrew Pierce with Cloud Peak Law LLC, the US Army Corps of Engineers, the United States Environmental Protection Agency, the Idaho Department of Environmental Quality, and the Idaho Department of Water Resources on May 28, 2025

3. Attached hereto as **Exhibit B** is a true and correct copy of *Good Neighbors' complaint and request to revoke Nationwide Permit 27 authorization for Good Timber Ranch NWW-2021-303-I02, under 33 CFR 330.5 for egregious noncompliance* was served to the US Army

Corps of Engineers, and cc'd to United States Environmental Protection Agency, the Idaho Department of Environmental Quality, the Idaho Department of Water Resources, and Teton County, Idaho on May 28, 2025.

4. Attached hereto as **Exhibit C** is a true and correct copy of Good Timber Ranch LLC joint application for permits, March 8, 2022.

5. Attached hereto as **Exhibit D** is a true and correct copy of Good Timber Ranch Nationwide Permit 27 authorization letter dated June 21, 2022.

6. Attached hereto as **Exhibit E** is a true and correct copy of a photo the July 23, 2024 Stop Work Order posted at Good Timber Ranch.

7. Attached hereto as **Exhibit F** is a true and correct copy of the email communication between legal counsel for Good Timber Ranch and the Good Neighbors May 12-13, 2025.

8. Attached hereto as **Exhibit G** is a true and correct copy of *Little Warm Creek Restoration Project Preliminary Estimate of Restoration Costs*, May 29, 2025 by Biota Research & Consulting Inc.

9. I declary under criminal penalty of the State of Idaho that the foregoing is true and correct.

Dated this 3rd day of June, 2025.

TRENTADUE LAW OFFICE PLLC.

BY_____

Anna Trentadue
Attorney for the Good Neighbors

CERTIFICATE OF SERVICE

I hereby certify that on this 3rd day of June, 2025, I served the foregoing documents on the persons below via email or as otherwise indicated:

BY 

Anna Trentadue
Attorney for the Good Neighbors

Idaho Department of Water Resources Eastern Region Office 900 North Skyline Drive, Suite A Idaho Falls, Idaho 83402-1718	christina.henman@idwr.idaho.gov file@idwr.idaho.gov
Good TimberRanch, LLC % Nathan Godfrey 1300 Good Timber Ranch Road Victor, Idaho 83455	nathan@coldwaterpaint.com
Georgie Stanley PO Box 928 Jackson, WY 83001 208-201-3625	georgiews4@gmail.com
Susan Miller 10435 S. 1750 W. Victor, Idaho 83455	suebmm11@gmail.com
Maguire Family Trust 10165 S. 2000 W. Victor, Idaho 83455	brianm@vertsolutions.com
Rafe and Ainsley Rivers 1566 W. 10250 S. Victor, Idaho 83455	raferivers@gmail.com
Gregory G. Collins 10435 S. 1750 W. Victor, Idaho 83455	gcollins@wyoming.com
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Exhibit A

TRENTADUE LAW OFFICE PLLC | PO BOX 1443 DRIGGS ID 83422 | 208-557-4846

May 28, 2025

Via certified mail, return receipt requested and Email

Good Timber Ranch, LLC
Nathan Godfrey, Manager and 5% owner
of Good Timber Ranch LLC
1300 Good Timber Ranch Road
Victor, Idaho 83455
nathan@coldewaterpaint.com

Cloud Peak Law, LLC
% Andrew Pierce
Agent for Good Timber Ranch LLC
1095 Sugar View Drive
Suite 500
Sheridan, WY 82801
reports@cloudpeaklaw.com

Jared Smith, Trustee
JARED SMITH
REVOCABLE LIVING TRUST
u/d/t/ June 9, 2020
95% Owner of Good Timber Ranch LLC
412 Olive Ave, suite 490
Huntington Beach, CA 92648
jared@totallysmith.com

Re: Notice of intent to sue Good Timber Ranch LLC, Nathan Godfrey, Jared Smith, and the Jared Smith Revocable Living Trust over violations of the Clean Water Act and their Nationwide Permit #27 at Good Timber Ranch in Victor, Idaho.

Dear Mr. Smith and Mr. Godfrey:

I represent a group of seven landowners abutting your property known as Good Timber Ranch in Victor, Idaho. The group includes owners of Snowdrift Farm, Canewater Farm, and three other abutting downstream property owners. For brevity, I'll refer to them as "the Good Neighbors." I have made an effort to ensure that both of you personally received this notice so you both will have the full understanding of the issues at stake here.

With this letter, the Good Neighbors hereby give you notice, pursuant to Section 505 of the Federal Water Pollution Control Act (CWA), 33 U.S.C. § 1365, of our intent to initiate a federal court lawsuit against you to enforce provisions of the CWA, 33 U.S.C. §§ 1311 & 1342. These violations stem from ongoing unauthorized discharges of pollutants into waters of the United States without a permit, and repeat violations of the terms and conditions of your Nationwide Permit #27 (NWP 27), issued by the U.S. Army Corps of Engineers (USACE).

You were issued NWP 27 on June 21, 2022 for construction of an artificial 3.94-acre lake ("Lake Washakie") and associated wetland restoration efforts. However, to date, 13.9 acres of land, including 1.8 acres of wetland, and 2,310 feet of spring creek stream channels are scraped away, permanently impacted, with inadequate, and failing Best Management Practices (BMPs). You dug, scraped, and removed these stream channels and wetlands over a period of approximately two weeks last summer, with no BMPs in place, sending a large bolus of sediment and debris down Little Warm Creek. Even though construction activity at Good Timber has been

halted since last August, fines and materials from last summer still continue to impact downstream reaches of Little Warm Creek, and your discharges leaving the Good Timber property still remain at or above the permitted impacts under Section 404 of the CWA. Little Warm Creek and the entire Warm Creek watershed **is also a 303(d) listed stream** that is impaired for cold water aquatic life, Salmonid spawning, and secondary contact recreation.[1] A foot of sediment now sits in the reaches of Little Warm Creek downstream from your property.[2]

Attached to this letter is a May 21, 2025 Memo from Biota Research & Consulting Inc. which details the high quality fens once located on Good Timber Ranch that were likely destroyed by your excavators last July, and the current non-compliant condition of Good Timber Ranch and ongoing discharges.[3] Biota has also documented an average increase of **4.2 NTUs** downstream from your property throughout this (unusually slow) spring run off. Unless you take the steps necessary to remedy the ongoing CWA violations and restore Little Warm Creek, we intend to file suit in the U.S. District Court for Idaho following the expiration of the 60-day statutory notice period, seeking injunctive relief, civil penalties, and other relief for any additional similar violations we identify subsequently. We are also poised to file a separate Trespass with Damages action to recover for the harm done to the Good Neighbors' properties.

Location of Violations

The violations are occurring and have occurred at Good Timber Ranch located at 1300 Good Timber Ranch Road, outside of Victor, Idaho 83455. Specifically, the affected waterbodies include Little Warm Creek, the Warm Creek watershed, Alder Spring Creek, Thoughtful Spring Creek, Forgotten Spring Creek, Big Spring Creek and all its associated wetlands and its associated wetlands, which are waters of the United States.

Parties Giving Notice

The Good Neighbors are downstream property and farm owners, whose land has been physically damaged by the ongoing downstream discharges caused by Good Timber's noncompliant scraping, bulldozing and lack of effective BMPs. Their full names and addresses are as follows:

Sue Miller & Gregory Collins
Owners of Snowdrift Farm
10435 South 1750 West
Victor, Idaho 83455
suebemm11@gmail.com
gcollins@wyoming.com

Rafe & Ansley Rivers
Owners of Canewater Farm
1566 West 10250 South
Victor, Idaho 83455
raferivers@gmail.com
ansleywest@gmail.com

[1] Warm Creek - source to mouth Assessment Unit ID: ID17040204SK034_02 has been listed as 303(d) impaired in 2016, 2020, 2022, and 2024.
[2] Click to view photo and video documentation of ongoing sedimentation from May 2025.
[3] *See*, Attachment A to this letter: *Good Timber Ranch LLC Site Condition Assessmen*t by BIOTA Research & Consulting Inc. dated May 21, 2025.

Georgie Stanley
PO Box 928
Jackson, Wyoming 83001
georgiews4@gmail.com

Brian & Elizabeth Maguire
10165 West 10250 South
Victor, Idaho 83455
brianm@vertsolutions.com
elizabethmaguire85@gmail.com

Collectively, the Good Neighbors own approximately 85 acres of land directly downstream from Good Timber Ranch. Some of them depend on their land for their livelihood. They have suffered harm and ongoing damages in the form of degraded streams and springs traversing their properties - namely Little Warm Creek which once ran clear and carried cutthroat trout through their lands and holding ponds, and eventually on to the Teton River. Now, these streams and interconnected holding ponds are full of deep sediment, debris, and absolutely choked with algae. The fish are gone. They have culinary wells that once ran clear which are now turbid and unusable - even for washing crops.

As for future harm, both Canewater Farm and Snowdrift Farm (click to view) are small organic farms sitting in the crosshairs for herbicide and pesticide contamination from Good Timber Ranch. Their crops directly abut the 13.9 acres of scraped earth on Good Timber Ranch that is now a veritable sea of invasive weeds. Unless swift action is taken by you to resolve this issue, it seems likely that reclamation of Good Timber will not be possible without the large-scale application of herbicides, which will then drift onto their crops, contaminating them.

Summary of Violations

You were issued a NWP 27 on June 21, 2022, and the purported justification for your project was "habitat restoration and enhancement" of what you claimed were degraded wetlands located onsite. Right from the start, the NWP 27 required Good Timber to comply with all state and local permitting requirements prior to any earthwork. Yet, Good Timber took all of the destructive actions documented in the Biota Memo without a Stream Channel Alteration Permit (I.C. § 42-3803), without a Teton County Grading and Excavation Permit (Teton County Land Development Code 5-2-1), and without the appropriate water rights to fill their Lake Washakie. (I.C. § 42-222(1)). The public record shows that county and state agents repeatedly reported in emails that Good Timber's representative Nathan Godfrey had told them he had these permits, when in fact he did not.

No BMP's were in place at the time of Good Timber's scraping and excavation work, sending a massive bolus of sediment and debris downstream, where it is still discharging and damaging Little Warm Creek and private property even today. On information and belief, you had no BMPs in place for at least 11 days last July, and very likely longer.[4] A July 26, 2024 field report from the Idaho Department of Environmental Quality detailed turbidity levels at 80FNU immediately downstream from you. Teton County Planner Torin Bjorklund reported on

[4] The Good Neighbors have video documentation from July 18, 2024 (click link to view) that shows extensive earthwork was already well underway at this time. DEQ Water Quality Analyst Cherie Windsor sent an email communication to USACE indicating that she inspected the newly placed BMPs on July 29, 2024.

that same day you denied county and DEQ field agents access to investigate:

> *The applicant and excavation owner called their attorney when we were on site. They suggested that they may be **"incriminating themselves"** by allowing us to take photos of the silt screens that were just installed. The waddles will be completed on Monday and they told us to come back then.*[5]

Minimal BMPs were observed the following Monday, July 29, 2024 by DEQ field agents. As demonstrated in the Biota Memo, these BMPs were ineffective to begin with, and have been neglected, left to break-down and degrade over the winter, allowing even more discharges. The sedimentation of Little Warm Creek is ongoing. Spring runoff has been unusually slow this year, and yet, there is still an average increase of **4.2 NTU**'s immediately downstream from the Good Timber property due to the lack of erosion control.

The Biota Memo also details the specific manner in which your excavators scraped, pushed, and bulldozed 13.9 acres, caused severe damage to 1.8 acres of wetland and obliterated 2,310ft spring creek stream channels, leaving them not able to be readily reclaimed. These are permanent impacts, far in excess of the treatment areas proposed and permitted in your March 8, 2022 Joint Application for Permits. You took an exceedingly blunt approach to this excavation work, with no attention towards your claimed goal of wetland enhancement. The end result of this overly aggressive excavation work is a swath of permanent impacts that far exceed the terms of your NWP 27. You permanently impacted **1.8 acres** of wetland when your Joint Application materials proposed a permanent impact of only **0.81 acres** of wetlands, of which 0.28 acres would be emergent wetlands and 0.53 acres would be scrub-shrub wetlands. You razed **2,310 ft** of spring creek stream channels when the permit allowed for **1,904 ft**. These are unacceptable overages that severely damaged surface water, a 303(d) listed stream, and abutting wetlands.

A Notice of Intent to Enforce was issued against Good Timber Ranch on August 6, 2024. However, a compliance determination letter was then issued on December 10, 2024.

Nature of CWA Violations

You are in violation of Sections 301(a) and 404 of the CWA, 33 U.S.C. §§ 1311(a) and 1344, by discharging pollutants into waters of the United States in excess of the limits and conditions of your NWP 27. Based on our many observations and available information, it appears that your activities at Good Timber Ranch which were purportedly for aquatic habitat restoration, establishment, and enhancement repeatedly violated the terms of your Nationwide Permit by causing permanent destructive impacts. These violations include, but are not limited to, the following:

1. **Excessive dredging and scraping:** The extensive and aggressive scraping and filling of Alder Spring Creek, Thoughtful Spring Creek, Forgotten Spring Creek, Big Spring Creek and all its associated wetlands have resulted in the fundamental alteration and

[5] July 26, 2025 Torin Bjorklund email to state and federal agencies.

degradation of the entire natural stream system, which collects and flows off Good Timber Ranch via Little Warm Creek. This is not a "minimal" effect; it is a profound and lasting environmental impact. 13.9 acres have been totally cleared away, completely destroying 2,310 ft of spring creek stream channels, and impacting 1.8 acres of wetland.

2. **Using heavy machinery in the riparian zone and stream channel with no BMPs:** The use of heavy machinery (e.g., excavators, bulldozers) within the riparian zone and directly in the wetted channel without adequate erosion control measures has resulted in substantial sediment runoff into Little Warm Creek. This sediment is a pollutant as defined by the CWA and is significantly degrading water quality throughout the Little Warm Creek system. Downstream reaches of Little Warm Creek now carry a foot of sediment on the bottom.

3. **Altering the natural flow of spring creek stream channels:** Your purported restoration activities have involved the total destruction of several stream channels, significantly altering the natural flow of Alder Spring Creek, Thoughtful Spring Creek, Forgotten Spring Creek, Big Spring Creek in violation of the requirement that NWP 27 activities result in “overall improvements to aquatic resources." There are no improvements here; the water resources have been totally destroyed.

4. **No establishment of appropriate native vegetation:** Your activities have not ensured the establishment of appropriate native vegetation to stabilize disturbed areas, leading to continued erosion and sedimentation, contrary to the objectives of NWP 27. Vegetation has not been preserved, or temporarily impacted to the minimum extent feasible. Instead, it has been totally scraped away. No effort was made to preserve or minimize impacts to wetlands and riparian vegetation.

5. **Ongoing sediment discharges into a 303(d) listed creek due to a lack of BMPs.** Your current BMPs and erosion control measures are inadequate or simply missing around the massive stockpiles of soils, fines, and debris throughout your property. Straw waddles and screens have quickly degraded and broken down due to a lack of maintenance. As a result you have created two types of unpermitted discharges into Little Warm Creek: (1) the bolus of sediment you released last summer which is still moving downstream, and (2) the ongoing discharges from Goods Timber Ranch due to lack of effective erosion control which average 4.2 NTUs higher than background levels.

These activities have resulted in the unauthorized discharge of pollutants, including but not limited to, dredged material, fill material, and sediment, into waters of the United States. Such discharges are unlawful without a valid Section 404 permit or if they exceed the conditions of an existing permit.

Failure to Comply with Specific NWP 27 Regional Conditions

The activities at Good Timber Ranch demonstrate an ongoing failure to comply with the region specific conditions of your permit. The NWP 27 permit is specifically designed to cover aquatic restoration and enhancement activities - but that is not what has happened here.

1. **Direct Channelization/Alteration in Violation of Regional Conditions C and D:** The explicit conversion of the onsite natural stream channels into a uniform, straightened ditch violates the spirit and letter of NWP 27 - which is intended to focus on restoration, not conversion or destruction of waterways. The documented destruction of natural riffle-pool sequences, channelization, and the filling of wetlands represent a loss of aquatic functions and services, directly contradicting the "net increases" requirement of NWP 27 and exceeding the minimal impact threshold.

2. **Lack of Effective Erosion and Sediment Controls in Violation of Regional Addition 12:** The continuous discharge of sediment into Little Warm Creek due to inadequate BMPs is a clear violation of Regional Addition 12 and constitutes unauthorized pollution under the CWA.

3. **Lack of Stabilization and Establishment of Native Vegetation in Violation of Regional Conditions B, H, and Regional Addition 12:** Good Timber's failure to effectively stabilize disturbed areas, preserve vegetation as much as possible, and timely establish native vegetation has ensured the ongoing erosion. Without these stabilizing measures in place, successful restoration is not possible, nor has it even been attempted here.

4. **Failure to Achieve Restoration Goals in Violation of Regional Condition B:** The activities at Good Timber have not resulted in "aquatic habitat that resembles an ecological reference" nor have they led to "net increases in aquatic resource functions and services." The work plan presented in Good Timbers' March 8, 2022 Joint Application for Permits laid out a plan for minimal impacts wherever possible. Instead, you have caused large losses of riparian and wetland habitat types. No restoration work has been done; your impacts are permanent.

Environmental Harm Caused Your Activities At Good Timber Ranch

The noncompliance at Good Timber Ranch has caused, and continues to cause, severe environmental harm, including:

1. **Loss of Functional Wetlands:** The scraping and filling of wetlands has eliminated critical filtration, flood storage, and wildlife habitat.

2. **Degradation of Stream Ecosystem:** Channelization of Big Spring Creek, combined with excessive continued sedimentation, and the dramatic alteration of flow regimes have reduced macroinvertebrate populations, and negatively impacted fish habitat.

3. **Impaired Water Quality:** Increased turbidity and sediment loads from the Good Timber property have significantly reduced water quality, affecting aquatic life and downstream users. The Good Neighbors' downstream reaches of Little Warm Creek have suffered significant sedimentation, loss of fish, and large algae blooms. This injury is ongoing as last summer's sedimentation continues to mobilize downstream, and the Good Timber

property is also still discharging. Moreover, both Canewater and Snowdrift are small organic farms sitting in the crosshairs for high levels of herbicide and pesticide contamination. Their crops directly abut the 13.9 acres of scraped earth on Good Timber Ranch that is now a veritable sea of invasive weeds. It seems likely that reclamation of Good Timber will not be possible without the large-scale application of herbicides that will drift onto their crops.

4. **Loss of Riparian Buffers:** The total removal of native riparian vegetation along 2,310 ft of spring creek stream channels exacerbates erosion, increases water temperatures, and diminishes terrestrial habitat value. Little Warm Creek is a 303(d) listed stream; these buffers were a last line of defense to reduce sedimentation and temperature increases.

Relief Requested

There are two potential tracks here: the relief the Good Neighbors ask from you in order to settle this dispute, versus the relief the Good Neighbors will seek if forced to bring suit in the Federal District Court of Idaho for violating the CWA coupled with a separate action for trespass, damages, attorney fees, and punitive damages.

Track 1: In order to settle this dispute outside of litigation, the Good Neighbors request the following, to be resolved in further detail, and formalized in a stipulated settlement agreement:

1. Remediate the entire Little Warm Creek watershed from Good Timber Ranch down through the Maguire property. Good Timber must develop and implement a comprehensive, USACE-approved plan for the full restoration and remediation of the entire Little Warm Creek system and adjacent wetlands. This plan must prioritize returning the affected areas to a natural, functioning condition, which means Good Timber must fix the habitat destruction, channelization, and sediment issues they have created. Biota is currently designing a comprehensive restoration plan which we will share with you as soon as it is finalized. Good Timber must stabilize and fix the entire system that it damaged.

2. No lake Washakie. This is a fragile, unique spring system that has been upended by your excavation work last summer. Implement a USACE-approve plan to restore the springs, wetlands and stream channels onsite.

3. Timely commit to organic remediation in order to not contaminate neighboring crops.

4. Move the proposed Godfrey Residence outside of the wetland setbacks.

5. Bring the proposed Godfrey Residence into compliance with Teton County's dark skies ordinances. (Teton County Land Development Code 5-8)

6. Plant a vegetation border between Good Timber Ranch, Canewater Farm, and Snowdrift Farm. Vegetation type and size can be determined on mutual agreement of all parties.

7. Pay for costs and attorney fees incurred by the Good Neighbors in issuing this complaint.

Track 2: On the other track, pursuant to 33 U.S.C. § 1365(a), the Good Neighbors can to seek the following relief in a civil action if the violations are not cured within sixty (60) days of your receipt of this notice:

1. A declaratory judgment that Good Timber Ranch LLC has violated and continues to violate the Clean Water Act.

2. Injunctive relief, including but not limited to, an order requiring Good Timber Ranch to immediately cease all unauthorized discharges and activities, and to undertake comprehensive restoration and remediation of the affected waters and wetlands to their original condition or to a condition that fully complies with the CWA and the intent of NWP 27.

3. The assessment of civil penalties against Good Timber Ranch LLC for each violation of the CWA, for each day of violation, as provided in 33 U.S.C. § 1319(d) and adjusted for inflation pursuant to 40 C.F.R. Part 19.

4. An order requiring Good Timber Ranch to pay all litigation costs, including reasonable attorneys' fees, expert witness fees, and other costs, incurred by the Good Neighbors in pursuing this enforcement action, pursuant to 33 U.S.C. § 1365(d).

5. Any other relief as the Court deems appropriate.

In addition to the federal CWA action, Good Neighbors are poised to promptly file a separate action against you for Civil Trespass and Civil Trespass with Damages to their properties. They will seek to recover not only the costs to remediate their property, attorneys fees, but they will also seek punitive damages in this case. We have co-counsel lined up and are readily prepared to take this step, if necessary. Pursuing this second track will delay all construction at Good Timber Ranch, potentially drag out this conflict for several more years, and cost significantly more money for you.

Conclusion

Mr. Smith and Mr. Godfrey, we believe that the ongoing damage to Little Warm Creek and the Good Neighbor's property is not going away unless you take action to resolve these issues. All of the ongoing harm was easily preventable here. It is time to turn your attention towards mitigating damages and fixing this mess - which is what the Good Neighbors desire most of all. We believe our claims are vetted and meritorious with a high potential for success - including and especially, an award of punitive damages against you given the extensive documentation that we have.

If, during the 60-day notice period, you would like to discuss any aspect of this notice or explore options for resolving the issues described herein, please contact me (contact info below). We do not presently intend to delay the filing of a lawsuit past the end of the 60-day notice period—even if settlement negotiations are in progress at that time. Any interest in such discussions should be communicated at your earliest possible convenience.

I look forward to hearing from you. Respectfully,

Anna R. Trentadue Esq.
Trentadue Law Office
anna@trentaduelawoffice.com
Attorney for the Good Neighbors

ATTACHMENTS:

A- *Good Timber Ranch LLC Site Condition Assessment* by BIOTA Research & Consulting Inc. dated May 21, 2025.

CC Via Certified Mail, Return Receipt Requested and Email:

James Werntz, Director
Idaho Operations
Environmental Protection Agency
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LTC Kathryn A Werback
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Jared Smith C/O
Agent for NEWBO Property
Management Inc.
330 North Brand Boulevard
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Glendale, CA 91203

MEMO FROM

P. O. Box 8578, 140 E. Broadway, Suite 23, Jackson, Wyoming 83002; voice: (307) 733-4216

To: **Anna Trentadue**

Date: **May 21, 2025**

Re: **Good Timber Ranch LLC Site Condition Assessment**

The content of this memo is intended to summarize the findings of multidisciplinary assessment efforts completed to evaluate recent development activities on the Good Timber Ranch LLC property in Teton County, Idaho.

REMOTE SENSING ANALYSES

Aerial imagery from multiple sources (Google imagery from July 2024 and drone imagery from May 2, 2025) was obtained and georeferenced for use in a Geographic Information System (GIS) platform. The area of site disturbance associated with recent vegetation removal, grading, stockpiling of materials was delineated (attached Sheets 1 and 2). The estimated locations of discrete springs, the alignments of spring creek stream channels, and the extents of pre-disturbance wetlands were also mapped in the GIS. The analysis indicates that recent grading activities impacted a total area of about 13.9 acres (attached Sheet 3). The analysis also indicates that recent grading activities impacted approximately 1.8 acres of wetlands, and recent grading, dewatering, and channel realignment activities have impacted approximately 2,310 ft of spring creek stream channels.

The applicant's Joint Application for Permit supporting materials suggest that the project proposed to permanently impact 0.81 acres of wetlands, of which 0.28 acres would be emergent wetlands and 0.53 acres would be scrub-shrub wetlands. The impacts document during the remote sensing analysis indicate approximately 1.8 acres of wetland impacts. The observed impacts are mostly associated with scraping, pushing material, bulldozing, and removing native soil and vegetation in these areas. These types of impacts are severe and are not expected to be able to be readily reclaimed.

The applicant's Joint Application for Permits supporting materials also suggest that the project proposed to permanently impact 1,904 ft of spring creek stream channels. The impacts documented during the remote sensing analysis indicate that approximately 2,310 ft of spring creek stream channels have been impacted, through a combination of bulldozing, pushing material, scraping, and diverting instream flows. (Note that the diversion of instream flows appears to have occurred only after initial construction activities were halted due to regulatory agency involvement.) The impacts to stream channels appear to be at or above the permitted impacts to Waters of the United States, which are regulated by the U.S. Army Corps under Section 404 of the Clean Waters Act. These impacts to stream channels have not been permitted through the Idaho Department of Water Resources in conjunction with the Idaho Stream Channel Protection Act.

IMPACTED WETLANDS

The wetlands that were impacted on the subject property were comprised of emergent, scrub-shrub and forested wetlands. The wetlands received hydrologic support from discrete springs and spring-fed creek channels. Based on Biota's experience with similar wetlands in the vicinity, the emergent wetlands appear to have been dominated by various native herbaceous species including Nebraska sedge (*Carex nebrascensis*), water sedge (*Carex aquatilis*), dagger-leaf rush (*Juncus ensifolius*), fowl mannagrass (*Glyceria striata*), fringed willow herb (*Epilobium ciliatum*), and yellow monkey flower (*Mimulus guttatus*). The scrub-shrub wetlands appear to have been dominated by willows (*Sali*x spp.), red osier dogwood (*Cornus sericea*), wild black currant (*Ribes americanum*), and mountain alder (*Alnus incana*) in the shrub layer, with an understory similar to that of the emergent wetlands. The forested wetlands appear to have included a quaking aspen overstory with a shrub and understory composition similar to that of the scrub-shrub wetlands.

The wetlands that existed on the subject property appear to have had a relatively high functional value, due to their landscape position, consistent hydrologic regime, and structurally complex vegetation communities. Spring-fed wetlands (or fens) are ecologically valuable and limited resources in Teton Valley. Fens are biodiversity hotspots that provide habitat for a diverse array of flora and fauna (including that are rare or endemic), perform many ecosystem services, and maintain perennial base flows for streams even during dry periods. An example of the pre-disturbance project area wetlands is depicted below (Figure 1).



Figure 1. Photographic example of pre-disturbance wetlands on the subject property.

The loss of functioning and diverse wetlands on the subject property, in addition to the dramatic alteration of the spring creek stream channel drainage pattern, have degraded aquatic resources in the headwaters of the Teton River drainage.

CONSTRUCTION BEST MANAGEMENT PRACTICES

Photographic documentation collected downstream of the Good Timber Ranch LLC property in the spring of 2025 characterize several aspects of both on-site and off-site ecological degradation and the continued lack of project area Best Management Practices (BMPs). These conditions include the apparent recent mobilization of fine sediments (silt) from the subject property to downstream surface water receiving areas, as evidenced by the presence of recently formed (unvegetated and loose) silt deposits in eddy and backwater areas of spring creek stream channels on downstream properties. A downstream on-channel water feature has widespread evidence of the recent mobilization and deposition of fine sediments, including a plume of silt that has recently formed where the spring creek enters the pond. The fine sediments that have been mobilized into spring creeks and water features downstream of the subject property are not contained or stabilized. These fine sediments will continue to be mobilized to receiving waters, especially during seasonal periods of elevated flows. The continued mobilization and dispersal of the fine sediments released from the Good Timber Ranch LLC property represent an ongoing and continuing discharge of fine sediments into Waters of the United States that is, and will continue to, adversely impact aquatic resources downstream of the subject property.

The noted inadequate BMPs include the reliance on dilapidated straw wattles that were installed to slow surface flows as they leave the subject property. Many of those straw wattles were in place over the course of the winter and are now disintegrated and inadequate. In addition, large expanses of disturbed ground (bare soils) and numerous large stockpiles of loose dirt located on the subject property lack any silt fence or other containment devices to prevent the additional mobilization of fine sediments into local waterways. Photographic documentation of these observations is presented below.



Figure 2. Photographic example of silt deposit in a backwater within downstream receiving spring creek stream channel, April 23, 2025.



Figure 3. Photographic example of silt deposit in an eddy within downstream receiving spring creek stream channel, April 23, 2025.



Figure 4. Photographic example of a deposited silt plume that has recently formed at the inlet to an on-channel water feature downstream of the subject property, May 20, 2025.



Figure 5. Photographic example of dilapidated straw wattles and the wooden stakes that used to hold them in place, at a location where surface waters exit the subject property within an altered spring creek stream channel, April 23, 2025.



Figure 6. Photographic example of dilapidated straw wattles and the wooden stakes that used to hold them in place, at a location where surface waters exit the subject property within an altered spring creek stream channel, April 23, 2025.



Figure 7. Photographic example of dilapidated straw wattles at a location where surface waters exit the subject property within an altered spring creek stream channel, April 23, 2025.



Figure 8. Photographic example of large expanse of disturbed ground and numerous stockpiles of loose soil that lack silt fence or other devices to prevent additional mobilization of fines from the subject property, April 23, 2025. The photograph also depicts some of the stockpiles of the woody vegetation that was removed from riparian and wetland areas.



Figure 9. Photographic example of a loose soil stockpile that lacks silt fence or other devices to prevent additional mobilization of fines from the subject property, April 23, 2025. Note the photograph does depict about 20 ft of straw wattles installed at the base of the soil stockpile, but that wattle does not encircle the stockpile nor does it extend along the entire down-gradient extents of the stockpile.



Figure 10. Photographic example of loose soil stockpiles in the background that lack silt fence or other devices to prevent additional mobilization of fines from the subject property, April 23, 2025.



Figure 11. Photographic example of loose soil stockpiles and extensive area of vegetation removal and site disturbance that lack silt fence or other devices to prevent additional mobilization of fines from the subject property, April 23, 2025.

TURBIDITY

The presence of increased turbidity is a clear indication that fine sediment has been mobilized within surface waters, and that downstream aquatic ecological integrity has been degraded. The Department of Environmental Quality (DEQ) and Teton County staff visited the subject property on July 26, 2024 while site disturbance was ongoing. A report generated by the DEQ in conjunction with that site visit and downstream field assessment documented increased surface water turbidity of up to as much as 80 Nephelometric Turbidity Units (NTUs). Idaho Water Quality Standards for permitted and authorized aquatic resource projects allow an increase in background turbidity of up to 25 NTUs for not more than 10 consecutive days. The Water Quality Standards also prohibit the increase of background turbidity by more than 50 NTUs at any time. A photograph depicting downstream significantly increased turbidity (of approximately 80 NTUs) on July 26, 2024 is presented below (Figure 12, courtesy of DEQ).



Figure 12. Photographic documentation of increased turbidity (of approximately 80 NTUs) on downstream property on July 26, 2024 (courtesy of DEQ).

Turbidity monitoring of surface water downstream of the subject property was performed on multiple occasions in the spring of 2025 using grab samples and a portable turbidity meter. Instantaneous turbidity readings were recorded during each analysis event. The complex network of spring creek stream channels that conveyed surface waters from the subject property to downstream receiving waters prior to site disturbance originated at approximately 20 distinct springs, all of which were located on the subject property. It was not possible to access these springs due to land ownership, so it was not possible to collect background turbidity measurements (or turbidity readings upstream of the expansive disturbance areas). However, a spring creek stream channel (referred to as the West Fork) located west of the disturbance area was sampled and used as a surrogate for background turbidity levels because it is in a similar landscape position and setting as the more easterly springs that discharge into the expansive disturbed areas and it was not visibly disturbed or impacted by the recent site alterations.

Monitoring documented turbidity downstream of the disturbance area that was consistently elevated over surrogate background levels. Turbidity increases during the 6 sample events ranged from 1.7 NTUs (minimum) to 9.7 NTUs (maximum) with an average increase of 4.2 NTUs. Turbidity monitoring data are depicted below in Table 1.

Table 1. Turbidity monitoring results from sample events in the spring of 2025.

Date / Time	Turbidity Reading, NTU	Sample Location	Net NTU Difference	Notes
4/24/2025 2:30	4.1	West Fork, above confluence with combined spring creek stream channel		Surrogate for background levels
4/24/2025 2:30	5.8	Combined spring Creek stream channel downstream of Good Timber Ranch LLC property	1.7	Downstream of disturbance area
5/1/2025 12:00	5.7	West Fork, above confluence with combined spring creek stream channel		Surrogate for background levels
5/1/2025 12:00	9.9	Combined spring Creek stream channel downstream of Good Timber Ranch LLC property	4.2	Downstream of disturbance area
5/6/2025 12:30	15.6	West Fork, above confluence with combined spring creek stream channel		Surrogate for background levels
5/6/2025 12:30	19.1	Combined spring Creek stream channel downstream of Good Timber Ranch LLC property	3.5	Downstream of disturbance area
5/7/2025 3:45	4.6	West Fork, above confluence with combined spring creek stream channel		Surrogate for background levels
5/7/2025 3:45	6.5	Combined spring Creek stream channel downstream of Good Timber Ranch LLC property	1.9	Downstream of disturbance area
5/18/2025 4:45	4.6	West Fork, above confluence with combined spring creek stream channel		Surrogate for background levels
5/18/2025 4:45	8.8	Combined spring Creek stream channel downstream of Good Timber Ranch LLC property	4.2	Downstream of disturbance area
5/20/2025 1:45	8.2	West Fork, above confluence with combined spring creek stream channel		Surrogate for background levels
5/20/2025 1:45	17.9	Combined spring Creek stream channel downstream of Good Timber Ranch LLC property	9.7	Downstream of disturbance area

SUMMARY

Remote sensing analysis indicates that recent earthwork activities on the Good Timber Ranch LLC property have disturbed approximately 13.9 acres of ground that previously supported functional wetlands and spring creek stream channels. Approximately 1.8 acres of wetlands were impacted, and approximately 2,310 ft of spring creek stream channel were impacted. The loss of functional emergent, scrub-shrub, and forested wetlands, and the alteration of the spring creek stream channel network, have impacted aquatic resources in the headwaters of the Teton River. Field observations indicate that fine sediments have been mobilized from the subject property and have impacted downstream aquatic resources. Field observations also indicate that BMPs are either dilapidated, inadequate, and absent on the subject property. Field monitoring of surface water turbidity suggests that downstream impacts may still be occurring even though active construction activities appear to be on hold on the subject property.



Legend

Impact Area (2025): Total 13.94-acres

research & consulting inc.

Biota

PO Box 8578. 140 E. Broadway, Suite 23 Jackson, WY 83002

IMPACT AREA OVERVIEW

GOOD TIMBER RANCH
TETON COUNTY, IDAHO

REV.	DATE	BY	DESC.
A	05-14-2025	CK	IMPACTS

UNITS: US FOOT

BASEMAP SOURCE:
DRONE IMAGERY May 2, 2025

SHEET 1

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Legend

Impact Area (2025): Total 13.94-acres

IMPACT AREA OVERVIEW

GOOD TIMBER RANCH
TETON COUNTY, IDAHO

research & consulting inc.
Biota
PO Box 8578. 140 E. Broadway, Suite 23 Jackson, WY 83002

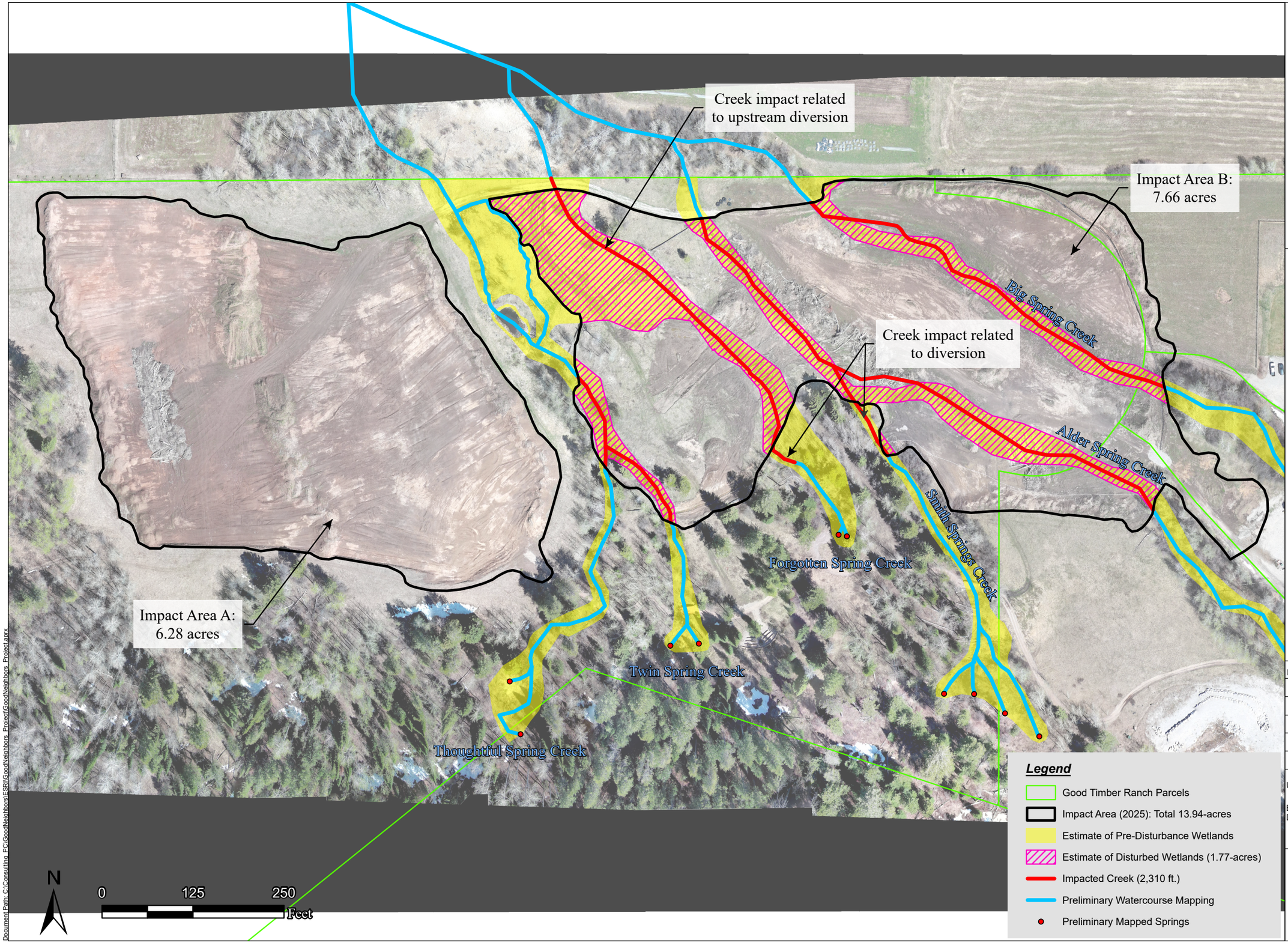
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UNITS: US FOOT

BASEMAP SOURCE:
2024 GOOGLE EARTH

SHEET 2

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research & consulting inc.
Biota
PO Box 8578. 140 E. Broadway, Suite 23 Jackson, WY 83002

GOOD TIMBER RANCH
IMPACT ANALYSIS

GOOD TIMBER RANCH
TETON COUNTY, IDAHO

REV.	DATE	BY	DESC.
A	05-14-2025	CK	IMPACTS

UNITS: US FOOT

BASEMAP SOURCE:
DRONE IMAGERY May 2, 2025

SHEET 3

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Exhibit B

TRENTADUE LAW OFFICE PLLC | PO BOX 1443 DRIGGS ID 83422 | 208-557-4846

May 28, 2025

Sent via Email

LTC Kathryn A Werback
US Army Corps of Engineers
Commander and District Engineer
Walla Walla District
Regulatory Division Office
720 E. Park Boulevard, Suite 245
Boise, Idaho 83712
Kathryn.A.Werback@usace.army.mil

James M. Joyner
US Army Corps of Engineers
Walla Walla District
Idaho Falls REgulatory Office
900 n. Skyline Road, Suite A
Idaho Falls, Idaho 83402
James.m.joyner@usace.army.mil

Re: Good Neighbors' complaint and request to revoke Nationwide Permit 27 authorization for Good Timber Ranch NWW-2021-303-I02, under 33 CFR 330.5 for egregious noncompliance.

Dear LTC Werback and Mr. Joyner,

This letter serves as a formal and urgent request, pursuant to the authority granted under 33 CFR 330.5, for the U.S. Army Corps of Engineers (USACE) to review and revoke the Nationwide Permit No. 27 (Aquatic Habitat Restoration, Establishment, and Enhancement Activities) held by Good Timber Ranch, located at 1300 Good Timber Ranch Road in Victor, Idaho 83422. The permit was issued on June 21, 2022 for construction of an artificial 3.94-acre lake ("Lake Washakie") and associated restoration efforts. However, to date, 13.9 acres of land, including 1.8 acres of wetland, and 2,310 feet of spring creek stream channels are scraped away, permanently impacted, with inadequate, and failing Best Management Practices (BMPs).

Even though construction activity at Good Timber has been halted since last August, sediment and debris from Good Timber's vast excavation work still continues to impact downstream reaches of Little Warm Creek, and their discharges remain at or above the permitted impacts to Waters of the United States, which are regulated by USACE under Section 404 of the Federal Water Pollution Control Act (CWA). Little Warm Creek and the entire Warm Creek watershed **is also a 303(d) listed stream** that is impaired for cold water aquatic life, Salmonid spawning, and secondary contact recreation.[1]

The purported justification for Good Timber's permit was "habitat restoration and enhancement" of what Good Timber claimed were degraded wetlands located onsite. This was a demonstrably false narrative. Attached to this letter is a May 21, 2025 Memo from Biota Research & Consulting Inc. which details the high quality fens once located on Good Timber Ranch that were likely destroyed by their excavators last July, and the current non-compliant

[1] Warm Creek - source to mouth Assessment Unit ID: ID17040204SK034_02 has been listed as 303(d) impaired in 2016, 2020, 2022, and 2024.

condition of Good Timber Ranch.[2] Biota has extensive onsite knowledge of the condition of this property prior to Good Timber Ranch LLC purchasing it.[3] Even though spring runoff has been unusually slow this year, Biota has still documented an average increase of **4.2 NTUs** downstream from Good Timber these past two months.

The activities undertaken at Good Timber Ranch last summer under the purported authority of NWP 27 constitute severe and ongoing noncompliance with the terms and conditions of the permit and are causing significant (rather than minimal) permanent adverse environmental effects to Waters of the United States. These actions are fundamentally contrary to the CWA and the very purpose of NWP 27. Even today, Good Timber continues to discharge into Waters of the United States, damaging downstream reaches of Little Warm Creek, which is already impaired for temperature and turbidity. Good Timber has demonstrated a blunt inability to manage the site. Remediation is needed as soon as possible.

Parties Giving Notice

The parties giving notice are downstream property and farm owners, who can collectively be referred to as "The Good Neighbors." All of the Good Neighbors own land that has been physically damaged by the ongoing downstream discharges caused by Good Timbers noncompliant scraping, bulldozing and lack of effective BMPs. Their full names and addresses are as follows:

Sue Miller & Gregory Collins
Owners of Snowdrift Farm
10435 South 1750 West
Victor, Idaho 83455
suebemm11@gmail.com
gcollins@wyoming.com

Rafe & Ansley Rivers
Owners of Canewater Farm
1566 West 10250 South
Victor, Idaho 83455
raferivers@gmail.com
ansleywest@gmail.com

Georgie Stanley
PO Box 928
Jackson, Wyoming 83001
georgiews4@gmail.com

Brian & Elizabeth Maguire
10165 West 10250 South
Victor, Idaho 83455
brianm@vertsolutions.com
elizabethmaguire85@gmail.com

In total, the Good Neighbors own approximately 85 acres of land directly downstream from Good Timber Ranch. Some of them depend on their land for their livelihood. They have suffered harm and ongoing damages in the form of degraded streams and springs traversing their properties - namely Little Warm Creek which once ran clear and carried cutthroat trout via Little Warm Creek, through their lands and holding ponds, and eventually on to the Teton River. Now, these streams and interconnected holding ponds are full of sediment, debris, and absolutely

[2] *See*, Attachment A to this letter: *Good Timber Ranch LLC Site Condition Assessmen*t by BIOTA Research & Consulting Inc. dated May 21, 2025.
[3] For a more detailed description of the high-quality wetlands that were present at Good Timber Ranch prior to last summer's scraping and excavation, please contact our consultant, Ryan Colyer, Principal at Biota Research & Consulting, Inc. He can give you an in-depth background summary. Rcolyer@biotaresearch.com Cell 208 201-3081

choked with algae. The fish are gone. They have culinary wells that once ran clear which are now turbid and unusable - even for washing crops.

As for future harm, both Canewater Farm (click view) and Snowdrift Farm (click to view) are small organic farms sitting in the crosshairs for herbicide and pesticide contamination. Their crops directly abut the 13.9 acres of scraped earth on Good Timber Ranch that is now a veritable sea of invasive weeds. It seems likely that reclamation of Good Timber will not be possible without the large-scale application of herbicides immediately abutting their crops unless swift action is taken by you to resolve this issue.

Basis for Revocation under 33 CFR 330.5

The provisions of 33 CFR 330.5(d) explicitly grant District Engineers (DE) the discretionary authority to modify, suspend, or revoke Good Timber's permit. When deciding whether to modify, suspend, or revoke an activity's authorization under an NWP, the DE should consider to the extent relevant and appropriate:

1. Changes in circumstances relating to the authorized activity since the NWP itself was issued or since the DE confirmed authorization under the NWP by written verification;
2. The continuing need for, or adequacy of, the specific conditions of the authorization;
3. Any significant objections to the authorization not previously considered;
4. Progress inspections of individual activities occurring under an NWP;
5. Cumulative adverse environmental effects resulting from activities occurring under the NWP;
6. The extent of the permittee's compliance with the terms and conditions of the NWPs;
7. Revisions to applicable statutory or regulatory authorities;
8. The extent to which asserting discretionary authority would adversely affect plans, investments, and actions the permittee has made or taken in reliance on the permit;
9. Other concerns for the environment, including the aquatic environment under the section 404(b)(1) Guidelines, and other relevant factors of the public interest.

Criteria 1, 2, 3, 5, and 6 are particularly relevant here. Right from the start, the NWP 27 required Good Timber to comply with all state and local permitting requirements prior to any earthwork. Yet, Good Timber took all of the destructive actions documented in the Biota Memo without a Stream Channel Alteration Permit (I.C. § 42-3803), without a Teton County Grading and Excavation Permit (Teton County Land Development Code 5-2-1), and without the appropriate water rights to fill their Lake Washakie. (I.C. § 42-222(1)). The public record shows that county and state agents repeatedly reported in emails that Good Timber's representative Nathan Godfrey had told them he had these permits, when in fact he did not.

No BMP's were in place at the time of Good Timber's scraping and excavation work, sending a massive bolus of sediment and debris downstream, where it is still discharging and damaging Little Warm Creek and private property even today. On information and belief, Good Timber had no BMPs in place for at least 11 days last July, and very likely longer.[4] The Good Neighbors thoroughly documented several days of discharges with no BMPs. A July 26, 2024 field report from the Idaho Department of Environmental Quality detailed turbidity levels at 80FNU immediately downstream. Teton County Planner Torin Bjorklund reported that the county and DEQ were denied access to Good Timber Ranch that same day:

> *The applicant and excavation owner called their attorney when we were on site. They suggested that they may be* ***"incriminating themselves"*** *by allowing us to take photos of the silt screens that were just installed. The waddles will be completed on Monday and they told us to come back then.*[5]

Minimal BMPs were observed the following Monday, July 29, 2024 by DEQ field agents. As demonstrated in the Biota Memo, these BMPs were ineffective to begin with, and have been neglected, left to break-down and degrade over the winter, allowing even more discharges. The sedimentation of Little Warm Creek is ongoing, with twelve inches of sediment sitting instream.

The Biota Memo also details the specific manner in which Good Timber scraped, pushed, and bulldozed 13.9 acres, caused severe damage to 1.8 acres of wetland and obliterated 2,310ft spring creek stream channels, leaving them not able to be readily reclaimed. These are permanent impacts, far in excess of the treatment areas proposed and permitted in the March 8, 2022 Joint Application for Permits. Good Timber took an exceedingly blunt approach to their excavation work, with no attention towards their claimed goal of wetland enhancement. The end result of their overly aggressive excavation work is a swath of permanent impacts that far exceed the terms of their NWP 27. They impacted **1.8 acres** of wetland when their Joint Application materials proposed a permanent impact of only **0.81 acres** of wetlands, of which 0.28 acres would be emergent wetlands and 0.53 acres would be scrub-shrub wetlands. They razed **2,310 ft** of spring creek stream channels when the permit allowed for **1,904 ft**. These are unacceptable overages that severely damaged surface water, a 303(d) listed stream, and abutting wetlands.

Nature of Good Timber's CWA Violations

Good TImber has violated Sections 301(a) and 404 of the CWA, 33 U.S.C. §§ 1311(a) and 1344, by discharging pollutants into waters of the United States in excess of the limits and conditions of your NWP 27. Based on our many observations and available information, it appears that activities at Good Timber Ranch which were purportedly for aquatic habitat restoration, establishment, and enhancement repeatedly violated the terms of their permit by causing permanent destructive impacts. These violations include, but are not limited to, the following:

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[4] The Good Neighbors have video documentation from July 18, 2024 (click to view) that shows extensive earthwork was already well underway at this time. DEQ Water Quality Analyst Cherie Windsor sent an email communication to USACE indicating that she inspected the newly placed BMPs on July 29, 2024.

[5] July 26, 2025 Teton County Planner Torin Bjorklund email to state and federal agencies.

1. **Excessive dredging and scraping:** The extensive and aggressive scraping and filling of Alder Spring Creek, Thoughtful Spring Creek, Forgotten Spring Creek, Big Spring Creek and all its associated wetlands have resulted in the fundamental alteration and degradation of the entire natural stream system, which collects and flows off Good Timber Ranch via Little Warm Creek. This is not a "minimal" effect; it is a profound and lasting environmental impact. 13.9 acres have been totally cleared away, completely destroying 2,310 ft of spring creek stream channels, and impacting 1.8 acres of wetland.

2. **Using heavy machinery in the riparian zone and stream channel with no BMPs:** The use of heavy machinery (e.g., excavators, bulldozers) within the riparian zone and directly in the wetted channel without adequate erosion control measures has resulted in substantial sediment runoff into Little Warm Creek. This sediment is a pollutant as defined by the CWA and is significantly degrading water quality throughout the Little Warm Creek system. Downstream reaches of Little Warm Creek now carry a foot of sediment on the bottom.

3. **Altering the natural flow of spring creek stream channels:** Good Timber's purported restoration activities have involved the total destruction of several stream channels, significantly altering the natural flow of Alder Spring Creek, Thoughtful Spring Creek, Forgotten Spring Creek, Big Spring Creek in violation of the requirement that NWP 27 activities result in "overall improvements to aquatic resources." There are no improvements here; the water resources have been totally destroyed.

4. **No establishment of appropriate native vegetation:** Good Timber's activities have not ensured the establishment of appropriate native vegetation to stabilize disturbed areas, leading to continued erosion and sedimentation, contrary to the objectives of NWP 27. Vegetation has not been preserved, or temporarily impacted to the minimum extent feasible. Instead, it has been totally scraped away. No effort was made to preserve or minimize impacts to wetlands and riparian vegetation.

5. **Ongoing sediment discharges into a 303(d) listed creek due to a lack of BMPs.** Good Timber's current BMPs and erosion control measures are inadequate or simply missing around the massive stockpiles of soils, fines, and debris throughout the property. Straw waddles and screens have quickly degraded and broken down due to a lack of maintenance. As a result this has created two types of unpermitted discharges into Little Warm Creek: (1) the bolus of sediment released last summer which is still moving downstream, and (2) the ongoing discharges from Good Timber Ranch due to lack of effective erosion control.

These activities have resulted in the unauthorized discharge of pollutants, including but not limited to, dredged material, fill material, and sediment, into waters of the United States. Such discharges are unlawful without a valid Section 404 permit or if they exceed the conditions of an existing permit.

Failure to Comply with Specific NWP 27 Regional Conditions

The activities at Good Timber Ranch demonstrate an ongoing total failure to comply with the region specific conditions of their permit. The NWP 27 permit is specifically designed to cover aquatic restoration and enhancement activities - but that is not what has happened here.

1. **Direct Channelization/Alteration in Violation of Regional Conditions C and D:** The explicit conversion of the onsite natural stream channels into a uniform, straightened ditch violates the spirit and letter of NWP 27 - which is intended to focus on restoration, not conversion or destruction of waterways. The documented destruction of natural riffle-pool sequences, channelization, and the filling of wetlands represent a loss of aquatic functions and services, directly contradicting the "net increases" requirement of NWP 27 and exceeding the minimal impact threshold.
2. **Lack of Effective Erosion and Sediment Controls in Violation of Regional Addition 12:** The continuous discharge of sediment into Little Warm Creek due to inadequate BMPs is a clear violation of Regional Addition 12 and constitutes unauthorized pollution under the CWA.
3. **Lack of Stabilization and Establishment of Native Vegetation in Violation of Regional Conditions B, H, and Regional Addition 12:** Good Timber's failure to effectively stabilize disturbed areas, preserve vegetation as much as possible, and timely establish native vegetation has ensured the ongoing erosion. Without these stabilizing measures in place, successful restoration is not possible, nor has it even been attempted here.
4. **Failure to Achieve Restoration Goals in Violation of Regional Condition B:** The activities at Good Timber have not resulted in "aquatic habitat that resembles an ecological reference" nor have they led to "net increases in aquatic resource functions and services." The work plan presented in Good Timbers' March 8, 2022 Joint Application for Permits laid out a plan for minimal impacts wherever possible. Instead, they have caused large losses of riparian and wetland habitat types. No restoration work has been done; these impacts are permanent. Indeed, the public record shows that USACE and state agents repeatedly expressed concern that the type of excavation work being done at Good Timber appeared to be prepping the area for construction, not restoration.

Environmental Harm Necessitating Permit Revocation

The noncompliance at Good Timber Ranch has caused, and continues to cause, severe environmental harm, including:

1. **Loss of Functional Wetlands:** The scraping and filling of wetlands has eliminated critical filtration, flood storage, and wildlife habitat.
2. **Degradation of Stream Ecosystem:** Channelization of Big Spring Creek, combined with

excessive continued sedimentation, and the dramatic alteration of flow regimes have reduced macroinvertebrate populations, and negatively impacted fish habitat.

3. **Impaired Water Quality:** Increased turbidity and sediment loads from the Good Timber property have significantly reduced water quality, affecting aquatic life and downstream users. The Good Neighbors' downstream reaches of Little Warm Creek have suffered significant sedimentation, loss of fish, and large algae blooms. This injury is ongoing as last summer's sedimentation continues to mobilize downstream, and the Good Timber property is also still discharging. Moreover, both Canewater and Snowdrift are small organic farms sitting in the crosshairs for high levels of herbicide and pesticide contamination. Their crops directly abut the 13.9 acres of scraped earth on Good Timber Ranch that is now a veritable sea of invasive weeds. It seems likely that reclamation of Good Timber will not be possible without the large-scale application of herbicides that will drift onto their crops.

4. **Loss of Riparian Buffers:** The total removal of native riparian vegetation along 2,310 ft of spring creek stream channels exacerbates erosion, increases water temperatures, and diminishes terrestrial habitat value. Little Warm Creek is a 303(d) listed stream; these buffers were a last line of defense to reduce sedimentation and temperature increases.

Request for Immediate Action

Given the clear and compelling evidence that Good Timber Ranch's activities are not in compliance with their NWP 27 authorization and are causing significantly more than minimal adverse environmental effects, we formally request that the USACE, under the authority of 33 CFR 330.5(c) and (d), immediately take the following actions:

1. **Issue a Notice of Suspension/Revocation:** Please notify Good Timber Ranch that their NWP 27 authorization is suspended and will be revoked, effective immediately, pending a formal hearing or opportunity to present their case, as per 33 CFR 330.5(c).

2. **Issue a Cease and Desist Order:** Require Good Timber Ranch to immediately cease all further activities authorized under NWP 27 and any other activities causing unauthorized discharges into Waters of the U.S. This cease and desist should also apply to their very large home construction plan as detailed below under "Other bad Actions by Good Timber."

3. **Mandate Comprehensive Remediation:** Require Good Timber Ranch to develop and implement a comprehensive, USACE-approved plan for the full restoration and remediation of the entire Little Warm Creek system and adjacent wetlands. This plan must prioritize returning the affected areas to a natural, functioning condition, which means Good Timber must fix the habitat destruction, channelization, and sediment issues they have created. The Good Neighbors are unable to effectively remediate their own downstream properties if Good Timber continues to discharge and these loads of sediment simply continue to flow downstream. Good Timber must stabilize and fix the entire system that it damaged.

Other Bad Actions By Good Timber

This is not a one-off. Good Timber has consistently acted outside of the law, only stopping when an agency or local government requires it. The Stop Work Order (click to view) issued by Teton County last summer identifies multiple violations of the zoning and building code and is still in effect. The entire Lake Washiki project was initiated without any water rights to fill it. Only after state agencies became alerted to the unpermitted earthwork at Good Timber did they apply to transfer water rights, seeking legitimacy after-the-fact.[6]

USACE should be aware that Good Neighbors timely protested this water rights transfer, and trial was originally set for this July. However, Good Timber has barely communicated with the Good Neighbors regarding the transfer proceedings, has repeatedly asked for trial extensions, and has utterly failed to comply with discovery that was due April 11, 2025. By contrast, the Good Neighbors timely submitted their discovery four weeks earlier on March 13, 2024.[7] Good Timber's counsel has not responded to any scheduling questions since May 12, 2025. Our October 27-31, 2025 trial date will likely have to be moved back again due to their inaction.

While Good Timber has stalled out on transferring the water rights necessary to fill Lake Washiki, they have now applied for a building permit and variance from the wetland setback in order to construct a massive 9,187 sf house with a 1,972 sf paved patio directly in the impacted area.[8] The mega-mansion would be sandwiched between Big Spring and Alder Spring Creeks, sitting on an artificial 10-foot tall earthen bench, proposed to be held back with straw wattles. A well driller's report (click to view) from 2022 shows that an open cavern was found at 30-40 feet below ground, approximately 100 feet from this proposed large homesite.

Good Timber is already discharging sediment without any active construction activities onsite; **these discharges will surely grow worse if large-scale home construction is allowed to proceed in the impacted area**. USACE should take action to ensure there are no Section 402 discharges from this giant house and berm. Ideally, no construction should be permitted at all given the stunningly non-compliant, unstable condition of the property.[9] Please review Good Timber's grading and excavation plans which show significant impacts to wetland and creeks. To better understand the true impacts to surface waters, **USACE should evaluate Good Timber's construction plans in light of the current "true" condition of the property.**

Conclusion

We understand that revoking a permit is a serious action. However, the magnitude of persistent noncompliance and documented damage at Good Timber Ranch (and downstream)

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[6] *See*, Idaho Dept. of Water Resources Transfer No. 89232 submitted by Good Timber Ranch on August 2, 2024.
[7] *See,* pleadings for Transfer No. 89232 which can be accessed here on the Idaho Department of Water Resources Water Rights Search portal, under the water right No 22-02279
[8] The Godfrey Residence architectural plans (click to view) show 3,503 sf of non-habitable space proposed, which appears to be an effort to disguise two more bedrooms, a bathroom, and gathering space with wet bar.
[9] The hearing before the Teton County Planning & Zoning Commission is set for **June 10, 2025.** The Godfrey Residence grading and excavation plans (click link to view) show **significant impacts to creeks and wetlands**. The variance narrative (click to view) for the Godfrey Residence admits to encroaching on Big Spring Creek.

demonstrate that their activities are irreconcilable with the terms of NWP 27 and the CWA's mandate. Allowing Good Timber to continue under the guise of an NWP authorization would **set a dangerous precedent that by simply acquiring a permit, a landowner can go rogue and degrade an entire 303(d) listed water system.**

We respectfully request a formal response outlining the specific actions the USACE will initiate here. We are available to provide additional information and evidence to support your investigation. The Good Neighbors have also filed a 60- day notice under the Section 505(b) of the CWA, 33 U.S.C. § 1365(b) to initiate a suit for violation of the Act. It is attached.

Respectfully,

Anna R. Trentadue Esq.
Trentadue Law Office
Attorney for the Good Neighbors

ATTACHMENTS:

A- *Good Timber Ranch LLC Site Condition Assessment* by BIOTA Research & Consulting Inc. dated May 21, 2025.

B - Notice of intent to sue Good Timber Ranch LLC, Nathan Godfrey, Jared Smith, and the Jared Smith Revocable Living Trust over violations of the Clean Water Act and their Nationwide Permit at Good Timber Ranch in Victor, Idaho.

CC Via Email:

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Idaho Operations
Environmental Protection Agency
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Boise, ID 83702
Werntz.james@epamail.epa.gov

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Wendy Koch
Teton County Building Official
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wkoch@tetoncountyidaho.gov

Exhibit C

JOINT APPLICATION FOR PERMITS

U.S. ARMY CORPS OF ENGINEERS - IDAHO DEPARTMENT OF WATER RESOURCES - IDAHO DEPARTMENT OF LANDS

Authorities: The Department of Army Corps of Engineers (Corps), Idaho Department of Water Resources (IDWR), and Idaho Department of Lands (IDL) established a joint process for activities impacting jurisdictional waterways that require review and/or approval of both the Corps and State of Idaho. Department of Army permits are required by Section 10 of the Rivers & Harbors Act of 1899 for any structure(s) or work in or affecting navigable waters of the United States and by Section 404 of the Clean Water Act for the discharge of dredged or fill materials into waters of the United States, including adjacent wetlands. State permits are required under the State of Idaho, Stream Protection Act (Title 42, Chapter 38, Idaho Code and Lake Protection Act (Section 58, Chapter 13 et seq., Idaho Code). In addition the information will be used to determine compliance with Section 401 of the Clean Water Act by the appropriate State, Tribal or Federal entity.

Joint Application: Information provided on this application will be used in evaluating the proposed activities. Disclosure of requested information is voluntary. Failure to supply the requested information may delay processing and issuance of the appropriate permit or authorization. **Applicant will need to send a completed application, along with one (1) set of legible, black and white (8½"x11"), reproducible drawings that illustrate the location and character of the proposed project / activities to both the Corps and the State of Idaho.**

See Instruction Guide for assistance with Application. Accurate submission of requested information can prevent delays in reviewing and permitting your application. Drawings including vicinity maps, plan-view and section-view drawings must be submitted on 8-1/2 x 11 papers.

Do not start work until you have received all required permits from both the Corps and the State of Idaho

FOR AGENCY USE ONLY			
USACE NWW- 2021-303 20211107	Date Received:	☐ Incomplete Application Returned	Date Returned:
Idaho Department of Water Resources No.	Date Received:	☐ Fee Received DATE:	Receipt No.:
Idaho Department of Lands No.	Date Received:	☐ Fee Received DATE:	Receipt No.:

INCOMPLETE APPLICATIONS MAY NOT BE PROCESSED

1. CONTACT INFORMATION - APPLICANT Required:			2. CONTACT INFORMATION - AGENT:		
Name: Nathan Godfrey			Name: Mike McConnell		
Company: Good Timber Ranch, LLC.			Company: Horrocks Engineers		
Mailing Address: PO Box 181			Mailing Address: 2775 W. Navigator Drive, Ste 210		
City: Victor	State: ID	Zip Code: 83455	City: Meridian	State: ID	Zip Code: 83642
Phone Number *(include area code)*: 208-709-1074	E-mail: nathan@coldwaterpaint.com		Phone Number *(include area code)*: 208-577-1642	E-mail: mike.mcconnell@horrocks.com	

3. PROJECT NAME or TITLE: Good Timber Ranch			4. PROJECT STREET ADDRESS: 10702 S 1000 W, Victor, ID 83455	
5. PROJECT COUNTY: Teton	6. PROJECT CITY: Victor		7. PROJECT ZIP CODE: 83455	8. NEAREST WATERWAY/WATERBODY: Warm Springs Creek
9. TAX PARCEL ID#: RP03N45E224801	10. LATITUDE: 43.569557° LONGITUDE: -111.130571°	11a. 1/4:	11b. 1/4: 11c. SECTION: 22	11d. TOWNSHIP: 03N 11e. RANGE: 45E
12a. ESTIMATED START DATE: 04-01-22	12b. ESTIMATED END DATE: 10-01-23	13a. IS PROJECT LOCATED WITHIN ESTABLISHED TRIBAL RESERVATION BOUNDARIES? ☒ NO ☐ YES Tribe:		
13b. IS PROJECT LOCATED IN LISTED ESA AREA? ☐ NO ☒ YES		13c. IS PROJECT LOCATED ON/NEAR HISTORICAL SITE? ☒ NO ☐ YES		

14. DIRECTIONS TO PROJECT SITE: Include vicinity map with legible crossroads, street numbers, names, landmarks.

From Victor, ID, travel west on US31. Turn south on S1000W. Travel south for approximately 2.5 miles. Property in on the west side of S1000W. See Attachment A - Project Vicinity Map.

15. PURPOSE and NEED: ☐ Commercial ☐ Industrial ☐ Public ☒ Private ☐ Other

Describe the reason or purpose of your project; include a brief description of the overall project. Continue to Block 16 to detail each work activity and overall project.

See Attachment B - Project Details

16. DETAILED DESCRIPTION OF EACH ACTIVITY WITHIN OVERALL PROJECT. Specifically indicate portions that take place within waters of the United States, including wetlands: Include dimensions; equipment, construction, methods; erosion, sediment and turbidity controls; hydrological changes: general stream/surface water flows, estimated winter/summer flows; borrow sources, disposal locations etc.:

See Attachment B - Detailed Project Description

17. DESCRIBE ALTERNATIVES CONSIDERED to AVOID or MEASURES TAKEN to MINIMIZE and/ or COMPENSATE for IMPACTS to WATERS of the UNITED STATES, INCLUDING WETLANDS: See Instruction Guide for specific details.

See Attachment B - Project Details

18. PROPOSED MITIGATION STATEMENT or PLAN: If you believe a mitigation plan is not needed, provide a statement and your reasoning why a mitigation plan is NOT required. Or, attach a copy of your proposed mitigation plan.

See Attachment B - Project Details

19. TYPE and QUANTITY of MATERIAL(S) to be discharged below the ordinary high water mark and/or wetlands:

Dirt or Topsoil: _____ cubic yards

Dredged Material: _____ cubic yards

Clean Sand: _____ cubic yards

Clay: _____ cubic yards

Gravel, Rock, or Stone: _____ cubic yards

Concrete: _____ cubic yards

Other (describe): _____ : _____ cubic yards

Other (describe: _____ : _____ cubic yards

TOTAL: 0 cubic yards

20. TYPE and QUANTITY of impacts to waters of the United States, including wetlands:

Filling: _____ acres _____ sq ft. _____ cubic yards

Backfill & Bedding: _____ acres _____ sq ft. _____ cubic yards

Land Clearing: _____ acres _____ sq ft. _____ cubic yards

Dredging: _____ acres _____ sq ft. _____ cubic yards

Flooding: _____ acres _____ sq ft. _____ cubic yards

Excavation: _____ acres _____ sq ft. _____ cubic yards

Draining: _____ acres _____ sq ft. _____ cubic yards

Other: _____ : _____ acres _____ sq ft. _____ cubic yards

TOTALS: 0 acres 0 sq ft. 0 cubic yards

See Attachment B - Project Details

21. HAVE ANY WORK ACTIVITIES STARTED ON THIS PROJECT? ☒ NO ☐ YES If yes, describe ALL work that has occurred including dates.

22. LIST ALL PREVIOUSLY ISSUED PERMIT AUTHORIZATIONS:

NA

23. ☐ YES, Alteration(s) are located on Public Trust Lands, Administered by Idaho Department of Lands

24. SIZE AND FLOW CAPACITY OF BRIDGE/CULVERT and DRAINAGE AREA SERVED: NA Square Miles

25. IS PROJECT LOCATED IN A MAPPED FLOODWAY? ☒ NO ☐ YES If yes, contact the floodplain administrator in the local government jsrisdiction in which the project is located. A Floodplain Development permit and a No-rise Certification may be required.

26a WATER QUALITY CERTIFICATION: Pursuant to the Clean Water Act, anyone who wishes to discharge dredge or fill material into the waters of the United States, either on private or public property, must obtain a Section 401 Water Quality Certification (WQC) from the appropriate water quality certifying government entity.
See Instruction Guide for further clarification and all contact information.

The following information is requested by IDEQ and/or EPA concerning the proposed impacts to water quality and anti-degradation:

☒ NO ☐ YES Is applicant willing to assume that the affected waterbody is high quality?
☒ NO ☐ YES Does applicant have water quality data relevant to determining whether the affected waterbody is high quality or not?
☒ NO ☐ YES Is the applicant willing to collect the data needed to determine whether the affected waterbody is high quality or not?

26b. BEST MANAGEMENT PRACTICTES (BMP's): List the Best Management Practices and describe these practices that you will use to minimize impacts on water quality and anti-degradation of water quality. All feasible alternatives should be considered - treatment or otherwise. Select an alternative which will minimize degrading water quality

See Attachment B - Project Details

Through the 401 Certification process, water quality certification will stipulate minimum management practices needed to prevent degradation.

27. LIST EACH IMPACT to stream, river, lake, reservoir, including shoreline: Attach site map with each impact location.

Activity	Name of Water Body	Intermittent Perennial	Description of Impact and Dimensions	Impact Length Linear Feet
			TOTAL STREAM IMPACTS (Linear Feet):	0

See Attachment B - Project Details

28. LIST EACH WETLAND IMPACT include mechanized clearing, filL excavation, flood, drainage, etc. Attach site map with each impact location.

Activity	Wetland Type: Emergent, Forested, Scrub/Shrub	Distance to Water Body (linear ft)	Description of Impact Purpose: road crossing, compound, culvert, etc.	Impact Length (acres, square ft linear ft
			TOTAL WETLAND IMPACTS (Square Feet):	0

See Attachment B - Project Details

29. ADJACENT PROPERTY OWNERS NOTIFICATION REQUIREM: Provide contact information of ALL adjacent property owners below.

Name: Richard Gebhard Mailing Address: (b) (6) City: (b) (6) State: (b) (6) Zip Code: Phone Number (include area code): E-mail:	Name: John H. Winger Mailing Address: (b) (6) City: (b) (6) State: (b) (6) Zip Code: Phone Number (include area code): E-mail:
Name: Snowdrift Farm LLC Mailing Address: (b) (6) City: (b) (6) State: (b) (6) Zip Code: Phone Number (include area code): E-mail:	Name: Susan B. Miller Mailing Address: (b) (6) City: (b) (6) State: (b) (6) Zip Code: Phone Number (include area code): E-mail:
Name: Rafe Rivers Mailing Address: (b) (6) City: (b) (6) State: (b) (6) Zip Code: Phone Number (include area code): E-mail:	Name: Mailing Address: City: State: Zip Code: Phone Number (include area code): E-mail:
Name: Caribou-Targhee National Forest Mailing Address: 1405 Hollipark Drive City: Idaho Falls State: ID Zip Code: 83401 Phone Number (include area code): E-mail:	Name: Brett A. Marcum Mailing Address: (b) (6) City: (b) (6) State: (b) (6) Zip Code: Phone Number (include area code): E-mail:

30. SIGNATURES: STATEMENT OF AUTHORIAZATION / CERTIFICATION OF AGENT / ACCESS

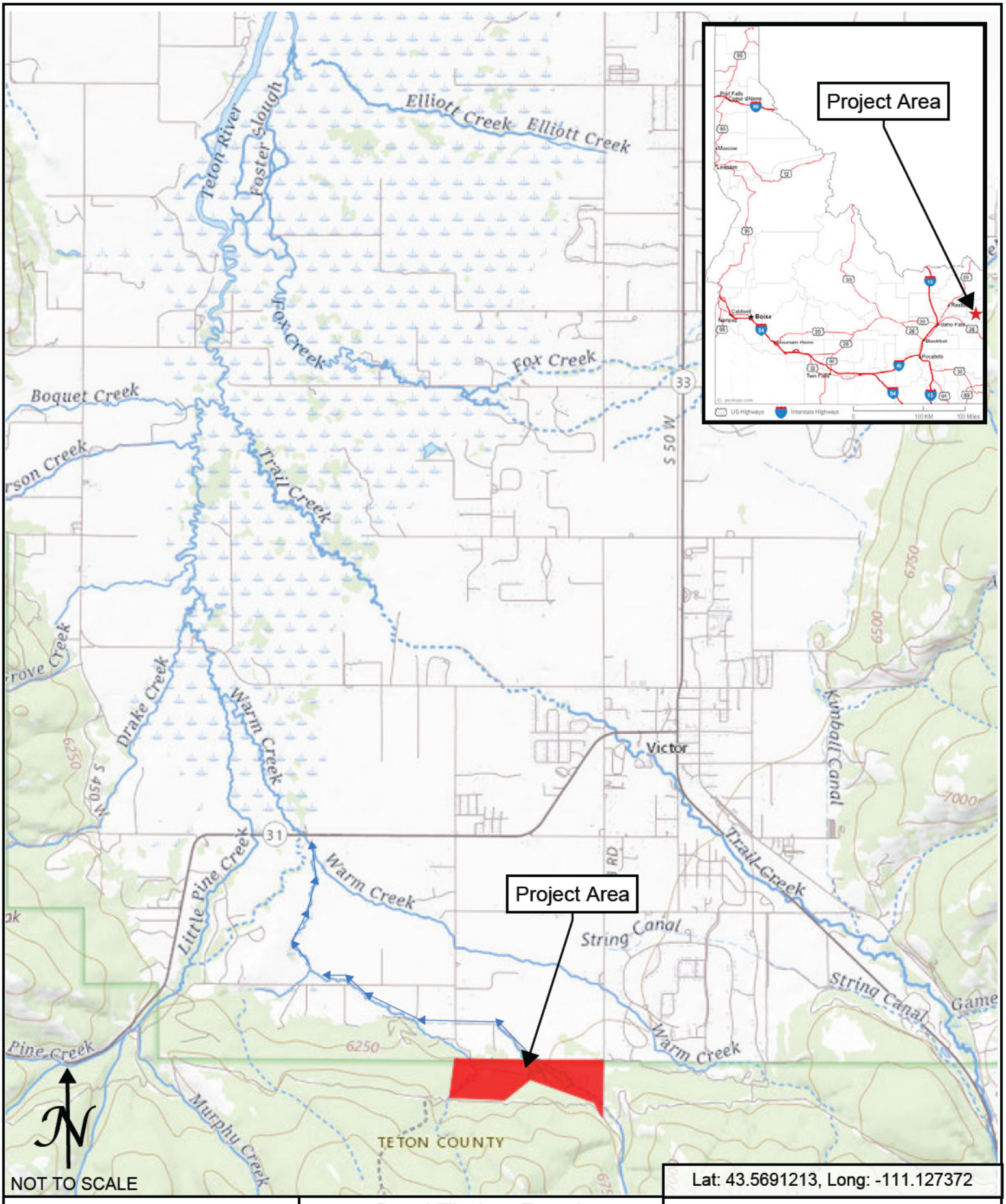
Application is hereby made for permit, or permits, to authorize the work described in this application and all supporting documentation. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein; or am acting as the duly authorized agent of the applicant (Block 2). I hereby grant the agencies to which this application is made, the right to access/come upon the above-described location(s) to inspect the proposed and completed work/activities.

Signature of Applicant: _____ *Date:* 03-08-2022

Signature of Agent: _____ *Date:* 03-08-2022

This application must be signed by the person who desires to undertake the proposed activity AND signed by a duly authorized agent (see Block 1, 2, 30). Further, 18 USC Section 1001 provides that: "*Whoever, in any manner within the jurisdiction of any department of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both*".

Attachment A – Project Vicinity Map



HORROCKS ENGINEERS

Good Timber Ranch

Joint Application for Permits

NWW-2021-303 20211107

Attachment A - Project Vicinity

Attachment B – Project Details

Introduction

Background

Good Timber Ranch, LLC (GTR) purchased a plot of farmland in Teton County, southwest of Victor, Idaho, in 2020 with the intention of creating a park-like private residence for family and friends. The property will be developed to highlight natural features while adding residential and recreational amenities that complement the existing landscape. This development is referred to as the Project.

The property has been used primarily for farming and ranching over the last five decades and an extensive system of springs, streams, and wetlands on the property were utilized for irrigation, grazing, and livestock watering. These prior uses are illustrated by the presence of significant modifications to these aquatic resources, both anthropogenic and from livestock.

Project Area

The Project area is characterized by a mosaic of coniferous and deciduous wooded slopes, mesic meadows, agricultural lands, springs, streams, and wetlands located at the headwaters of the Teton River southwest of Victor, Idaho. The approximately 150-acre Project area is located at latitude: 43.569557°, longitude: -111.130571°, Section 22, Township 03 North, Range 45 East in the Rocky Mountain Forests and Rangeland ecologic subregion, in Teton County, Idaho. Elevation at the Project area ranges from approximately 6,200 feet to 6,520 feet above mean sea level (See Attachment A – Project Vicinity).

Project Description

The owners GTR are implementing a planned residential and recreational development in Teton Valley, southwest of Victor, Idaho. In addition to the planned development, the owners of GTR are seeking to restore, enhance, and create aquatic resources on the property with two primary objectives including 1) increase the extent of aquatic resources on the property and 2) promote an overall functional uplift of the existing aquatic resources on the property.

To guide implementation of these objectives, GTR developed an Aquatic Resource Reclamation, Restoration, Enhancement and Creation Plan (Plan). The Plan presents a selection of industry-proven methods for improving and creating aquatic habitats and proposes site-specific project actions focused on accomplishing the overall Plan objectives mentioned above. These site specific project actions will result in permanent and temporary impacts to existing aquatic resources, requiring compliance with Sections 401 and 404 of the Clean Water Act (CWA) as well as the Idaho State Stream Channel Protection Act.

Methods for developing project actions, site specific application of project actions, anticipated results of applying those actions, and post-project functional conditions are presented in this Joint Application for Permits to facilitate project authorization by the Unites States Army Corps of Engineers and Idaho Department of Water Resources (IDWR).

Development of Project Actions

The Plan proposes project actions to promote effective aquatic resource restoration through the application of methods described in Principles of Wetland Restoration (USEPA, 2021) as well as techniques successfully implemented by GTRs Professional Wetland Scientist at other successful aquatic resource restoration and creation projects in the state.

Site specific project actions are based on existing conditions documented in the 2020 Aquatic Resource Delineation Report and associated Wetland Functional Assessment and the perceived needs at each site to accomplish the two main Plan objectives.

Site-specific project actions are further supported by industry-proven methods selected for use in this Plan based on their successful application at other aquatic resource restoration projects (Bernhardt, et. al, 2005; Boulton, et. al, 2016; Melvin, 2003; Roni, et. al., 2002; Yochum, 2018).

Reclamation, Restoration, Enhancement, and Protection Actions

Project actions focused on improving existing aquatic resources have been organized into 4 categories including reclamation, restoration, enhancement, and protection actions. These actions are assigned to specific sites based on a perceived need identified during the aquatic resource delineation effort and on the desired need to achieve Plan objectives.

Each action has been assigned an alphanumeric code which is summarized in Table 1. These codes are assigned on a site-specific basis and are presented in the detailed description of project actions, below.

Reclamation and Construction

1) **Erosion and Sediment Control (RC1):** This action consists of implementing erosion control best management practices (BMPs) such as installation of silt fence, straw wattle, re-seeding, dewatering areas, and sediment catchment basins. These materials would, with the exception of straw wattle all be temporary and would be removed following stabilization.
2) **Remove Existing Infrastructure (RC2):** This action consists of the permanent removal of pipes, culverts, concrete, berms, dilapidated ditches, trash, existing fence, etc.
3) **Material Handling and Stockpiling (RC3)**: Material handling, staging and stockpiling areas will be located away from aquatic resources to avoid construction-related impacts.
4) **Native Material Harvesting (RC4):** This action consists of harvesting native material displaced from development of infrastructure and a planned lake amenity on the property. These materials would consist of rock, topsoil, herbaceous wetland sod, live root wads, willow cuttings, cottonwood rhizomes and large woody debris.
5) **Dewatering (RC5):** Temporary dewatering of stream segments via redirecting flow into diversion ditches or adjacent streams to provide conditions suitable for mobilization of equipment in existing stream channels to conduct reclamation and restoration actions.
6) **Supplemental Irrigation (RC6):** During the establishment period, riparian and wetland areas may require supplemental irrigation to improve survivability. This would be a temporary action that would likely last for no more than two growing seasons, depending on seasonal temperature and precipitation.

Restoration

1) **Spring Source Restoration (RES1):** This action consists of excavating and recontouring spring sources that have been significantly altered. No more than minor excavation is expected under this action.

2) **Terrace Reconstruction (RES2):** This action consists of reestablishing a terraced wetland complex by re-constructing a Palustrine Emergent (PEM) wetland in a multilevel terrace configuration. This action is only prescribed in areas with suitable slope and where evidence exists suggesting such a configuration was previously present.

3) **Sediment Removal (RES3):** This action consists of mechanically removing excess sediment that has built-up at spring sources and stream segments, creating unnatural riverine conditions. Sediment removed during this action would be used to recontour streambanks and to create upland berms adjacent to aquatic resources. Spoils from this project action would be placed to blend with existing topography and landscape configuration.

4) **Stream Bank Stabilization (RES4):** This action consists of placing rocks, boulders, and large woody debris along stream banks to stabilize the water course, mitigate erosion, and mitigate downstream sedimentation. To the greatest extent practicable, material would be sourced from the existing aquatic resource and replaced in a new configuration to meet the goal of stabilizing stream banks.

5) **Reestablish Hydrologic Connectivity (RES5):** This action consists of reestablishing a hydrologic connection of springs, stream channels, and wetlands that have been disconnected as a result of livestock grazing or agricultural practices.

6) **Riparian Vegetation (RES6):** This action consists of installing riparian vegetation in degraded riparian areas. Native species suited to site-specific hydrologic conditions would be selected and installed. To the greatest extent practicable, vegetation and topsoil would be harvested from the other aquatic resources temporarily displaced by other project actions (see REC4).

Channel Realignment and Reconfiguration

1) **Side Channel (CH1):** This action consists of constructing a side channel from a main stream channel to provide floodplain complexity, flow velocity attenuation, and greater habitat availability.

2) **Pool, Riffle, Run Complex (CH2):** This action consists of reconfiguring a stream segment to include a pool, riffle, run complex. Material used to construct these features would consist of rock, gravel, and logs sourced on site.

3) **Sinuosity (CH3):** This action consists of creating greater stream channel sinuosity by reconfiguring channel geometry to utilize a greater degree of the available floodplain.

4) **Groundwater Capture and Conveyance (CH4):** This action consists of capturing groundwater that has been forced to sheet flow over a site as a result of severe trampling, soil compaction, or excavation of diversions and ditches. This action would be accomplished by minor topographic grading to re-direct water back towards natural channels and/or subsurface installation of less permeable materials such as compacted clays or logs.

Habitat Enhancement

1) **In-stream Elements (HE1):** This action consists of adding aquatic habitat elements such as large wood, excavating deep water refugia, adding rocks and boulders, etc.
2) **Emulating Natural Disturbance (Wildfire) (HE2):** This action consists of mechanically removing decadent understory to improve light penetration and create greater habitat diversity.
3) **Non-native, Invasive Species Control (HE3):** This action consists of controlling non-native, invasive species through mechanical removal and application of herbicides.
4) **Upland Buffers (HE4):** This action consists of seeding and planting native upland species in natural and constructed buffer areas around significant or sensitive aquatic resources to provide greater terrestrial habitat diversity and improved site biodiversity. HE3 would be a complimentary action during the establishment phase.
5) **Trophic Seeding (HE5)**: This action consists of harvesting existing primary decomposers, macroinvertebrates, and mollusks from productive riverine habitats and transporting those organisms to less productive riverine habitats to bolster nutrient cycling in impaired aquatic systems.
6) **Functional Uplift (HE6)**: This action consists of slight modifications to existing hydrology and topography to transition a wetland class to that of a higher functional class. An example of this would be to discharge small volumes of fill into areas consisting of a homogenous emergent wetland class to create topographic diversity suitable for the establishment of shrubs and trees, thereby creating heterogeneity in the wetland habitat where two or more wetland classes exist in a mutually beneficial relationship.

Site Protection

1) **Log Jack Fence (RP1):** This action consists of constructing a log jack fence around sensitive aquatic resources such as spring sources or high-quality wetlands to discourage livestock, people, and wildlife from trampling the area.
2) **Wire Fence (RP2):** This action consists of constructing a tensioned wire fence around sensitive aquatic resources such as spring sources or high-quality wetlands to exclude livestock, people, and wildlife from trampling the area.
3) **Elevated Pathway (RP3):** This action consists of constructing elevating trails over aquatic habitats to minimize impacts and provide an aesthetic and immersive experience for users to enjoy the aquatic habitat below. Elevated pathways would be supported by helical-screw piers, thereby mitigating the effect of constructing these features to a level of negligible impact.
4) **Preserve (RP4):** This action consists of preserving a natural area in the current condition. This action would be focused on areas currently in good functioning condition or where alteration would diminish the current functional capacity of the habitat.

Table 1 below summarizes proposed project actions and action codes, for reference.

Table 1. Project Actions and Action Code Summary

Category	Action Type	Action Code
Reclamation and Construction	Erosion and Sediment Control	RC1
	Remove Existing Infrastructure	RC2
	Material Handling and Stockpiling	RC3
	Native Material Harvesting	RC4
	Dewatering	RC5
	Supplemental Irrigation	RC6
Restoration	Spring Source Restoration	RES1
	Riparian Vegetation	RES2
	Terrace Reconstruction	RES3
	Sediment Removal	RES4
	Stream Bank Stabilization	RES5
	Reestablish Hydrologic Connectivity	RES6
Channel Realignment and Reconfiguration	Side Channel	CH1
	Pool, Riffle, Run Complex	CH2
	Sinuosity	CH3
	Groundwater Capture and Conveyance	CH4
Habitat Enhancement	In-stream Elements	HE1
	Emulating Natural Disturbance	HE2
	Non-native, Invasive Species Control	HE3
	Upland Buffers	HE4
	Trophic Seeding	HE5
	Functional Uplift	HE6
Site Protection	Log Jack Fence	SP1
	Wire Fence	SP2
	Elevated Pathway	SP3
	Preserve	SP4

Creation of New Aquatic Resources

The Plan proposes to create new aquatic resources to achieve the primary objectives of expanding aquatic resource extents and increase the functional capacity of aquatic resources throughout the property. Creation of aquatic resources for this Plan includes the construction of Lake Washakie, a 3.94-acre lacustrine habitat impounded by an engineered embankment to capture and store water emanating from the various spring sources on the property, conversion of upland meadows north of Lake Washakie to create a Palustrine Scrub Shrub (PSS) wetland habitat, creation of small segments of riverine habitat to re-establish hydrologic connectivity between various streams, and creation of an artificial stream channel conveying seasonal hydrology allocated to the property through existing water rights from Pole Creek.

Relocation of Existing Aquatic Habitats

To attain the primary goals of this Plan, all wetland material temporarily displaced during excavation of the lake and from restoration and enhancement activities along the various streams will be replaced in their entirety at areas specifically selected or created for reestablishment of those aquatic habitats. Topsoil, wetland sod, emergent macrophytes (i.e. watercress), live willows, live root wads, and large woody material will be harvested and relocated to the periphery of Lake Washakie, at restoration and reclamation sites along existing streams, and along the Pole Creek diversion. Installation of the harvested material will be based on site-specific hydrology and desired future condition relative to matching the existing background habitat type (i.e. live willow stakes would be planted in existing PSS habitats undergoing restoration and enhancement actions, herbaceous wetland sod would be installed in the PEM riparian zone around Lake Washakie, emergent macropytes would be planted in the emergent zone of Lake Washakie, etc.).

Aquatic Resources – Existing and Forecasted Functioning Condition

Existing Functioning Condition

In June 2021, wetland scientists delineated 20 wetland areas, 9 riverine habitats, and 1 man-made littoral lacustrine habitat following United States Army Corps of Engineers (USACE)-approved delineation methodology (Environmental Laboratory, 1987). All delineated aquatic resources are hydrologically influenced by a series of 20 natural springs. These aquatic resources generally flow north and discharge into Big Springs Creek which flows into Warm Springs Creek, a tributary of the Teton River. See Figure 1 – Project Vicinity.

Aquatic habitats associated with the spring complexes exhibit similar vegetation composition, soil structure and hydrologic characteristics which transition in a similar manner from the source at the upper reaches of each spring, down gradient to the middle reach and from the middle reach to the lower reach. These reaches are generally defined by slope gradient where the upper reaches are generally situated in a terrace or on steeper slopes, the middle reaches are situated in areas of moderate-continuous slope, and the lower reaches are generally situated in flat to gentle sloped areas.

Surface water velocity plays a major role in the composition of aquatic resourced along each reach. In the upper reaches, the terraced landscape configuration generally leads to a dichotomous situation where flat areas slow surface flow rates which contributes to a high degree of groundwater recharge and a wide wetted perimeter, Steep slopes between terraces lead to higher surface flow rates and less groundwater recharge with a narrower wetted perimeter. This terraced configuration creates a diverse wetland habitat consisting of herbaceous obligates in flat areas and dense shrub stands in sloped areas.

The middle reaches generally have a greater slope angle over a longer linear distance and therefore surface water flows travel at higher velocities when compared to the upper and lower reaches. In the middle reach, these steeper slopes result in less groundwater influence and the wetted perimeter of the stream is more confined to the channel, thereby creating dryer conditions more conducive to the establishment of woody shrubs such as hawthorn and dogwood.

The lower reaches are situated in more gentle sloped areas and show the greatest degree of groundwater influence relative to the slow surface flow velocities seen at these reaches. Here, the wetted perimeter of the stream is much broader which has led to the establishment of large stands of obligate herbaceous wetland species in mesic meadow habitats.

Due to the similarity of aquatic habitat characteristics within the upper, middle, and lower reaches of each spring and associated stream, three Action Areas (AA) were established based on the Montana Department of Transportation Wetland Assessment Method (MDT, 2008) as the basis for conducting a functional assessment of existing conditions within the project area. The three AAs include the Upper Reach, Middle Reach, and Lower Reach. The functional assessment conducted for each AA generated quantitative values for Possible Functional Points, Actual Functional Points and Functional Units that are used to define a Wetland Category based on a 4-tier classification system.

AAs generally fall in two categories including Category II and Category III wetlands.

Category II wetlands provide habitat for sensitive plants or animals, function at very high levels for wildlife/fish habitat, are unique in a given region, or are assigned high ratings for many of the assessed functions and values.

Category III wetlands are more common and generally less diverse than Category I and II wetlands. They can provide many functions and values, although they may not be assigned high ratings for as many parameters as are Category I and II wetlands.

Forecasted Functioning Condition

As a basis for realizing the effect of project actions, a functional assessment was conducted to forecast the post-project condition, operating under the assumption that project actions, as prescribed in this Plan will be successful. To maintain consistency with the pre-project functional assessment, existing aquatic resources were assessed using the Montana Department of Transportation Wetland Assessment Method (MDT, 2008) and were grouped into the same AA used in the initial assessment. Additionally, all newly created aquatic resources are included in one of the three AAs previously assessed.

The following section provides a detailed description of project actions including the existing functional condition and forecasted functional condition at each AA.

Project Action Plan

Box 16: Detailed Description of Project Actions

The following sections are intended to provide a detailed description of all project actions in place of Box 16 of the Joint Application for Permits form.

Construction Timing and Sequencing

Implementation of project actions that would impact delineated aquatic resources is anticipated to begin spring 2022 when snow has melted and soil surfaces have dried sufficiently to support equipment necessary to conduct the work.

Pre-construction Site Protection Measures

Prior to construction, temporary erosion and sediment control best management practices (BMPs) (RC1) would be installed around work areas to capture and contain potentially eroded sediment on site.

Temporary Work Areas

Temporary work areas including large material and equipment stockpile sites and small material staging sites will be located in uplands adjacent to the main access road and proposed action areas, respectively. The larger material stockpile sites will be the source for boulders, rocks, gravel, and large wood that would be transferred via small mechanized equipment (mini excavator, tracked dump cart) to smaller staging areas located adjacent to proposed action areas. Stockpile and staging sites would be protected with straw waddles to minimize sediment migration.

Existing stream segments proposed for restoration and enhancement activities will be temporarily diverted from the existing channel to provide a work environment conducive to the mobilization and operation of small mechanized equipment. The stream segments will be diverted into newly constructed ditches, existing ditches, into existing stream channels, or piped depending on the construction contractor's desired work sequence. This action will be completed such that hydrology would be flowing around work areas and would discharge into the existing stream channels at or near the northern property boundary where hydrology is conveyed off the property.

All temporary diversions would be limited to the greatest extent practicable and would be removed in their entirety following completion of project actions. Silt screens of straw waddle, straw bale, and wetland material harvested on site will be placed intermittently along the temporary diversion ditches to attenuate flows and catch water-born sediment, reducing the transfer of sediment downstream.

Source Material

Material used to restore, enhance, and create aquatic resources would be sourced either directly from existing wetlands and uplands on the property (emergent macrophytes, live willow stakes, herbaceous wetland sod, hawthorn root wads, large woody debris, topsoil, and small rock) or from a gravel pit approximately 3 miles north of the project area (boulders, large rock, native gravel (non-crushed)).

To the greatest extent practicable, all material sourced from existing wetlands temporarily displaced by project actions would be used to re-establish wetlands along the streams and around the proposed lake resulting in no-net loss of wetland area.

Post-construction Site Protection Measures

Following the completion of construction activities, temporary erosion and sediment control BMPs would be removed and disposed of in an approved off-site location. All disturbed surfaces would be graded to blend into the existing topography and revegetated to match the adjacent habitat utilizing a seed mix comprised of native or naturalized perennial grasses and herbs selected based on the guidance of the wetland scientist.

Application of Project Actions

The following sections provide a discussion of project actions at each AA including the aquatic resources present or planned within them, a summary of the existing functional condition, planned project actions, anticipated results of project actions, the extent of impact resulting from project actions (where

applicable), and a forecasted functional condition. All project actions are denoted in text with the alphanumeric codes as defined above. Additionally, are shown in See Attachment C – Project Action Plan showing reclamation, restoration, enhancement, protection, and creation actions, Attachment D – Current and Forecasted Functional Assessment Datasheets showing model input and results, Attachment E – Reference Stream Segment Typical Cross Section for modeling stream channels from, and Attachment F – Project Action Results Summary for an overall table of aquatic resource extents and project effects including the extent of surface disturbance, volumes of dredge and fill, and functional assessment pre- and post- implementation of project actions.

Upper Reach Action Area

Existing aquatic resources in the Upper Reach AA includes Viejo Spring, Thoughtful Spring Creek, Twin Spring Creek, Smith Springs Creek, Alder Spring Creek, and Big Spring Creek, as well as Wetlands 2, 6, 8, 12, 16, 17, and 19, which cumulatively totals 1,146 LF of riverine habitat and 2.31 acres of wetland habitat.

Existing Functioning Condition

Relative scoring of the function and value variables for this AA determined these wetlands classify as "Category II Wetlands" with 7.00 possible functional points and 4.35 actual functional points, which cumulatively account for 9.05 functional units, representing 62% of the possible functions and values score. See Attachment D – Current and Forecasted Functional Assessment Datasheets.

Project Actions

Viejo Spring and Wetland 2 compose an intact, diverse PSS wetland habitat spanning 0.11-acre. There is little evidence of adverse effects from prior land use, and overall this aquatic habitat is in high functioning condition. Viejo Spring and Wetland 2 are located at the bottom of a large pasture that is planned for minimal livestock grazing. To mitigate the impact of livestock and wildlife use of the spring and associated wetlands, this Plan recommends preserving the site (SP5) by installing exclusionary fencing (SP1 or SP2).

Thoughtful Spring Creek emerges from a rocky alcove at the toe of a steep wooded slope near the southern Project area boundary and is severely altered as a result of prior diversion efforts and livestock use. The effects of water and gravity have prevailed, and the spring has slowly begun to reclaim the original channel. However, erosion, bank destabilization, and downstream sedimentation is present. It is recommended that the existing diversion and property line fence be removed (RC2) and the connection between the spring source and Wetland 6 be reestablished (RES1, RES5, RES6). The southern property line fence should also be replaced (SP2). The spring source is located on lands administered by the United States Forest Service (USFS) so all work would need to be conducted on the GTR property unless permission is authorized by that agency.

Of the existing 114 linear feet (LF) of Thoughtful Spring Creek in the Upper Reach AA, approximately 45 LF is designated for restoration actions while the remaining 69 feet will be retained in the current condition to protect Wetland 6.

Perennial hydrology from Thoughtful Spring has created optimal growing conditions for the formation of **Wetland 6,** a 0.09-acre PEM aquatic habitat consisting of a thick organic cap of herbaceous obligates on a perched terrace. The upper 0.03-acre portion of Wetland 6 is disconnected from the spring source and should be restored through reconnection of hydrologic connectivity (RES6) and riparian planting (RES2).

The lower 0.06-acre portion of this wetland can be classified as a montane fen habitat, which is relatively rare and should be preserved and protected (SP1, SP5).

Implementation of project actions at Wetland 6 in the Upper Reach AA is anticipated to result in the restoration of approximately 1,260 square feet (SF) (0.03-acre) PSS wetland habitat (see Table 2). These project actions would result in up to 1,260 SF (0.03-acre) of surface disturbance, and 2 CY of excavation within delineated wetlands (see Table 3).

Twin Spring and associated **Wetland 8** consist of a pair of perennial springs emerging at the same elevation and break in topography as Thoughtful Spring to the west. The western spring at Twin Springs is in excellent condition. This spring should be preserved (SP1 and SP5) in the current condition. The eastern spring has been trampled, resulting in channel modification, riparian vegetation modification, bank erosion, downstream sedimentation, and modification of subsurface hydrology. Recommended actions here include spring source restoration (RES1), sediment removal from the stream channel (RES4), and stream bank stabilization measures (RES5) along the entire 47 LF section of the creek channel in the Upper Reach AA.

Implementation of project actions at Twin Springs Creek and Wetland 8 in the Upper Reach AA is anticipated to result in the restoration of approximately 47 LF of stream channel and 0.025-acre PSS wetland habitat (see Table 2). These project actions would result in up to 1,077 SF (0.025-acre) of surface disturbance, 2 CY of excavation, and 5 CY of fill within delineated wetlands (see Table 3).

Smith Springs Creek and associated **Wetland 12** consists of a 4-spring complex that emerges from a series of rock alcoves along the toe of a timbered slope. At the source, Smith Springs should resemble a terraced wetland. However, severe trampling has created compaction and modification of wetland and riparian habitat. Ground water that should be conveyed in a stream channel is forced out of bank, sheet flowing down a slope to the northeast, creating a non-natural wetland. Recommended actions here include installation of erosion control structure (RC1), restoration of the spring sources (RES1), reconstruction of a terraced pool configuration around each spring source (RES3), installation of riparian vegetation (RES2), and reestablishment of proper hydrologic conveyance in the stream channel rather than the current out-of-bank sheet flow (RES6, CH4). Groundwater capture and conveyance structures would be installed at roughly a 45 degree angle relative to slope (see Attachment C, sheet 2 of 3). These structures would be installed by excavating trenches and backfilling with a high-clay content soil, compacting the soil into the trenches to create a hydrophilic bar that would direct surface and shallow sub-surface flow back towards the stream channel. Once restoration and enhancement activities are completed, the spring sources and wetland areas should be protected with exclusionary fencing (SP2) and preserved (SP5).

Implementation of project actions at Smith Springs Creek and Wetland 12 in the Upper Reach AA is anticipated to result in the restoration of approximately 300 LF of stream channel and 0.19-acre PSS wetland habitat (see Table 2). These project actions would result in up to 8,093 SF (0.186-acre) of surface disturbance, 55 CY of excavation, and 60 CY of fill within delineated wetlands (see Table 3).

Alder Spring source is highly modified from livestock trampling and is in poor condition. Compaction, bank destabilization, erosion, and sedimentation are all present. Ground water associated with the spring has been forced to sheet flow over the ground surface down gradient (north) and there is no evidence of an established channel. Recommended actions here include restoration of the spring source

(RES1), reestablishment of hydrologic connectivity from the spring source to the adjacent wetland (RES6), removal of sediment to form a stream channel (RES4), installation of riparian vegetation (RES2), removing and rebuilding the existing property line fence (RC2 and RP2), and installation of stream bank stabilization measures including in-stream elements (RES5 and HE1)) at the upper reach of the stream channel prior to infiltrating into the adjacent Wetland 17; a segment of approximately 45 LF. Once restoration actions have been finished, the spring source should be fenced (SP1 or SP2), and the existing trail should be converted into an elevated pathway (SP4) to provide a recreation and educational amenity to the Plan (HE6).

Implementation of project actions at Alder Spring Creek in the Upper Reach AA is anticipated to result in the restoration of approximately 45 LF of stream channel (see Table 2). These project actions would result in up to 100 SF (0.014-acre) of surface disturbance, 10 CY of excavation, and 10 CY of fill within delineated wetlands (see Table 3).

Wetland 17 occurs in the upper-most reach of Alder Spring Creek and consists of a well-developed, biologically diverse, and extremely dense PSS wetland habitat. This wetland habitat should be preserved (SP5) via installation of exclusionary fencing (SP1). At the lowest portion of the wetland, Alder Spring Creek was diverted east to Big Springs Creek via an excavated berm. Over time, the diversion failed and hydrology from the wetland and spring complex has been forced to sheet flow downslope (north). Without a stream channel to collect and convey the stream, this sheet flow has resulted in the formation of an herbaceous mesic meadow. Past alterations focused on gathering this sheet flow and directing it under the main access road have long since failed and resulted in an impoundment above the road, creating **Wetland 16** in an excavated swale. Project actions at this location include regrading the altered slope and fill in Wetland 16 (RC2), focus sheet flow from Wetland 17 into a 24-inch culvert and convey that hydrology under the main access road, thereby reestablishing a hydrologic connection between the spring source and the mid-reach of Alder Spring Creek (CH4 and RES6). Disturbed areas should be replanted in upland buffer vegetation (HE4). Removal of the existing diversion structure and excavated swale is also necessary to build the main access road (RC2). Additionally, an elevated pathway (SP4) should be installed across the wetland to replace the existing pathway that traverses around the upper end of the wetland to reduce the erosive effects of that path.

Implementation of project actions to Wetlands 16 and 17 in the Upper Reach AA will result in the permanent loss of 0.062-acre of wetland habitat. Restoration of the spring source and re-establishment of a stream channel will result in the restoration of approximately 0.017-acre of wetlands (see Table 2). These project actions would result in up to 2,794 SF (0.064-acre) of surface disturbance, 5 CY of dredge, and 190 CY of fill within delineated wetlands (see Table 3).

Big Spring consists of a terraced three-spring complex and **Wetland 19**, a PSS riparian habitat supported by a perennial riverine aquatic habitat (Big Springs Creek). The upper spring at Big Springs is unprotected and livestock use over the years has resulted in an extremely diminished functional condition. The middle spring is somewhat isolated from cattle by steep slopes above and below. Here the spring sits in a gentle terraced slope and supports a small PEM habitat, surrounding by a mature alder stand. This middle spring is in very good condition. The lowest spring has been modified significantly. There, the source has been excavated and a large concrete pipe has been installed vertically to create a well for livestock water. Major bank erosion and vegetation modification is present at this location.

Recommended actions for the upper spring complex include the removal of concrete pipes and other infrastructure (RC2), removal of sediment from the stream channel (RES4), restoration of the upper and lower springs (RES1), and reestablishment of a terraced landscape configuration (RES3) through groundwater capture and conveyance (CH4). The spring complex would benefit from upland buffers (HE4) and trophic seeding (HE5) to encourage the establishment of aquatic invertebrates and increase biodiversity. Once restoration actions have been finished, the spring sources should be fenced (SP1 or SP2), and the existing trail should be converted into an elevated pathway (SP4) to provide a recreation and educational amenity (HE6). This pathway could be connected to the Alder Spring pathway.

Implementation of project actions at Big Springs Creek and Wetland 19 in the Upper Reach AA would result in the restoration of 373 LF of stream channel, restoration of approximately 0.4-acre of wetlands, and enhancement of 0.3-acre of wetlands (see Table 2). If the contractor determines there is adequate space in the existing floodplain, the addition of side channels or stream meanders would be expected to increase the amount of stream channel created. These project actions would result in up to 30,624 SF (0.7-acre) of surface disturbance, 10 CY dredge, and 50 CY fill within delineated wetlands (see Table 3).

Table 2 Upper Reach AA Aquatic Resources and Anticipate Results from Project Actions

Upper Reach Action Area																				
Aquatic Resource					Area of Effect															
Name	Type	Extent			Permanent Loss			Temporary Loss*			Restoration			Enhancement			Creation		
		SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF
Viejo Spring/Wetland 2	PSS	4791	0.11																
Wetland 6	PEM	3816	0.09								1260	0.029							
Wetland 8	PSS	1428	0.03								1077	0.025							
Wetland 12	PSS	8093	0.19								8093	0.186							
Wetland 16	PEM	1593	0.037		1593	0.037													
Wetland 17	PSS	18739	0.43		1101	0.025					753	0.017							
Wetland 19	PSS	53770	1.23								17325	0.398		13299	0.305				
Thoughtful Spring Creek	Riverine			114									45						
Twin Springs Creek	Riverine			47									47						
Smith Springs Creek	Riverine			300									300						
Alder Spring Creek	Riverine			260			30						45						
Big Springs Creek	Riverine			425									373						
SUBTOTAL	**Riverine**			1,146			30						810						
	Lacustrine																		
	PEM	5409	0.127		1593	0.037													
	PSS	88414	2.03		1101	0.025					27248	0.63		13299	0.31				
GRAND TOTAL		**93,823**	**2.15**	**1,146**	**2,694**	**0.062**	**30**				**27,248**	**0.63**	**810**	**13,299**	**0.31**				

NOTES: SF=Square Feet, LF=Linear Feet, PEM=Palustrine Emergent, PSS=Palustrine Scrub-shrub, *Aquatic resources temporarily lost will be relocated to the riparian wetland habitat around Lake Washakie, Pole Creek Diversion, and to the area between the Lake Washakie embankment and the northern property line planned for creation and uplift.

Table 3 Upper Reach AA Extent of Dredge and Fill

Upper Reach Action Area						
Resource Impacted	Project Action	Max Area of Impact			Max Volumes (cubic yards)	
		Square Feet	Acres	Linear Feet	Dredge	Fill
Thoughtful Spring Creek	RES 1,5,6	135	0.003	45	2	
Wetland 6	RES2,6	1260	0.029		2	
Twin Spring/Wetland 8	RES 1,4,5	1077	0.025	47	2	5
Smith Spring Creek	RC1, RES1,2	600	0.014	300	10	10
Wetland 12	RES2,3, 6, CH4	8093	0.186		45	50
Alder Spring	RES1,2,4,5,6, HE1	100	0.002	45	2	20
Wetland 16	RC2	1593	0.037		0	150
Wetland 17	RC2	1101	0.025		5	20
Big Springs Creek	RC2, RES1,3,4	850	0.020	422	30	
Wetland 19	RES1,4,6, CH4	30624	0.703		10	50
	TOTAL	**45,433**	**1.04**	**859**	**107**	**305**

Forecasted Functioning Condition

Following implementation of project actions, relative scoring of the function and value variables for this AA determined these wetlands classify as "Category 1 Wetlands" with 11 possible functional points and 8 actual functional points, which cumulatively account for 16.56 functional units, representing 73% of the possible functions and values score. Table 4 provides a comparison of existing versus forecasted functional conditions.

Table 4 Existing vs Forecasted Functional Condition in the Upper Reach AA

Upper Reach AA			
Assessment Variable	Existing Functional Condition	Forecasted Functional Condition	Results
Possible Functional Points	7	11	+4
Actual Functional Points	4.35	8	+3.65
Functional Units	9.05	16.56	+7.51
Percent Possible Score	62%	73%	+11%
Wetland Category	2	1	Upgrade

Middle Reach Action Area

Existing aquatic resources in the Middle Reach AA include segments of Thoughtful Spring Creek, Twin Spring Creek, Forgotten Spring Creek, Smith Springs Creek, Alder Spring Creek, and Big Springs Creek, as well as Wetlands 5, 7, 9, 11, 14, and 15 which cumulatively total 3,268 LF of riverine habitat and 3.76 acres of PSS wetlands. Additionally, aquatic resources planed for creation include Pole Creek Diversion Wetlands (0.3 acre) and Pole Creek Diversion Creek (1,040 LF).

Existing Functioning Condition

Relative scoring of the function and value variables for this AA determined these wetlands classify as "Category III Wetlands" with 7.00 possible functional points and 2.85 actual functional points, which

cumulatively account for 2.00 functional units, representing 40% of the possible functions and values score.

Project Actions

Wetland 5 is a sparse 0.1-acre PSS riparian wetland habitat hydrologically supported by **Thoughtful Spring Creek**. Bank erosion and sedimentation resulting from livestock trampling has significantly deteriorated the functional capacity of the stream and riparian habitat. Recommended actions for 277 LF of the stream and 0.06-acre of Wetland 5 include minor dredging to remove sediment (RES4), minor channel realignments to improve stream sinuosity (CH3), bank stabilization measures (RES5), and riparian vegetation planting (RES2). The lower 388 LF of Thoughtful Spring Creek and 0.038-acre of Wetland 5 will be temporarily impacted resulting from construction of Lake Washakie. During the excavation process, topsoil, wetland herbaceous sod, and native shrubs will be harvested (RC4) and stockpiled (RC3) for use in revegetating wetland habitats planned for reclamation and restoration activities associated with this Plan. Harvested material not used immediately will be stockpiled in Wetland 4 for future installation around Lake Washakie or at other restoration, enhancement, and/or creation areas.

Implementation of project actions at Thoughtful Spring Creek and Wetland 5 in the Middle Reach AA would result in the restoration of 277 LF of stream channel, temporary displacement of 388 LF of stream channel and temporary displacement of 1,641 (0.04-acre) of wetlands (see Table 5). Project actions would result in up to 2,589 SF (0.06-acre) of surface disturbance and 250 CY of dredge within delineated wetlands (see Table 6).

Wetland 7 is a sparse 0.06-acre PSS riparian wetland habitat hydrologically supported by **Twin Springs Creek**. Similar to Wetland 5, bank erosion and sedimentation resulting from livestock trampling has significantly deteriorated the functional capacity of the stream and riparian habitat. The upper 120 linear feet of stream and approximately 0.02-acre of Wetland 7 would benefit from minor dredging to remove sediment (RES4), minor channel realignments to improve stream sinuosity (CH3), bank stabilization measures (RES5), and riparian vegetation planting (RES2). Twin Springs Creek and Wetland 7 will be impacted by construction of Lake Washakie. During the excavation process, topsoil, wetland herbaceous sod, and native shrubs will be harvested and stockpiled (RC4) for use in revegetating wetland habitats planned for reclamation and restoration activities associated with this Plan. Harvested material not used immediately will be stockpiled in Wetland 4 for future installation around Lake Washakie or at other restoration, enhancement, and/or creation areas.

Implementation of project actions at Twin Springs Creek and Wetland 7 in the Middle Reach AA would result in the permanent loss of 168 LF of stream channel, enhancement of 120 LF of stream channel, temporary loss of 2,107 SF (0.048-acre) of PSS wetlands, and enhancement of 702 SF (0.016-acre) PSS wetlands (see Table 5). Project actions would result in up to 2,107 SF (0.048-acre) of surface disturbance, 185 CY of dredge, and 10 CY of fill within delineated wetlands (see Table 6).

Forgotten Spring emerges from under a big fir log and forms a shallow rocky stream that flows 428 LF before leaving the project area. **Wetland 9,** a 0.13-acre PSS riparian wetland habitat starts approximately 80 LF downstream from the spring source.

The Forgotten Spring source is in very good condition with little evidence of livestock trampling or other modification. Upon investigation, macroinvertebrates including dragonflies, damselflies, and stoneflies

as well as mollusks were observed at the spring source. The Forgotten Spring should be used as a reference location and conditions shown there should be emulated at other spring sources that are recommended for restoration activities. It is recommended that Forgotten Spring is preserved in its current condition (SP5) and given the steep topographic relief around the spring, it would not be necessary to install exclusionary fencing. Some large wood and associated macroorganisms should be selectively harvested (RC4) and transferred to other spring sources for trophic seeding.

Forgotten Spring Creek and Wetland 9 will be impacted by construction of Lake Washakie. During the excavation process, native shrubs and herbaceous sod will be harvested (RC4) and stockpiled (RC3) for use in revegetating wetland habitats planned for reclamation and restoration activities.

Implementation of project actions at Forgotten Spring Creek and Wetland 9 in the Middle Reach AA would result in the permanent loss of 366 LF of stream channel, enhancement of 62 LF of stream channel and temporary loss of 5,834 SF (0.134-acre) of PSS wetlands (see Table 5). Project actions would result in up to 5,834 SF (0.134-acre) of surface disturbance and 450 CY of dredge within delineated wetlands (see Table 6).

Wetland 11 consists of a decadent and homogenous 0.34-acre PSS riparian wetland associated with **Smith Springs Creek** and a nondescript pair of rocky alcove springs deep in the mid-reach of the wetland. The floodplain associated with the riverine habitat is fairly large, providing ample space for side channels and in-stream modifications to benefit aquatic life forms. A previous Idaho Department of Water Resources (IDWR) diversion structure and ditch are located in the mid-reach. This antiquated infrastructure is no longer functioning and has caused major modification to existing hydrology.

Recommended actions for Wetland 11 and Smith Springs Creek include mechanical thinning of the shrub strata (HE2) to improve light penetration and encourage the establishment of an herbaceous understory. The stream would benefit from re-contouring to improve channel sinuosity (CH3), and a construction of a single pool, riffle, run complex (CH2) would result in the creation of fish habitat currently absent from the stream. Wetland herbaceous sod and harvested woody material harvested from wetland areas temporarily impacted from construction of Lake Washakie should be installed here to re-vegetate the restored riparian habitat (RES2). These project actions will result in 0.18-acre of wetland and 370 LF of stream channel enhancement.

Smith Springs Creek and Wetland 11 will be impacted by construction of Lake Washakie. During the excavation process, native shrubs and herbaceous sod will be harvested (RC4) and stockpiled (RC3) for use in revegetating wetland habitats planned for reclamation and restoration activities.

Implementation of project actions at Smith Springs Creek and Wetland 11 in the Middle Reach AA would result in the permanent loss of 338 LF of stream channel, enhancement of 370 LF of stream channel, temporary loss of 6,949 SF (0.16-acre) of PSS wetlands, and enhancement of 7,878 SF (0.181-acre) PSS wetlands (see Table 5). Project actions would result in up to 7,871 SF (0.181-acre) of surface disturbance, 537 CY of dredge, and 60 CY of fill within delineated wetlands (see Table 6).

Wetland 14 is a 0.04-acre PSS riparian wetland habitat hydrologically supported by 800 LF of **Alder Spring Creek** in the Mid Reach AA. Generally, the wetland habitat and stream channel are in good functioning condition and there is minor alteration in the form of an abandoned road crossing and some livestock use. The abandoned crossing should be removed (RC2) and 225 LF of stream channel regraded (RES4, 5) to improve in-stream conditions. This segment of the creek has been hydrologically isolated

from upper Alder Spring Creek and the larger Wetland 17 complex. Reestablishment of the hydrologic connection (RES6) will greatly benefit this riparian habitat, likely resulting in the conversion of the upland habitat downstream, to a wetland habitat leading to functional uplift (HE6). Additionally, the existing 0.04 acre wetland habitat will undergo riparian planting to establish wetland plants and encourage the expansion of the riparian wetland habitat (RES2).

A 118 LF segment of Alder Spring Creek is going to be created in uplands to re-route hydrology north, into Big Springs Creek. The new stream channel will include a pool, riffle, run complex (CH2) and in-stream elements (HE1) to provide fish habitat. This re-route and subsequent abandonment of the existing stream channel will not constitute a loss of riverine habitat since the current degraded condition of the stream channel lacks any morphological characteristics of a jurisdictional stream such as discernible bed and banks or an ordinary high water mark.

Implementation of project actions at Alder Spring Creek and Wetland 14 in the Middle Reach AA would result in the restoration of 225 LF of stream channel and restoration of 1,526 SF (0.035-acre) PSS wetlands (see Table 5). Project actions would result in up to 71,526 SF (0.035-acre) of surface disturbance, 33 CY of dredge, and 5 CY of fill within delineated wetlands (see Table 6).

Wapiti Spring forms **Wetland 15,** a 1,135 SF (0.026-acre) isolated PSS wetland. This wetland will be excavated (84 CY), filled with gravel and drain rock (84 CY), and piped into the mid reach of Alder Springs Creek, further improving the hydrologic condition of that habitat. During the excavation process, herbaceous wetland sod and live woody material will be harvested and used for revegetating areas planned for reclamation and enhancement actions (RC4). However, since this conversion is necessary for the construction of a driveway into the main residence planned for the development, this loss will be considered permanent.

Big Springs Creek from the lowest main spring down to where the main access road crosses the creek (approximately 558 LF), the creek channel and associated **Wetland 19** are larger and more well defined than other aquatic habitats is the Project area. Here, the creek supports a more intact and functional floodplain. The riparian wetland habitat is characterized by a decadent stand of hawthorn and willow with an understory consisting mostly of bare ground. Areas of impounded or otherwise slow-moving water resulting from livestock trampling and subsequent bank erosion are present at several locations along the stream. Many of these areas, if not shadowed by the PSS riparian wetland are choked with dense stands of watercress and polygonum, creating poor fish habitat. At the lowest point of the AA, the creek is conveyed under the main access road and impounded creating a 120 LF and 690 SF shallow pond. Existing hydrologic conveyance is significantly impaired by this impoundment and sediment has filled the small pond.

Project actions for this segment of Big Springs Creek and Wetland 19 include mechanically thinning the decadent PSS habitat to emulate natural disturbance (wildfire) (HE2). The stream channel is significantly modified in some places. These area should undergo sediment removal work (RES4), and the banks should be stabilized (RES5). Given the floodplain is large enough in the mid reach to incorporate a broader stream complex, channel realignment and restoration actions such as creating a single pool, riffle, run complex (CH2), increasing stream sinuosity (CH3), adding in-stream habitat elements (HE1), and possibly constructing a side channel (CH1) would all lead to functional uplift (HE6) of the stream and riparian corridor as well as creating fish habitat currently absent from this stream segment.

The overall GTR Project plans to construct an elevated bridge across Big Springs Creek which will greatly improve hydrologic connectivity (RES6). Finally, the impoundment should be removed (RC2) and a stream channel reestablished into a pool, riffle, run complex (CH2) with riparian vegetation planting (RES2) and upland buffer strips (HE4).

Implementation of project actions at Big Springs Creek and Wetland 19 in the Middle Reach AA would result in the restoration of 120 LF of stream channel, enhancement of 558 LF of stream channel, and restoration of 13,300 SF (0.305-acre) PSS wetlands (see Table 5). Project actions would result in up to 13,300 SF (0.305-acre) of surface disturbance, 140 CY of dredge, and 50 CY of fill within delineated wetlands (see Table 6).

More stream channel may be created during the construction process as indicated in the above prescription, further improving the functional condition of Big Springs Creek and the associated riparian wetland habitat in this AA.

Pole Creek Diversion is a planned riverine aquatic feature designed to convey seasonal flow from Pole Creek, which GTR has existing water right to in order to create a new stream channel where wetlands temporarily impacted by construction of Lake Washakie can be transferred to and reestablished. Additionally, the newly created stream channel will be used to convey water to Lake Washakie via Big Springs Creek to support the lacustrine and wetland riparian habitats downstream.

The Pole Creek Diversion will be constructed to convey water from the main-stem Pole Creek under S1000W via a buried 18 inch steel pipe approximately 900 LF where it will then be day lighted into the newly created stream channel. The diversion structure and associated pipe will be permitted at a later date under a separate permit application.

The Pole Creek Diversion stream channel will be constructed south of the main access road and will run west from the point of daylighting approximately 1,187 LF before merging with the existing Lower Big Springs Creek channel (see Attachment C, sheet 3 of 3). The Pole Creek Diversion channel is designed to emulate the reference stream segment at Lower Big Springs Creek (see Lower Reach AA) and is sized to convey half the volume of water the reference segment would fully contain, approximately 10 cubic feet per second (CFS). See Attachment D – Reference Stream Segment Typical Cross Section.

The existing water rights allow GTR to draw from Pole Creek at a rate of 2 cfs during the irrigation season, which is defined in the IDWR water right as April 15th through October 31st. Based on this allotted time frame, the newly-constructed stream channel is expected to lack surface water through the latter part of the fall and into early spring. This seasonal hydrologic regime may not be suitable for the establishment and persistence of herbaceous wetlands or obligate willows but will be well-suited for the establishment and persistence of a facultative wetland riparian habitat closely resembling the habitat surrounding Big Springs Creek. The riparian zone around the constructed stream would be planted with live rootwads from Douglas hawthorn (*Crataegus douglasii),* live willow stakes (*Salix bebianna and exigua)*, and live root-stock from narrowleaf cottonwood (*Populus angustifolia*) relocated from wetland habitats impacted by construction of Lake Washakie. It is anticipated that once established, the riparian corridor along Pole Creek Diversion will develop hydric soils and an 11,000 SF (0.253-acre) facultative PSS wetland that may trend towards a forested riparian wetland over time.

Table 5 Middle Reach AA Aquatic Resources and Anticipate Results from Project Actions

Middle Reach Action Area																			
Aquatic Resource					Area of Effect														
Name	Type	Extent			Permanent Loss			Temporary Loss*			Restoration			Enhancement			Creation		
		SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF
Wetland 5	PSS	4200	0.096					1641	0.038		2589	0.059							
Wetland 7	PSS	2768	0.064					2107	0.048					702	0.016				
Wetland 9	PSS	5834	0.134					5834	0.134										
Wetland 11	PSS	148237	3.403					6949	0.160					7878	0.181				
Wetland 14	PSS	1526	0.035								1526	0.035							
Wapiti Spring/Wetland 15	PSS	1135	0.026		1135	0.026													
Wetland 19	PSS	13990	0.321								690	0.016		13299	0.305				
Pole Creek Diversion Wetlands	PSS																00	0.253	
Thoughtful Spring Creek	Riverine			514						388			277						
Twin Springs Creek	Riverine			288			168									120			
Forgotten Spring Creek	Riverine			428			366									62			
Smith Springs Creek	Riverine			708			338									370			
Alder Spring Creek	Riverine			800									225						118
Big Springs Creek	Riverine			530									120			558			
Pole Creek Diversion	Riverine																		1187
SUBTOTAL	**Riverine**			3,268			872			388			622			1,110			1,305
	Lacustrine																		
	PEM																		
	PSS	163700	3.76		1135	0.03		16531	0.38		4805	0.11		21879	0.50		11000	0.25	
GRAND TOTAL		**163,700**	**3.76**	**3,268**	**1,135**	**0.03**	**872**	**16,531**	**0.38**	**388**	**4,805**	**0.11**	**622**	**21,879**	**0.50**	**1,110**	**11,000**	**0.25**	**1,305**

NOTES: SF=Square Feet, LF=Linear Feet, PEM=Palustrine Emergent, PSS=Palustrine Scrub-shrub, *Aquatic resources temporarily lost will be relocated to the riparian wetland habitat around Lake Washakie, Pole Creek Diversion, and to the area between the Lake Washakie embankment and the northern property line planned for creation and uplift.

Table 6 Middle Reach AA Extent of Dredge and Fill

Middle Reach Action Area						
Resource Impacted	Project Action	Max Area of Impact			Max Volumes (cubic yards)	
		Square Feet	Acres	Linear Feet	Dredge	Fill
Thoughtful Spring Creek	RES2,4,5, CH3	600	0.014	300	45	0
Wetland 5	RES2,4	1641	0.038		5	
Thoughtful Spring Creek*	Excavation	388	0.009	388	**	
Wetland 5*	Excavation, RC4	2589	0.059		200	
Twin Springs Creek	CH3, RES2,4,5	240	0.006	120	20	10
Wetland 7	RES2, RC4	702	0.016		5	
Twin Springs Creek*	Excavation	168	0.004	168	**	
Wetland 7*	Excavation, RC4	2107	0.048		160	
Forgotten Spring Creek*	Excavation		0.000	366	**	
Wetland 9*	Excavation, RC4	5834	0.134		450	
Smith Springs Creek	CH2,3	740	0.017	370	27	50
Wetland 11	HE2, RES2, RC4	7871	0.181		10	10
Smith Springs Creek*	Excavation	776	0.018	388	**	
Wetland 11*	Excavation, RC4	6949	0.160		500	
Alder Spring Creek	RES4,5	450	0.010	225	15	5
Wetland 14	RC2, RC4	1526	0.035		18	
Wetland 15	Excavation, RC4	1135	0.026		84	84
Big Springs Creek	RES4,5, CH1,2,3, HE1,	1600	0.037	800	120	50
Wetland 19	RES2, RC2, CH2	13989	0.321		20	
	TOTAL	**49,305**	**1.13**	**3,125**	**1,679**	**209**

NOTES: *Temporary loss due to excavation of Lake Washakie, **dredge accounted for in associated wetland

Forecasted Functioning Condition

Following implementation of project actions, relative scoring of the function and value variables for this AA determined these wetlands classify as "Category 2 Wetlands" with 11.0 possible functional points and 7.4 actual functional points, which cumulatively account for 6.22 functional units, representing 67% of the possible functions and values score. Table 7 provides a comparison of existing versus forecasted functional conditions.

Table 7 Existing vs Forecasted Functional Condition in the Middle Reach AA

Middle Reach AA			
Assessment Variable	**Existing Functional Condition**	**Forecasted Functional Condition**	**Results**
Possible Functional Points	7.00	11.00	+4.00
Actual Functional Points	2.85	7.40	+4.55
Functional Units	2.00	6.22	+4.22
Percent Possible Score	40%	67%	+27%
Wetland Category	3	2	Upgrade

Lower Reach Action Area

Aquatic resources currently present in the Lower Reach AA include Rocky Spring Creek, Thoughtful Spring Creek, Forgotten Spring Creek, Smith Spring Creek, Big Spring Creek, and Sedge Spring, as well as Wetlands 1, 3, 4, 10, 13, 18, and 20 which cumulatively totals 2,123 LF of riverine habitat and 0.82 acre of wetland habitats.

Existing Functioning Condition

Relative scoring of the function and value variables for this AA determined these wetlands classify as "Category III Wetlands" with 9.00 possible functional points and 3.05 actual functional points, which cumulatively account for 2.56 functional units, representing 33% of the possible functions and values score.

Project Actions

Lake Washakie

The Classification of Wetlands and Deepwater Habitats of the United States suggests the boundary between wetland and deepwater habitats in a lacustrine systems generally occurs at a depth of 2.5 meters or 8.2 feet (Federal Geographic Data Committee, 2013). This depth was selected because it approximates the maximum depth to which emergent plants normally grow (Welch, 1952; Zhadin and Gerd, 1963; Scuthrope, 1967) and the depth beyond which soil does not occur (Soil Survey Staff, 1999).

This widely accepted approximation differentiating a wetland habitat from a lacustrine habitat is an important distinction because the periphery of the 3.94-acre Lake Washakie will be planted with herbaceous and woody material salvaged from existing wetland temporarily displaced by construction of the lake to construct a diverse riparian wetland habitat consisting of native endemic species.

Based on analysis of Lake Washakie final grading plans, the target OHWM will be maintained at approximately 6,234 feet above mean sea level. At that elevation, approximately 1,900 linear feet of the

proposed lake shore is available for replacing the wetland habitats temporarily displaced by construction of the lake. The riparian area will be designed to emulate a natural wetland habitat and will be planted with obligate and emergent plant species below the OHWM to a depth of approximately 8 vertical feet resulting in the creation of a 39,335 SF (0.90-acre) of emergent-aquatic and PEM wetlands. Woody shrub and tree species temporarily displace by construction of the lake would be planted landward from the OHWM no more than 6 horizontal feet and 4 vertical feet resulting in the creation of up to 16,766 (0.385-acre) of PSS wetlands. Upland buffers would be installed (HE4) landward of the wetland habitats to enhance species diversity and mitigate the establishment of non-native invasive plant species.

It is expected that some variation in surface and subsurface hydrology will ultimately determine where and to what extent the newly-created PEM and PSS habitats will persist. During the planting phase, herbaceous and woody species would be blended at their interface to anticipate a range of suitable growing conditions. Through natural succession, fine-tuning of the surface water elevation via outfall gates at the lake embankment, and adaptive management activities (i.e. supplemental planting, supplemental irrigation, and weed control), the wetland habitats are expected to normalize and persist in perpetuity, especially given the primary source of hydrology supporting the lacustrine system and associated riparian wetland habitats comes from the perennial springs flowing into the lake.

Construction of Lake Washakie, including the associated embankment, access road, and outfall structures in the Lower Reach AA would result in the permanent and temporary loss of wetlands and riverine habitats (described below with each respective aquatic habitat), creation of a 2.55-acre lacustrine habitat, creation of wetland riparian habitats for replacement of wetlands temporarily displaced including 39,335 SF (0.90-acre) emergent-aquatic and PEM wetlands and 16,766 (0.385-acre) of PSS wetlands (see Table 8). Project actions would result in up to 307,535 SF (7.0 acres) of surface disturbance and excavation of approximately 145,000 CY (see Table 9). Note that the extent of surface disturbance and excavation are for the entire lake, embankment, and associated access road. Specific surface disturbance, dredge, and fill extents impacting delineated wetlands are described under each aquatic resource section below.

Maintenance Flows

Based on the IDWR Pond Loss Calculation conducted for the project, the loss to evaporation of 6.2 acre feet per year requires a minimum maintenance flow of 0.02 cfs to offset that loss. Excavation of the lake is expected to intercept groundwater and therefore, no loss to infiltration is expected. In addition, existing water rights downstream of the project area require a minimum outflow of 0.6 cfs to be maintain statutory water rights requirements during the irrigation season.

The volume of all creeks measured by wetland scientists at the northern property boundary during the spring and summer of 2021 averaged approximately 0.8 cfs. The two embankment outfall structure are designed to convey, at minimum the existing average spring flow volume to maintain hydrology sufficient to support existing wetlands north of the property boundary and to provide the statutory water rights flow requirements.

Rocky Spring and associated **Wetland 1** occur in the western Project vicinity, abutting the northern property boundary. Livestock use of the spring source and associated riparian wetland habitat has resulted in moderate bank erosion and subsequent sedimentation to the stream channel as well as reduced riparian vegetation vigor and prevalence. Overall this aquatic habitat is in moderate functioning

condition. Recommended actions include stream bank stabilization (RES5) and replanting riparian vegetation (RES2), as well as site preservation (SP5) by installing exclusionary fencing (SP1 or SP2).

Implementation of project actions at Rocky Spring Creek and Wetland 1 in the Lower Reach AA would result in the enhancement of 90 LF of stream channel and 1,689 SF (0.39-acre) PSS wetlands (see Table 8). Project actions would result in up to 1,689 SF (0.39-acre) of surface disturbance and 9 CY of dredge within delineated wetlands (see Table 9).

Wetland 3 consists of a 0.58-acre mesic meadow PEM wetland hydrologically supported by Thoughtful Spring, Twin Springs, and Forgotten Spring. The wetland is likely a result of a failed impoundment of Thoughtful Spring Creek and Smith Spring Creek that were not maintained resulting in the creeks migrating out of bank and into the meadow down gradient towards the northern Project property line. The wetland is dominated by sedges with a few scattered willows and hawthorn shrubs along the lower segments of the aforementioned streams. Approximately 0.09-acre of Wetland 3 will be temporarily displaced resulting from construction of Lake Washakie. However, the wetland herbaceous sod will be selectively harvested and stockpiled (RC4) for future installation around Lake Washakie (see below). Wetland sod and other wetland material harvested from Wetland 3 will be kept wet during construction of the lake to maintain viability for future planting.

Construction of Lake Washakie is expected to alter the existing hydrology supporting Wetland 3 resulting in hydrologic conditions more suitable for PSS wetlands. In anticipation of this expected shift in hydrology and in light of planned creation and reestablishment of the lowest reach of Thoughtful Spring Creek (see below), 0.48-acre of the existing Wetland 3 habitat will be enhanced by introducing microtopography features and installing live willow stakes, root wads, and woody components harvested from the project area, effectively uplifting the wetland habitat from PEM to PSS (HE6).

Implementation of project actions at Wetland 3 in the Lower Reach AA would result in the temporary loss of 3,898 SF (0.089-acre) PEM wetlands, and enhancement of 21,208 SF (0.487-acre) PEM wetlands to uplift them to PSS wetlands (see Table 8). Project actions would result in up to 21,208 SF (0.487-acre) of surface disturbance, 30 CY of dredge (assuming the wetland habitat and associated soils extend 2 feet below the ground) and 30 CY of fill within delineated wetlands (see Table 9).

Thoughtful Spring Creek consists of a small, undeveloped channel approximately 12 inches wide and 6 inches deep running generally north for a distance of 370 LF from the confluence of Twin Springs Creek to the northern property boundary. In addition to the 388 LF of creek temporarily impacted in the Mid Reach AA, 227 LF of the existing creek channel in the Lower Reach AA will also be temporarily impacted from excavation of the lake.

The western lake outfall is approximately at the same location of the existing Thoughtful Spring Creek channel. Here, the existing stream segment would undergo channel realignment and reconfiguration to create a new stream channel designed to emulate the reference stream segment of Big Springs Creek. Proposed project actions include the construction of a new stream segment that incorporates a pool, riffle, run complex (CH2), channel sinuosity (CH3), established bed and banks, in-stream habitat elements (HE1) and riparian wetland habitats (RES2). The newly created stream segment would provide hydrology necessary to support the creation of new PSS wetlands north of the planned lake (see Northside Wetland below), support Wetland 3, and provide perennial hydrology to maintain the integrity of existing wetlands north of the property boundary. Creation of this new stream segment will

result in the conversion of 0.01 acres of existing Wetland 3 into a riverine habitat and will not only replace the 665 LF of stream channel temporarily displaced by Lake Washakie, it will also lead to the creation of 236 LF of new stream channel.

Forgotten Spring Creek consists of a 260 LF riverine habitat in the Lower Reach AA. The entire stream segment will be permanently lost resulting from construction of Lake Washakie resulting in up to 260 SF (0.006-acre) surface disturbance and approximately 10 CY of dredge in delineated wetlands.

Wetland 4/Sedge Pond is an approximately 1,610 SF (0.037-acre) PEM wetland habitat formed as a result of prior impoundment of the Thoughtful Spring Creek channel. This anthropogenic wetland feature will play an important role during construction of Lake Washakie. As described under Temporary Work Areas, Wetland 4 and the associated Sedge Pond will be utilized two fold. First, the site will be used as a sediment catchment for water diverted from Thoughtful Spring Creek, Twin Spring Creek, and Forgotten Spring Creek during excavation of the lake. The pond is perfectly suited for capturing, attenuating, and filtering sediment mobilized during the construction process. Second, the pond and outfall area, hydrologically supported by the aforementioned perennial creeks will be utilized as stockpile sites for wetland herbaceous sod and woody material harvested from the lake impact area. These areas are particularly well-suited for stockpiling of live wetland materials given the presence of water which will preserve the integrity of the harvested material prior to installation around Lake Washakie or at other restoration/enhancement/creation areas on site. Temporary fill from stockpiling harvested wetland material will result in a temporary discharge of dredged material in the entire wetland. These temporary fills will be removed and the terraced pond retained in the current configuration. Finally, following removal of temporary fills, the upland berms and existing embankment will be removed to bring the surface elevation down to the match existing ground surface elevation (RC2) and the entire 0.037-acre wetland will be planted with willow cuttings to uplift the habitat from PEM to PSS (CH6).

Implementation of project actions at Wetland 4 in the Lower Reach AA would result in the temporary fill of the entire 0.037-acre wetland (staging harvested wetland material), temporary loss of 0.037-acre of PEM wetlands, and enhancement of 1,610 SF (0.037-acre) PEM wetlands to uplift them to PSS wetlands (see Table 8). Project actions would result in up to 1,610 SF (0.037-acre) of surface disturbance, 120 CY of temporary fill (stockpiled material) and 120 CY of dredge (removal of existing infrastructure) within delineated wetlands (see Table 9).

Smith Springs Creek and associated **Wetland 10** consist of approximately 203 LF of riverine habitat and 3,356 SF (0.077-acre) PEM wetland habitat within the Lower Reach AA. Construction of Lake Washakie will result in the permanent loss of a portion of the riverine habitat and temporary displacement of the entire PEM wetland. The herbaceous wetland sod and top soil as well as live willow stakes and root wads excavated/harvested from the wetland will be stockpiled for use in revegetating areas undergoing restoration and enhancement actions (RC4). Additionally, 27 LF of existing riverine habitat will be restored to convey maintenance flows from the Lake Washakie East Outlet into wetlands north of the property boundary (see Maintenance Flows below).

Implementation of project actions at Smith Springs Creek and Wetland 10 in the Lower Reach AA would result in the permanent loss of 175 LF of riverine habitat, temporary displacement of the entire 3,356 SF (0.077-acre) PEM wetland habitat, and restoration of 27 LF of riverine habitat (see Table 8. Project

actions would result in up to 3,356 SF (0.077-acre) of surface disturbance, and 250 CY of dredge within delineated wetlands (see Table 9).

Wetland 13 consists of a 0.045-acre PEM wetland that formed as a result of hydrology from lower Alder Spring Creek being impounded by the main access road. The entirety of this wetland will be temporarily displaced resulting from excavation of Lake Washakie. The 145 CY of herbaceous wetland sod and top soil as well as live willow stakes and root wads excavated/harvested from the wetland will be stockpiled for use in revegetating areas undergoing restoration and enhancement actions (RC4) (see Table 9).

Sedge Spring and associated **Wetland 18** make up a small, isolated PEM wetland complex situated northwest of Big Springs Creek in a stand of aspen at the edge of a small meadow. The wetland is dominated by sedges and has a "bulged" profile (from ground water upwelling) with a small open water area, approximately 3 feet in diameter. The composition of this wetland is consistent with a montane fen which are relatively rare. This site should be preserved in its existing condition (SP5). Exclusionary fencing here is recommended, mostly for the safety of property visitors as the open water component is over 4-feet deep and could be a hazard to children and pets (SP1).

Wetland 20 is a small isolated PEM wetland associated with a small spring upwelling from the toe of a wooded slope. This habitat is well away from the larger aquatic habitats and spring complexes and is not hydrologically connected. It is recommended that the spring and PEM habitat simply be preserved in its current condition (SP5).

Lower Big Springs Creek consists of a narrow riverine habitat surrounding a riparian habitat does not qualify as a wetland habitat but does support a diverse assemblage of riparian vegetation. From the bottom of the existing Big Springs Creek impoundment (discussed in the Mid Reach AA), Lower Big Springs Creek flows generally northwest until reaching the northern property boundary; a distance of approximately 1,155 LF and a drop of approximately 45 vertical feet. The creek channel in this lower reach is well defined having discernible bed, banks, and OHWM. The active channel, measured at the OHWM by wetland scientists at several sample locations averaged 24 inches wide by 8 inches deep. Based on these channel dimensions, the channel could conceptually convey up to 20 cubic feet of water per second. This section of Big Springs Creek serves as a **reference stream segment** to base design parameter on when implementing other stream channel reconfiguration and enhancement actions, specifically at Lower Thoughtful Spring Creek and the Pole Creek Diversion channel. See Attachment D – Reference Stream Segment Typical Cross Section

The lower 565 LF of Big Springs Creek will be permanently impacted resulting from construction of Lake Washakie. The remaining 593 LF of Big Springs Creek not impacted by the lake construction would benefit from the addition of a single pool, riffle, run complexes (CH2), meanders (CH3), and in-stream habitat elements (HE1) to enhance the aquatic habitat for fish, macroinvertebrates, and amphibians. Project actions applied here would be minimized to an area within 4 feet of the existing channel centerline to preserve the existing riparian habitat.

Implementation of project actions at Lower Big Springs Creek and Wetland 10 in the Lower Reach AA would result in the permanent loss of 175 LF of riverine habitat, temporary displacement of the entire 3,356 SF (0.077-acre) PEM wetland habitat, and restoration of 27 LF of riverine habitat (see Table 8). Project actions would result in up to 3,356 SF (0.077-acre) of surface disturbance, and 250 CY of dredge within delineated wetlands (see Table 9).

Northside Wetland

Construction of Lake Washakie and the associated embankment is expected to affect the hydrologic conditions north of the embankment. During the design phase, Project engineers and wetland scientists worked to incorporate outfall structures in the embankment design thereby providing GTR a means to control hydrologic conditions north of the embankment. The outfall structures were strategically sited to tie in to existing stream channels, specifically the existing Thoughtful Spring Creek and Big Springs Creek. In addition to conveying maintenance flows from the embankment into the newly created Thoughtful Spring Creek, minor modification of site topography and installation of live willow stakes, hawthorn root wads, large woody debris, and cottonwood rhizomes salvaged from existing wetlands is expected to result in a functional uplift (HE6) of the remaining 0.48 acres of Wetland 3 not affected by project actions.

Additionally, 0.76 acres of non-wetland habitat between the embankment and northern property boundary will benefit from these project actions which will be implemented with the intent of converting existing uplands to PSS wetland habitats. Combined with the area of uplift, project actions north of the lake embankment will create an approximately 1.24-acre contiguous PSS wetland habitat with a perennial riverine habitat (Thoughtful Spring Creek) running through it.

To provide greater assurance that project actions will be successful at establishing PSS wetlands north of the embankment, supplemental watering (RC6) can be applied by pumping or syphoning from the adjacent lake to make sure the newly created habitats survive through the establishment phase (1-2 years).

Creation of the Northside Wetland will only affect non-wetland/upland areas and therefore no impacts to aquatic resources will result.

Table 8 Lower Reach AA Aquatic Resources and Anticipate Results from Project Actions

Lower Reach Action Area																			
Aquatic Resource					Area of Effect														
Name	Type	Extent			Permanent Loss			Temporary Loss*			Restoration			Enhancement			Creation		
		SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF
Rocky Spring/Wetland 1	PSS	2142	0.049											1689	0.039	90			
Wetland 3	PEM	24949	0.573					3898	0.089					21208	0.487				
Wetland 4/Sedge Pond	PEM	1610	0.037											1610	0.037				
Wetland 10	PEM	3356	0.077					3356	0.077										
Wetland 13	PEM	1967	0.045					1967	0.045										
Sedge Spring/Wetland 18	PEM	1395	0.032																
Wetland 20	PEM	316	0.007																
Northside Wetland	PSS																35003	0.804	
Lake Washaki	PEM																39335	0.903	
Lake Washaki	PSS																16766	0.385	
Rocky Spring Creek	Riverine			135												88			
Thoughtful Spring Creek	Riverine			370						227			227						236
Forgotten Spring Creek	Riverine			260			260												
Smith Springs Creek	Riverine			203			175						27						
Lower Big Springs Creek	Riverine			1155			565									593			
Lake Washaki	Lacustrine																111265	2.554	
SUBTOTAL	**Riverine**			2,123			1,000			227			254			771			236
	Lacustrine																111265	2.55	
	PEM	33593	0.77					9221	0.21					22818	0.52		39335	0.90	
	PSS	2142	0.05											1689	0.04		51769	1.19	
GRAND TOTAL		**35,735**	**0.82**	**2,123**			**1,000**	**9,221**	**0.21**	**227**			**277**	**24,507**	**0.56**	**771**	**202,369**	**4.65**	**236**

NOTES: SF=Square Feet, LF=Linear Feet, PEM=Palustrine Emergent, PSS=Palustrine Scrub-shrub, *Aquatic resources temporarily lost will be relocated to the riparian wetland habitat around Lake Washakie, Pole Creek Diversion, and to the area between the Lake Washakie embankment and the northern property line planned for creation and uplift.

Table 9 Lower Reach AA Extent of Dredge and Fill

Lower Reach Action Area						
Resource Impacted	Project Action	Max Area of Impact			Max Volumes (cubic yards)	
		Square Feet	Acres	Linear Feet	Dredge	Fill
Rocky Spring	RES5	180	0.004	90	8	
Wetland 1	RES2,5	1689	0.039		**	
Wetland 3	HE6	21208	0.487		30	30
Wetland 3*	Excavation, RC4	3898	0.089		290	
Wetland 4/ Sedge Pond	RC2,4, HE6	1610	0.037		120	120
Wetland 10*	Excavation, RC4	3356	0.077		250	
Smith Springs Creek	Excavation	230	0.005	203	**	
Wetland 13*	Excavation, RC4	1967	0.045		145	
Forgotten Spring Creek	Excavation	260	0.006	260	**	
Lower Big Springs Creek*	Excavation, RC4	1130	0.026	565	42	
Lower Big Springs Creek	RES2, CH2,3,HE1	1186	0.027	593	40	100
Thoughtful Spring Creek*	Excavation, RC4	454	0.010	227	16	
Lake Washakie	Excavation	307535	7.060		**	
	TOTAL	**344,703**	**7.91**	**1,938**	**941**	**250**
NOTES: *Temporary loss due to excavation of Lake Washakie, **dredge accounted for in associated wetland						

Forecasted Functioning Condition

Following implementation of project actions, relative scoring of the function and value variables for this AA determined these wetlands classify as "Category 2 Wetlands" with 11 possible functional points and 8.6 actual functional points, which cumulatively account for 9.21 functional units, representing 78% of the possible functions and values score. Table 10 provides a comparison of existing versus forecasted functional conditions.

Table 10 Existing vs Forecasted Functional Condition in the Lower Reach AA

Lower Reach AA			
Assessment Variable	Existing Functional Condition	Forecasted Functional Condition	Results
Possible Functional Points	9.00	11.00	+2.00
Actual Functional Points	3.05	8.60	+5.55
Functional Units	2.56	9.21	+6.65
Percent Possible Score	33%	78%	+45%
Wetland Category	3	2	Upgrade

Box 13b and 13c: Environmental Considerations

Threatened, Endangered, and Candidate Species

The United States Fish and Wildlife Information for Planning and Consultation (IPaC) database was queried for the Project area to determine if species protected under the Endangered Species Act (ESA) occur in the project vicinity or have designated critical habitat within the project area. The database query identified three (3) species listed under the ESA including Canada Lynx (*Lynx Canadensis*), Grizzly Bear (*Ursus arctos horribilis*), and Monarch Butterfly (*Danaus plexippus*) that are known to occur in the area (See Attachment G – IPaC Report). The IPaC database indicated that there is no designated critical habitat in the Project area. Further, while the Project area does include habitat suitable for Canada lynx and grizzly bear, the proposed project actions would not be of the nature or extent that would diminish the value of habitat in the project area, nor would implementation of project actions result in the direct or indirect take of individuals. Therefore, project actions would have **No Effect** on Canada lynx or grizzly bear.

During the aquatic resource delineation conducted for the project, a robust plant species list was generated. Monarch butterfly are dependent on milkweed for their larval life-stage and without it, they cannot occur. No species of milkweed were observed during the aquatic resource delineation, as documented in the delineation report. Further, no monarch butterfly individuals were observed during the delineation effort and follow-up water monitoring. Therefore, project actions would have **No Effect** on monarch butterfly.

Cultural and Historic Resources

A Class I records search was conducted February 22, 2022 for the Project to identify any known cultural and/or historic resources in the Project area. The Class I records search determined that no previously recorded resources occur within the Project area and demonstrated only a limited number of cultural resources occur in the search area outside the project area. See Attachment H - Class 1 Records Request Results.

Areas proposed for project actions are all significantly disturbed resulting mainly from livestock trampling and subsequent erosion. This degree of disturbance and site degradation has altered the natural landform extensively across the project area. These disturbances, in conjunctions with relatively steep slopes and natural drainages exhibiting extensive erosion limit the potential for identifying intact sediments and buried deposits.

During the aquatic resource delineation effort, the senior wetland scientist, who has worked alongside senior archaeological staff on multiple projects, and is familiar with cultural resources including lithic scatters, projectile points, historic trash dumps, and historic structures/infrastructure, observed no artifacts in or evidence of pre-historic or historic occupation of the project area.

Additionally, as a component of the aquatic resource delineation field investigation, a total of 43 soil test pits were excavated in the areas proposed for project actions. Each test pit and soil profile were examined closely to determine soil color and composition which requires dissection of the soil profile. During examination of these soil pit tests, the wetland scientists did not observe any cultural materials

in the stratigraphy of the test pits or within the matrix removed for analysis. The lack of cultural materials within these soil test pits further demonstrates the probability that intact cultural materials are not likely to exist within the project area.

Based on these contributing factors (records search, extensive disturbance, site investigation, and shovel testing), we feel confident that there is a low likelihood of intact cultural materials occurring either on the surface or below the surface within the project area. Additional development within the project area has a low probability of exposing long-term pre-historic or historic occupations. Further cultural investigations of the project area would be redundant, outside of the expectations and wishes of the private property landowner, and beyond the scope of this project. Therefore, it is the professional opinion of the project archaeologist that additional site investigation is not warranted.

Box 17: Avoidance, Minimization, and Compensation

During the aquatic resource delineation, wetland scientists identified aquatic resources in the project area that are regionally rare or which are currently in exceptionally high functioning condition. These aquatic resources include Viejo Spring, Wetland 6, Forgotten Spring, Wetland 17, and Sedge Spring. These aquatic resources are planned for avoidance and in some circumstances may be protected from future impacts via installation of fencing.

Project actions proposed to restore and enhance existing aquatic resources will be limited to the smallest extent of surface disturbance practicable to successfully implement project actions. Where streams will undergo minor dredging to remove sediment, add meanders or where stream banks will be recontoured to install stabilization measures, the extent of surface disturbance will be limited to no more than the track-width of a mini excavator, which is the optimal piece of equipment to implement project actions, approximately 8-10 feet. Excavation for these minor stream improvements would be limited to the dimensions of the bucket approximately 2 feet to a depth of approximately 1-2 feet deep. In circumstances where a pool-riffle-run complex is added to a stream or where a wetland would undergo recontouring to improve site conditions, there may be a greater area of disturbance. However, this area would be limited to the smallest extent necessary to implement project actions.

Where an aquatic resource will be temporarily displaced resulting from construction of Lake Washakie, wetland sod, root wads, and woody material will be excavated and harvested carefully, being mindful to not compromise the integrity of the material via compaction, or most importantly, via desiccation.

To compensate for the temporary loss of aquatic habitats, all wetlands will be re-established in their entirety in new areas undergoing treatment. In some cases, wetland sod may be portioned out and used across a larger area, resulting in the re-establishment of a wetland across a greater area than what was impacted. Stream segments temporarily lost to development of the Project will be replaced to the extent practicable with the space available. However, it is anticipated that there will be a minor net-loss of stream channel; approximately 360 LF. This loss of stream channel and associated functions and services is compensated for via the restoration of 1,382 LF and enhancement of 1,882 LF of the existing riverine habitats throughout the Project area.

Box 18: Proposed Mitigation

The GTR project would result in the permanent loss of 3,829 SF (0.088-acre) wetland habitat, which is less than the standard 0.10-acre threshold requiring compensatory mitigation. Therefore, no wetland mitigation is proposed.

Permanent loss of 1,902 LF of stream channel will result from implementation of project actions. This permanent loss would be compensated through creation of 1,541 LF of new stream channel resulting in a net loss of 361 LF. Project actions focused on restoring 1,686 LF and enhancing 1,881 LF of existing stream channel would compensator for the permanent loss of stream channel functions and values. Therefore, no stream mitigation is proposed.

Table 11 below summarizes the total permanent loss of wetland habitats resulting from development of the Project and permanent loss of riverine habitat resulting from implementation of project actions.

Table 11 Permanent Loss of Aquatic Resources

Name	Type	Extent		
		LF	SF	Acres
Permanent Loss from the GTR Development				
Wapiti Spring/Wetland 15	PSS		1135	0.03
Wetland 16	PEM		1593	0.04
Wetland 17	PSS		1101	0.03
Permanent Loss from Implementation of Project Actions				
Alder Spring Creek	Riverine	30		
Twin Springs Creek	Riverine	168		
Forgotten Spring Creek	Riverine	626		
Smith Springs Creek	Riverine	513		
Big Springs Creek	Riverine	565		
	TOTAL	**1,902**	**3,829**	**0.088**

Notes: LF=Linear Feet, SF=Square Feet, PSS=Palustrine Scrub Shrub, PEM=Palustrine Emergent

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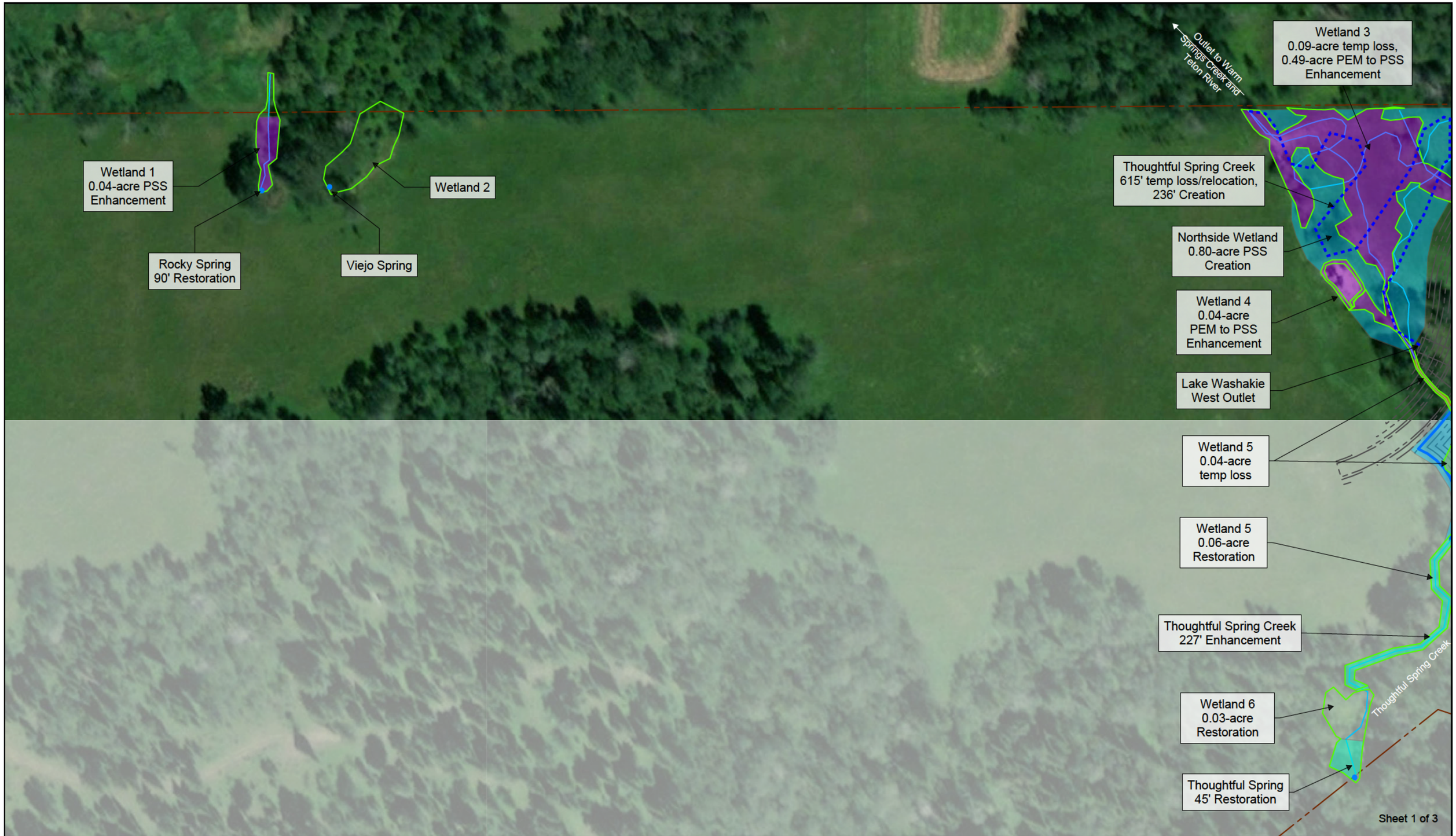
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Attachment C – Project Action Plan



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Attachment C
Project Action Plan

Existing Wetlands
Existing Streams
Pond Edge of Water
Project Features
Property Boundary
Enhanced
Perm Loss
Temp Loss
New Creek Alignment
Restoration
Creation
Spring

Applicant: Good Timber Ranch, LLC.
NWW No: NWW-2021-303-102
Watershed: Trail Creek -Teton River
Proposed Action: Aquatic Resources Restoration, Enhancement, and Creation
Lat: N 43.5691213 Long: W -111.127372

Thoughtful Spring Creek 615' temp loss/relocation, 236' Creation

Wetland 3 0.47-acre PEM to PSS Enhancement

Wetland 3 0.09-acre temp loss

Wetland 10 0.08-acre temp loss

Lake Washaki Embankment and Access Road

Lake Washakie East Outlet

Lake Washakie 2.55-acre Lacustrine Creation

Big Springs Creek 565' perm loss

Lake Washaki 0.9-acre PEM Creation

Lake Washaki 0.39-acre PSS Creation

Lake Washaki OHWM

Outlet to Warm Springs Creek and Teton River

Northside Wetland 0.80-acre PSS Creation

Wetland 4 0.04-acre PEM to PSS Enhancement

Lake Washaki West Outlet

Wetland 11 0.16-acre temp loss

Wetland 13 0.05-acre temp loss

Wetland 9 0.13-acre temp loss

Big Springs Creek 593' Enhancement

Flow

Pole Creek Diversion 1,187' and 0.25-acre creation

Big Springs Creek Reference Segment

Big Springs Creek

Wetland 5 0.04-acre PSS temp loss

Wetland 7 0.05-acre PSS temp loss

Wetland 5 0.06-acre PSS Restoration

Thoughtful Spring Creek 277' Restoration

Wetland 6 0.03-acre Restoration

Thoughtful Spring 45' Restoration

Thoughtful Spring Creek

Twin Springs Creek

Flow

Twin Spring Creek 168' perm loss 47' Restoration 120' Enhancement

Wetland 7 0.02-acre PSS Enhancement

Wetland 8 0.03-acre PSS Restoration

Twin Springs

Forgotten Spring 260' perm loss 62' Enhancement

Smith Springs Creek 300' Restoration

Smith Springs & Proposed Terraces

Smith Springs Creek

Smith Springs Creek 338' perm loss 370' Enhancement

Wetland 11 0.11-acre Enhancement

Wetland 12 0.19-acre Restoration

Groundwater Capture and Conveyance Structures

Alder Spring Creek 118' Creation

Alder Springs Creek

Alder Springs Creek 225' Restoration

Sedge Spring

Wetland 18

Wetland 19 0.02-acre Restoration

Alder Springs Creek Re-connection (piped)

Main Access Road

Wetland 14 0.04-acre Restoration

Wetland 19 0.3-acre Enhancement

Wetland 16 0.037-acre perm loss

Wetland 17 0.025-acre perm loss

Wetland 15 0.026-acre perm loss

Wapiti Spring

Alder Springs Creek

Sheet 2 of 3

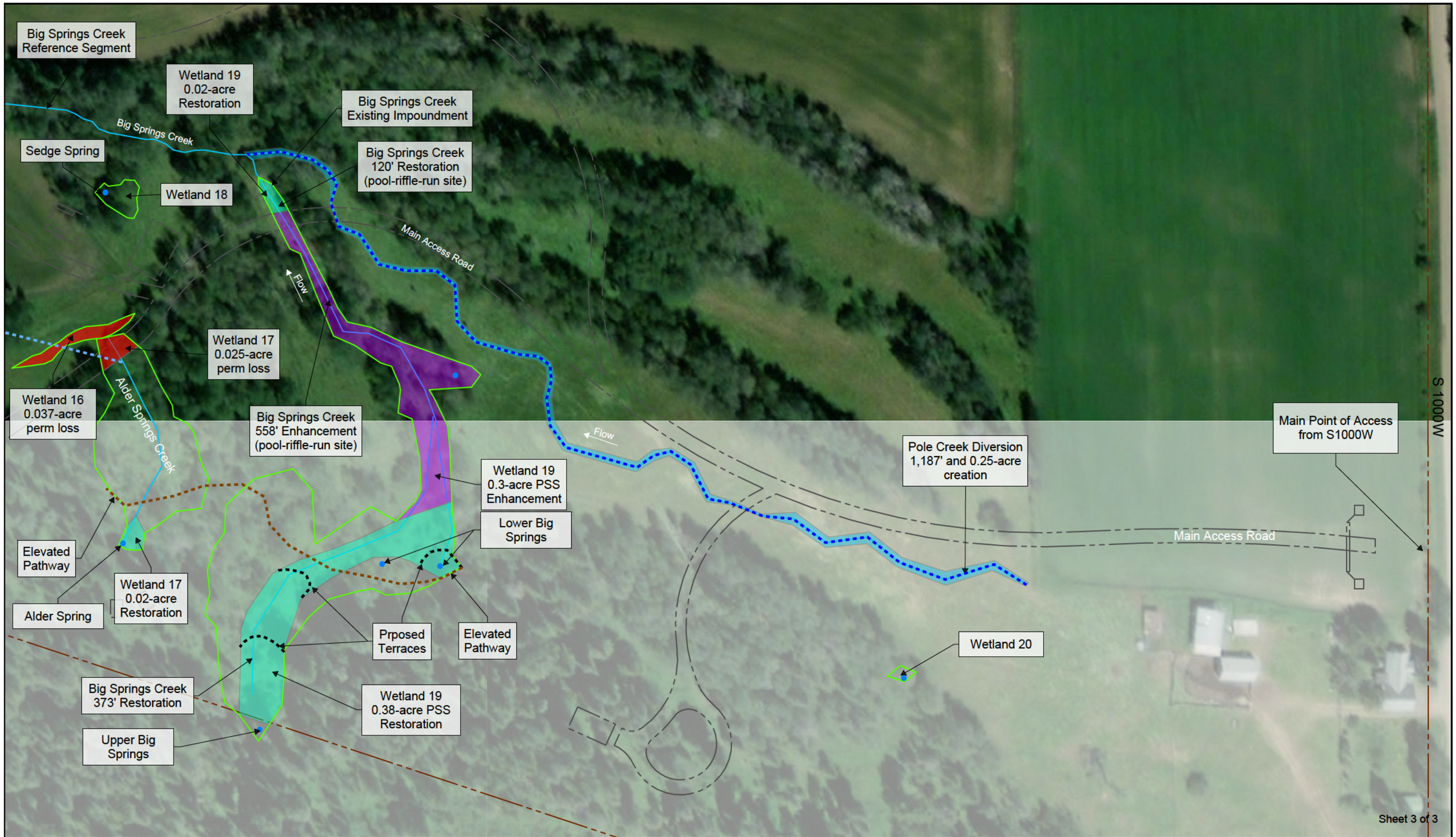
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Attachment C
Project Action Plan

Existing Wetlands
Existing Streams
Pond Edge of Water
Project Features
Property Boundary
Enhanced
Perm Loss
Temp Loss
New Creek Alignment
Restoration
Creation
Spring

Applicant: Good Timber Ranch, LLC.
NWW No: NWW-2021-303-102
Watershed: Trail Creek -Teton River
Proposed Action: Aquatic Resources Restoration, Enhancement, and Creation
Lat: N 43.5691213 Long: W -111.127372



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Attachment C
Project Action Plan

Existing Wetlands
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Applicant: Good Timber Ranch, LLC.
NWW No: NWW-2021-303-102
Watershed: Trail Creek -Teton River
Proposed Action: Aquatic Resources Restoration, Enhancement, and Creation
Lat: N 43.5691213 Long: W -111.127372

Attachment D – Current and Forecasted Functional Assessment Data Sheets

Current Functional Assessment Data Sheets

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Good TImber Ranch **2. MDT Project #:** **Control #:**

3. Evaluation Date: 07/20/2021 **4. Evaluator(s):** Howe, McConnell **5. Wetlands/Site #(s):** Wetlands 2, 6, 8, 12, 17, 19

6. Wetland Location(s): i. Legal: T03N,R45E,SW and SE quarter Sec 22

Latitude/Longitude: 43.568913, -111.130715
43.570624, -111.135691
43.569021, -111.130645
43.56872, -111.12896
43.568388, -111.127034

ii. Approx. Stationing or Mileposts:

iii. Watershed: 1704020401

Watershed Name, County: Trail Creek-Teton River , Teton

8. Wetland size: Min: 0.030 acres, Max: 1.230 acres, Avg: 0.200 acres (estimated)

9. Assessment area (AA): Min: 0.030 acres, Max: 1.230 acres, Avg: 0.200 acres (estimated)

7. a. Evaluating Agency:

b. Purpose of Evaluation:

1. ___ Wetlands potentially affected by MDT project
2. ___ Mitigation wetlands; pre-construction
3. ___ Mitigation wetlands; post-construction
4. X Other: Baseline Environmental Evaluation

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
S	SS	NA	PP	100.00

Abbreviations:
(see manual for definitions)

HGM Classes: Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**);

Cowardin Classes: Rock Bottom (**RB**), Unconsolidated bottom (**UB**), Aquatic Bed (**AB**), Unconsolidated Shore (**US**), Moss-lichen Wetland (**ML**), Emergent Wetland (**EM**), Scrub-Shrub Wetland (**SS**), Forested Wetland (**FO**)

Modifiers: Excavated (**E**), Impounded (**I**), Diked (**D**), Partly Drained (**PD**), Farmed (**F**), Artificial (**A**)

Water Regimes: Permanent / Perennial (**PP**), Seasonal / Intermittent (**SI**), Temporary / Ephemeral (**TE**)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

RARE

12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (**ANVS**) list)

Conditions within AA	*Predominant conditions adjacent to (within 500 feet of) AA*		
	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is >=15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is <= 30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <= 15%.	low disturbance	low disturbance	moderate disturbance
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is <=	moderate disturbance	**moderate disturbance**	high disturbance
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.	high disturbance	high disturbance	high disturbance

Comments: (types of disturbance, intensity, season, etc.): AA consists of wetland habitats near the source of several springs on the Good Timber Ranch Property. The springs upwell on the toe slope of the mountains near the boundary of the Caribou-Targhee National Forest. The wetlands surrounding the spring source have PEM and PSS components.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Houndstongue, nodding plumeless thistle

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: The area surrounding the Project study area consists of residential development, farming, ranching, and recreation.

13. Structural Diversity: (based on number of "Cowardin" ***vegetated*** classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management preventing (passive) existence of additional vegetated classes?		Modified Rating
>= 3 (or 2 if 1 is forested) classes	H	NA	NA	NA
2 (or 1 if forested) classes	**M**	NA	NA	NA
1 class, but not a monoculture	M	<-- NO	YES -->	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: Wetlands in AA have both a PEM and PSS component

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (**list species**)
Secondary habitat (**list species**)
Incidental habitat (**list species**)
No usable habitat S

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
Functional Points and Rating	1H	.9H	.8H	.7H	.3L	.1L	**0L**

Sources for documented use (e.g. observations, records, etc): No federally threatened species in the vicinity of the AA.

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (**list species**)
Secondary habitat (**list species**)
Incidental habitat (**list species**)
No usable habitat S

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
***S1 Species:** Functional Points and Rating*	1H	.8H	.7H	.6H	.2L	.1L	0L
***S2 and S3 Species:** Functional Points and Rating*	.9H	.7H	.6H	.5H	.2L	.1L	**0L**

Sources for documented use (e.g. observations, records, etc): No IDFG special status plants or animals in the vicinity of the AA.

14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):
__ observations of abundant wildlife #s or high species diversity (during any period)
__ abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.
__ presence of extremely limiting habitat features not available in the surrounding area
__ interviews with local biologists with knowledge of the AA

Minimal (based on any of the following [check]):
X few or no wildlife observations during peak use periods
__ little to no wildlife sign
__ sparse adjacent upland food sources
__ interviews with local biologists with knowledge of the AA

Moderate (based on any of the following [check]):
__ observations of scattered wildlife groups or individuals or relatively few species during peak periods
__ common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, etc.
__ adequate adjacent upland food sources
__ interviews with local biologists with knowledge of the AA

ii. Wildlife habitat features (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)	High								Moderate								Low			
Class cover distribution (all vegetated classes)	Even				Uneven				Even				Uneven				Even			
Duration of surface water in >=10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A
Low disturbance at AA (see #12i)	E	E	E	H	E	E	H	H	E	H	H	M	E	H	M	M	E	H	M	M
Moderate disturbance at AA (see #12i)	H	H	H	H	H	H	H	M	H	H	M	M	**H**	M	M	L	H	M	L	L
High disturbance at AA (see #12i)	M	M	M	L	M	M	L	L	M	M	L	L	M	L	L	L	L	L	L	L

iii. Rating (use the conclusions from i and ii above and the matrix below to arrive at [circle] the functional points and rating)

Evidence of wildlife use (i)	*Wildlife habitat features rating (ii)*			
	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	.9H	.7M	.5M	.3L
Minimal	.6M	**.4M**	.2L	.1L

Comments: Little to no wildlife activity or sign of wildlife observed in AA.

14D. General Fish Habitat Rating: (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark ___ **NA** and proceed to 14E.)

Type of Fishery: Cold Water **(CW)** **X** Warm Water **(WW)** ___ **Use the CW or WW guidelines in the user manual to complete the matrix**

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA	Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral					
Aquatic hiding / resting / escape cover	Optimal		Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor	
Thermal cover optimal / suboptimal	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	**.5M**	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA: Identification of fish species was estimated based on professional judgement and experience. Species identification was not confirmed.

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? ___ *If yes, reduce score in i above by 0.1.*

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? ___ *If yes, add 0.1 to the adjusted score in* ***i*** *or* ***iia.***

iii. Final Score and Rating: 0.5M **Comments:** Some non-game fish species observed during the field investigation. Species observed were likely Longnose Dace (Rhinichthys cataractae), Redside Shiner (Richardsonius balteatus), and Speckled Dace (Rhinichthys osculus)

14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark **X** **NA** and proceed to 14F.)

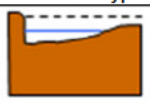
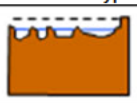
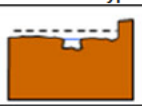
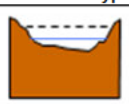
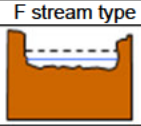
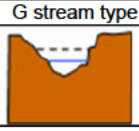
i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly entrenched - C, D, E stream types			Moderately entrenched – B stream type			Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains **no outlet or restricted outlet**	1H	.9H	.6M	.8H	.7M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.8H	.5M	.7M	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

/	=	
Flood-prone width	*Bankfull width*	*Entrenchment ratio (ER)*



Slightly Entrenched ER = >2.2			**Moderately Entrenched ER = 1.41 – 2.2**	**Entrenched ER = 1.0 – 1.4**		
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type
						

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? ___ **Comments:** The hydrology source is a spring, therefore there is little to no flooding in wetlands in the AA.

14F. Short and Long Term Surface Water Storage: (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, mark ___ **NA** and proceed to 14G.)

i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 to 5 acre feet			<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond **>= 5 out of 10 years**	1H	.9H	.8H	.8H	.6M	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond **< 5 out of 10 years**	.9H	.8H	.7M	.7M	.5M	.4M	**.3L**	.2L	.1L

Comments: AA has low capacity for short and long term surface water storage

14G. Sediment/Nutrient/Toxicant Retention and Removal: (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, mark ___ **NA** and proceed to 14H.)

i. Rating

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				Waterbody on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use with potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.			
% cover of wetland vegetation in AA	>= 70%		< 70%		>= 70%		< 70%	
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains **no or restricted outlet**	1H	.8H	.7M	.5M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.7M	.6M	.4M	.4M	.3L	.2L	**.1L**

Comments: Low capacity for nutrient/toxicant retention in the AA. AA subject to sedimentation and nutrient pollution caused by hoof shear.

14H Sediment/Shoreline Stabilization: (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, mark ___ **NA** and proceed to 14I.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

*% Cover of **wetland** streambank or shoreline by species with stability ratings of >=6 (see **Appendix F**).*	*Duration of surface water adjacent to rooted vegetation*		
	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	1H	.9H	.7M
35-64%	**.7M**	.6M	.5M
35%	.3L	.2L	.1L

Comments: AA has moderate rating for surface stabilization. Some portions of streams are vegetated, with bare ground interspersed.

14I. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat Rating (14D.iii.)	**General Wildlife Habitat Rating (14C.iii.)**		
	E/H	M	L
E/H	H	H	M
M	H	**M**	M
L	M	M	L
N/A	H	M	L

ii. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

A	Vegetated component >5 acres						Vegetated component 1-5 acres						Vegetated component < 1 acre					
B	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low	
C	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	.9H	.6M	**.7M**	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.5M	.5M	.3L	.3L	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) **Vegetated Upland Buffer (VUB):** Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference? ___ *If yes, add 0.1 to the score in ii above.*

iv. Final Score and Rating: **0.70M** **Comments:** There is an upland buffer surrounding wetlands in AA. Some invasive vegetation species present within AA.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)

i. Discharge Indicators

- X The AA is a slope wetland
- X Springs or seeps are known or observed
- ___ Vegetation growing during dormant season/drought
- X Wetland occurs at the toe of a natural slope
- ___ AA permanently flooded during drought periods
- ___ Wetland contains an outlet, but no inlet
- ___ Shallow water table and the site is saturated to the surface
- ___ Other:

ii. Recharge Indicators

- ___ Permeable substrate present without underlying impeding layer
- ___ Wetland contains inlet but no outlet
- ___ Stream is a known 'losing' stream; discharge volume decreases
- ___ Other:

iii. Rating (use the information from i and ii above and the table below to arrive at [circle] the functional points and rating)

	Duration of saturation at AA Wetlands *FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM*			
Criteria	P/P	S/I	T	None
Groundwater Discharge or Recharge	1H	**.7M**	.4M	.1L
Insufficient Data/Information	N/A			

Comments: Hydrology sources of all wetlands in AA are springs.

14K. Uniqueness:

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland **or** plant association listed as "S1" by the MTNHP			AA does not contain previously cited rare types **and** structural diversity (#13) is high **or** contains plant association listed as "S2" by the MTNHP			AA does not contain previously cited rare types or associations **and** structural diversity (#13) is low-moderate		
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	.6M	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	**.9H**	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L

14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity)

i. Is the AA a known or potential rec./ed. site: (circle) **X** (if 'Yes' continue with the evaluation; if 'No' then mark ___ **NA** and proceed to the overall summary and rating page)

ii. Check categories that apply to the AA: ___Educational/scientific study; **X** Consumptive rec.; ___Non-consumptive rec.; ___Other :

iii. Rating (use the matrix below to arrive at [circle] the functional points and rating)

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	.1M	**.05L**

Comments: AA is located on privately-owned land without general public access, and without permission for general public access.

General Site Notes

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Wetlands 2, 6, 8, 12, 17, 19

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Estimated AA Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.00	1	0.00	
B. MT Natural Heritage Program Species Habitat	L	0.00	1	0.00	
C. General Wildlife Habitat	M	0.40	1	0.83	
D. General Fish Habitat	M	0.50	1	1.04	
E. Flood Attenuation	NA			0.00	
F. Short and Long Term Surface Water Storage	L	0.30	1	0.62	
G. Sediment/Nutrient/Toxicant Removal	L	0.10	1	0.21	
H. Sediment/Shoreline Stabilization	M	0.70	1	1.46	*
I. Production Export/Food Chain Support	M	0.70	1	1.46	*
J. Groundwater Discharge/Recharge	M	0.70	1	1.46	*
K. Uniqueness	H	0.90	1	1.87	*
L. Recreation/Education Potential (bonus points)	L	0.05	1	0.10	
Totals:		4.35	7.00	9.05	
Percent of Possible Score			62%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)

____ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; **or**
____ Score of 1 functional point for Uniqueness; **or**
____ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; **or**
____ Percent of possible score > 80% (round to nearest whole #).

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)

____ Score of 1 functional point for MT Natural Heritage Program Species Habitat; **or**
____ Score of .9 or 1 functional point for General Wildlife Habitat; **or**
____ Score of .9 or 1 functional point for General Fish Habitat; **or**
____ "High" to "Exceptional" ratings for **both** General Wildlife Habitat **and** General Fish/Aquatic Habitat; **or**
__X__ Score of .9 functional point for Uniqueness; **or**
____ Percent of possible score > 65% (round to nearest whole #).

Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)

Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)

____ "Low" rating for Uniqueness; **and**
____ Vegetated wetland component 1 acre (do not include upland vegetated buffer); **and**
____ Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: II

Summary Comments: Category II wetland, very rare wetlands in the AA.

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Good Timber Ranch **2. MDT Project #:** **Control #:**

3. Evaluation Date: 07/20/2021 **4. Evaluator(s):** Howe, McConnell **5. Wetlands/Site #(s):** Wetlands 5, 7, 9, 11, 14, 15

6. Wetland Location(s): i. Legal: T03N,R45E,SW and SE quarter Sec 22

Latitude/Longitude: 43.569659, -111.131148
43.569502, -111.13075
43.569867, 111.130254
43.569772, -111.129683
43.569073, -111.127731
43.568561, 111.127666

ii. Approx. Stationing or Mileposts:

iii. Watershed: **Watershed Name, County:** Trail Creek-Teton River , Teton

1704020401

8. Wetland size: Min: 0.020 acres, Max: 0.340 acres, Avg: 0.060 acres (estimated)

9. Assessment area (AA): Min: 0.020 acres, Max: 0.340 acres, Avg: 0.060 acres (estimated)

7. a. Evaluating Agency:

b. Purpose of Evaluation:

1. ___ Wetlands potentially affected by MDT project
2. ___ Mitigation wetlands; pre-construction
3. ___ Mitigation wetlands; post-construction
4. X Other: Baseline Environmental Analysis

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
S	SS	NA	PP	100.00

Abbreviations:
(see manual for definitions)

HGM Classes: Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**);

Cowardin Classes: Rock Bottom (**RB**), Unconsolidated bottom (**UB**), Aquatic Bed (**AB**), Unconsolidated Shore (**US**), Moss-lichen Wetland (**ML**), Emergent Wetland (**EM**), Scrub-Shrub Wetland (**SS**), Forested Wetland (**FO**)

Modifiers: Excavated (**E**), Impounded (**I**), Diked (**D**), Partly Drained (**PD**), Farmed (**F**), Artificial (**A**)

Water Regimes: Permanent / Perennial (**PP**), Seasonal / Intermittent (**SI**), Temporary / Ephemeral (**TE**)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

COMMON

12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (**ANVS**) list)

Conditions within AA	*Predominant conditions adjacent to (within 500 feet of) AA*		
	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is >=15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is <= 30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <= 15%.	low disturbance	low disturbance	moderate disturbance
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is <=	moderate disturbance	**moderate disturbance**	high disturbance
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.	high disturbance	high disturbance	high disturbance

Comments: (types of disturbance, intensity, season, etc.): AA consists of mid-reach of spring-fed streams that flow through the good timber ranch project area. The id-reach of these streams generally have fringe PSS wetlands associated with them. In general, stream channels are 1.5-3 feet wide. Hydrology has been altered by roadways and grazing.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Houndstongue, nodding plumeless thistle

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: The area surrounding the Project study area consists of residential development, farming, ranching, and recreation.

13. Structural Diversity: (based on number of "Cowardin" ***vegetated*** classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management preventing (passive) existence of additional vegetated classes?		Modified Rating
>= 3 (or 2 if 1 is forested) classes	H	NA	NA	NA
2 (or 1 if forested) classes	**M**	NA	NA	NA
1 class, but not a monoculture	M	<-- NO	YES -->	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: Vegetation consists of scrub/shrub overstory with wetland forbs and grasses in the understory

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (**list species**)
Secondary habitat (**list species**)
Incidental habitat (**list species**)
No usable habitat S

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
Functional Points and Rating	1H	.9H	.8H	.7H	.3L	.1L	**0L**

Sources for documented use (e.g. observations, records, etc): No federally listed habitat present in the project area.

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (**list species**)
Secondary habitat (**list species**)
Incidental habitat (**list species**)
No usable habitat S

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
***S1 Species:** Functional Points and Rating*	1H	.8H	.7H	.6H	.2L	.1L	0L
***S2 and S3 Species:** Functional Points and Rating*	.9H	.7H	.6H	.5H	.2L	.1L	**0L**

Sources for documented use (e.g. observations, records, etc): No IDFG listed plants or animals present in study area.

14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):
__ observations of abundant wildlife #s or high species diversity (during any period)
__ abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.
__ presence of extremely limiting habitat features not available in the surrounding area
__ interviews with local biologists with knowledge of the AA

Minimal (based on any of the following [check]):
X few or no wildlife observations during peak use periods
__ little to no wildlife sign
__ sparse adjacent upland food sources
__ interviews with local biologists with knowledge of the AA

Moderate (based on any of the following [check]):
__ observations of scattered wildlife groups or individuals or relatively few species during peak periods
__ common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, etc.
__ adequate adjacent upland food sources
__ interviews with local biologists with knowledge of the AA

ii. Wildlife habitat features (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)	High								Moderate								Low			
Class cover distribution (all vegetated classes)	Even				Uneven				Even				Uneven				Even			
Duration of surface water in >=10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A
Low disturbance at AA (see #12i)	E	E	E	H	E	E	H	H	E	H	H	M	E	H	M	M	E	H	M	M
Moderate disturbance at AA (see #12i)	H	H	H	H	H	H	H	M	H	H	M	M	H	**M**	M	L	H	M	L	L
High disturbance at AA (see #12i)	M	M	M	L	M	M	L	L	M	M	L	L	M	L	L	L	L	L	L	L

iii. Rating (use the conclusions from i and ii above and the matrix below to arrive at [circle] the functional points and rating)

Evidence of wildlife use (i)	*Wildlife habitat features rating (ii)*			
	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	.9H	.7M	.5M	.3L
Minimal	.6M	.4M	**.2L**	.1L

Comments: Little to no wildlife observations or signs of wildlife identified during field investigation.

14D. General Fish Habitat Rating: (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark ___ **NA** and proceed to 14E.)

Type of Fishery: Cold Water **(CW)** **X** Warm Water **(WW)** ___ **Use the CW or WW guidelines in the user manual to complete the matrix**

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA	Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral					
Aquatic hiding / resting / escape cover	Optimal		Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor	
Thermal cover optimal / suboptimal	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	**.3L**	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA: Species were observed in the field. Identification was assigned based on professional judgement and experience. Species determinations were not confirmed.

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? ___ *If yes, reduce score in i above by 0.1.*

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? ___ *If yes, add 0.1 to the adjusted score in* ***i*** *or* ***iia.***

iii. Final Score and Rating: 0.3L **Comments:** Small fish species observed during the field investigation.

14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark **X** **NA** and proceed to 14F.)

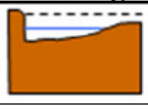
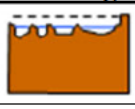
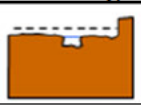
i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly entrenched - C, D, E stream types			Moderately entrenched – B stream type			Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains **no outlet or restricted outlet**	1H	.9H	.6M	.8H	.7M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.8H	.5M	.7M	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

/	=	
Flood-prone width	*Bankfull width*	*Entrenchment ratio (ER)*



Slightly Entrenched ER = >2.2			**Moderately Entrenched ER = 1.41 – 2.2**	**Entrenched ER = 1.0 – 1.4**		
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type
						

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? ___ **Comments:** Wetlands in AA do not contribute flood attenuation.

14F. Short and Long Term Surface Water Storage: (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, mark ___ **NA** and proceed to 14G.)

i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 to 5 acre feet			<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond **>= 5 out of 10 years**	1H	.9H	.8H	.8H	.6M	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond **< 5 out of 10 years**	.9H	.8H	.7M	.7M	.5M	.4M	.3L	**.2L**	.1L

Comments: AA has low capacity for short and long term surface water storage.

14G. Sediment/Nutrient/Toxicant Retention and Removal: (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, mark ___ **NA** and proceed to 14H.)

i. Rating

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				Waterbody on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use with potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.			
% cover of wetland vegetation in AA	>= 70%		< 70%		>= 70%		< 70%	
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains **no or restricted outlet**	1H	.8H	.7M	.5M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.7M	.6M	.4M	.4M	.3L	.2L	**.1L**

Comments: AA subject to sedimentation from cattle hoof shear

14H Sediment/Shoreline Stabilization: (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, mark ___ **NA** and proceed to 14I.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

*% Cover of **wetland** streambank or shoreline by species with stability ratings of >=6 (see **Appendix F**).*	*Duration of surface water adjacent to rooted vegetation*		
	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	1H	.9H	.7M
35-64%	.7M	.6M	.5M
35%	.3L	.2L	.1L

Comments: Streams present in AA with small riparian wetlands. Riparian wetland cover <35% of streambank.

14I. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat Rating (14D.iii.)	**General Wildlife Habitat Rating (14C.iii.)**		
	E/H	M	L
E/H	H	H	M
M	H	M	M
L	M	M	**L**
N/A	H	M	L

ii. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

A	Vegetated component >5 acres						Vegetated component 1-5 acres						Vegetated component < 1 acre					
B	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low	
C	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.5M	.5M	.3L	**.3L**	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) **Vegetated Upland Buffer (VUB):** Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference? ___ *If yes, add 0.1 to the score in ii above.*

iv. Final Score and Rating: **0.30L** **Comments:** Upland buffer around the wetlands in the project area. Invasive vegetation species present near the wetland/upland boundary.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)

i. Discharge Indicators

- X The AA is a slope wetland
- X Springs or seeps are known or observed
- ___ Vegetation growing during dormant season/drought
- ___ Wetland occurs at the toe of a natural slope
- ___ AA permanently flooded during drought periods
- ___ Wetland contains an outlet, but no inlet
- ___ Shallow water table and the site is saturated to the surface
- ___ Other:

ii. Recharge Indicators

- ___ Permeable substrate present without underlying impeding layer
- ___ Wetland contains inlet but no outlet
- ___ Stream is a known 'losing' stream; discharge volume decreases
- ___ Other:

iii. Rating (use the information from i and ii above and the table below to arrive at [circle] the functional points and rating)

	Duration of saturation at AA Wetlands *FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM*			
Criteria	P/P	S/I	T	None
Groundwater Discharge or Recharge	1H	**.7M**	.4M	.1L
Insufficient Data/Information	N/A			

Comments: Source of all wetlands in AA are naturally-occurring streams.

14K. Uniqueness:

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland **or** plant association listed as "S1" by the MTNHP			AA does not contain previously cited rare types **and** structural diversity (#13) is high **or** contains plant association listed as "S2" by the MTNHP			AA does not contain previously cited rare types or associations **and** structural diversity (#13) is low-moderate		
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	.6M	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	.9H	**.8H**	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L

14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity)

i. Is the AA a known or potential rec./ed. site: (circle) **X** (if 'Yes' continue with the evaluation; if 'No' then mark ___ **NA** and proceed to the overall summary and rating page)

ii. Check categories that apply to the AA: **X** Educational/scientific study; ___ Consumptive rec.; **X** Non-consumptive rec.; ___ Other :

iii. Rating (use the matrix below to arrive at [circle] the functional points and rating)

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	.1M	**.05L**

Comments: Site is privately-owned without general public access or permission for general public access

General Site Notes

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Wetlands 5, 7, 9, 11, 14, 15

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Estimated AA Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.00	1	0.00	
B. MT Natural Heritage Program Species Habitat	L	0.00	1	0.00	
C. General Wildlife Habitat	L	0.20	1	0.14	
D. General Fish Habitat	L	0.30	1	0.21	
E. Flood Attenuation	NA			0.00	
F. Short and Long Term Surface Water Storage	L	0.20	1	0.14	
G. Sediment/Nutrient/Toxicant Removal	L	0.10	1	0.07	
H. Sediment/Shoreline Stabilization	L	0.20	1	0.14	*
I. Production Export/Food Chain Support	L	0.30	1	0.21	*
J. Groundwater Discharge/Recharge	M	0.70	1	0.49	*
K. Uniqueness	H	0.80	1	0.56	*
L. Recreation/Education Potential (bonus points)	L	0.05	1	0.04	
Totals:		2.85	7.00	2.00	
Percent of Possible Score			40%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)

____ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; **or**
____ Score of 1 functional point for Uniqueness; **or**
____ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; **or**
____ Percent of possible score > 80% (round to nearest whole #).

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)

____ Score of 1 functional point for MT Natural Heritage Program Species Habitat; **or**
____ Score of .9 or 1 functional point for General Wildlife Habitat; **or**
____ Score of .9 or 1 functional point for General Fish Habitat; **or**
____ "High" to "Exceptional" ratings for **both** General Wildlife Habitat **and** General Fish/Aquatic Habitat; **or**
____ Score of .9 functional point for Uniqueness; **or**
____ Percent of possible score > 65% (round to nearest whole #).

Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)

Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)

____ "Low" rating for Uniqueness; **and**
__X__ Vegetated wetland component 1 acre (do not include upland vegetated buffer); **and**
____ Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: III

Summary Comments: Classified as category III and IV wetland

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Good TImber Ranch **2. MDT Project #:** **Control #:**

3. Evaluation Date: 07/20/2021 **4. Evaluator(s):** Howe, McConnell **5. Wetlands/Site #(s):** Wetlands 1, 3, 4, 10, 13, 16, 18, 20

6. Wetland Location(s): i. Legal: T3N,R45E,SW and SE quarter Sec 22 ;T03N,R45E,

Latitude/Longitude: 43.570662, -111.13066
43.570474, -111.13142
43.570155, -111.131586
43.569321, -111.126924
43.567828, -111.123885
43.570582, -111.13621
43.569931, -111.129711
43.568784, -111.12732

iii. Watershed: 1704020401

ii. Approx. Stationing or Mileposts:

Watershed Name, County: Trail Creek-Teton River Watershed, Teton

8. Wetland size: Min: 0.010 acres, Max: 0.570 acres, Avg: 0.200 acres (estimated)

9. Assessment area (AA): Min: 0.010 acres, Max: 0.570 acres, Avg: 0.200 acres (estimated)

7. a. Evaluating Agency:

b. Purpose of Evaluation:

1. ___ Wetlands potentially affected by MDT project
2. ___ Mitigation wetlands; pre-construction
3. ___ Mitigation wetlands; post-construction
4. X Other: Baseline Environmental Evaluation

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
S	EM	NA	PP	100.00

Abbreviations:
(see manual for definitions)

HGM Classes: Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**);

Cowardin Classes: Rock Bottom (**RB**), Unconsolidated bottom (**UB**), Aquatic Bed (**AB**), Unconsolidated Shore (**US**), Moss-lichen Wetland (**ML**), Emergent Wetland (**EM**), Scrub-Shrub Wetland (**SS**), Forested Wetland (**FO**)

Modifiers: Excavated (**E**), Impounded (**I**), Diked (**D**), Partly Drained (**PD**), Farmed (**F**), Artificial (**A**)

Water Regimes: Permanent / Perennial (**PP**), Seasonal / Intermittent (**SI**), Temporary / Ephemeral (**TE**)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

ABUNDANT

12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (**ANVS**) list)

Conditions within AA	*Predominant conditions adjacent to (within 500 feet of) AA*		
	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is >=15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is <= 30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <= 15%.	low disturbance	low disturbance	moderate disturbance
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is <=	moderate disturbance	**moderate disturbance**	high disturbance
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.	high disturbance	high disturbance	high disturbance

Comments: (types of disturbance, intensity, season, etc.): Action area consists of series of herbaceous PEM wetland. Lower reach of a series of springs on Good Timber Ranch Property. Dominant vegetation in PEM wetlands is mainly sedge species. Some grazing has occurred, as well as hydrological alteration.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Houndstongue, nodding plumeless thistle

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: The area surrounding the Project study area consists of residential development, farming, ranching, and recreation.

13. Structural Diversity: (based on number of "Cowardin" ***vegetated*** classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	Initial Rating	Is current management preventing (passive) existence of additional vegetated classes?		Modified Rating
>= 3 (or 2 if 1 is forested) classes	H	NA	NA	NA
2 (or 1 if forested) classes	M	NA	NA	NA
1 class, but not a monoculture	**M**	<-- NO	YES -->	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: Sedge species are dominant in the PEM wetlands; however, additional wetland species are present.

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (**list species**)
Secondary habitat (**list species**)
Incidental habitat (**list species**)
No usable habitat S

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
Functional Points and Rating	1H	.9H	.8H	.7H	.3L	.1L	**0L**

Sources for documented use (e.g. observations, records, etc): No federally-listed habitat present in the AA.

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (**list species**)
Secondary habitat (**list species**)
Incidental habitat (**list species**)
No usable habitat S

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
***S1 Species:** Functional Points and Rating*	1H	.8H	.7H	.6H	.2L	.1L	0L
***S2 and S3 Species:** Functional Points and Rating*	.9H	.7H	.6H	.5H	.2L	.1L	**0L**

Sources for documented use (e.g. observations, records, etc): No IDFG special status plants plants present in the AA.

14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):
__ observations of abundant wildlife #s or high species diversity (during any period)
__ abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.
__ presence of extremely limiting habitat features not available in the surrounding area
__ interviews with local biologists with knowledge of the AA

Minimal (based on any of the following [check]):
X few or no wildlife observations during peak use periods
__ little to no wildlife sign
__ sparse adjacent upland food sources
__ interviews with local biologists with knowledge of the AA

Moderate (based on any of the following [check]):
__ observations of scattered wildlife groups or individuals or relatively few species during peak periods
__ common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, etc.
__ adequate adjacent upland food sources
__ interviews with local biologists with knowledge of the AA

ii. Wildlife habitat features (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)	High								Moderate								Low			
Class cover distribution (all vegetated classes)	Even				Uneven				Even				Uneven				Even			
Duration of surface water in >=10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A
Low disturbance at AA (see #12i)	E	E	E	H	E	E	H	H	E	H	H	M	E	H	M	M	E	H	M	M
Moderate disturbance at AA (see #12i)	H	H	H	H	H	H	H	M	H	H	**M**	M	H	M	M	L	H	M	L	L
High disturbance at AA (see #12i)	M	M	M	L	M	M	L	L	M	M	L	L	M	L	L	L	L	L	L	L

iii. Rating (use the conclusions from i and ii above and the matrix below to arrive at [circle] the functional points and rating)

Evidence of wildlife use (i)	*Wildlife habitat features rating (ii)*			
	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	.9H	.7M	.5M	.3L
Minimal	.6M	.4M	**.2L**	.1L

Comments: Few or no wildlife observations recorded during field investigation.

14D. General Fish Habitat Rating: (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark ___ **NA** and proceed to 14E.)

Type of Fishery: Cold Water **(CW)** **X** Warm Water **(WW)** ___ **Use the CW or WW guidelines in the user manual to complete the matrix**

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA	Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral					
Aquatic hiding / resting / escape cover	Optimal		Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor	
Thermal cover optimal / suboptimal	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	.8H	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	**.3L**	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA: Identification of fish species was estimated based on professional judgement and experience. Species identification was not confirmed.

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? ___ *If yes, reduce score in i above by 0.1.*

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? ___ *If yes, add 0.1 to the adjusted score in* ***i*** *or* ***iia.***

iii. Final Score and Rating: 0.3L **Comments:** Some non-game fish species observed during the field investigation. Fish species mostly occurred in the middle reach PSS habitats. Species observed were likely Longnose Dace (Rhinichthys cataractae), Redside Shiner (Richardsonius balteatus), and Speckled Dace (Rhinichthys osculus)

14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark **X** **NA** and proceed to 14F.)

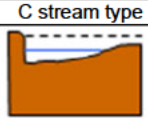
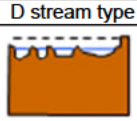
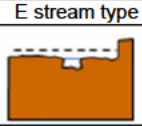
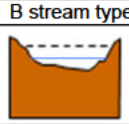
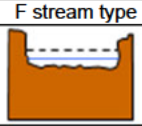
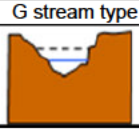
i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly entrenched - C, D, E stream types			Moderately entrenched – B stream type			Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains **no outlet or restricted outlet**	1H	.9H	.6M	.8H	.7M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.8H	.5M	.7M	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

/	=	
Flood-prone width	*Bankfull width*	*Entrenchment ratio (ER)*



Slightly Entrenched ER = >2.2			**Moderately Entrenched ER = 1.41 – 2.2**	**Entrenched ER = 1.0 – 1.4**		
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type
						

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? ___ **Comments:** No flooding occurs in AA

14F. Short and Long Term Surface Water Storage: (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, mark ___ **NA** and proceed to 14G.)

i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 to 5 acre feet			<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond **>= 5 out of 10 years**	1H	.9H	.8H	.8H	.6M	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond **< 5 out of 10 years**	.9H	.8H	.7M	.7M	.5M	.4M	.3L	.2L	**.1L**

Comments: Wetlands prone to short term, temporary flooding during a smaller portion of the high-flow season.

14G. Sediment/Nutrient/Toxicant Retention and Removal: (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, mark ___ **NA** and proceed to 14H.)

i. Rating

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				Waterbody on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use with potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.			
% cover of wetland vegetation in AA	>= 70%		< 70%		>= 70%		< 70%	
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains **no or restricted outlet**	1H	.8H	.7M	.5M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.7M	.6M	.4M	.4M	.3L	.2L	**.1L**

Comments: AA has a low capacity for nutrient and toxicant removal. Sedimentation and nutrient pollution common in AA due to cattle hoof shear, excrement, and other related damage

14H Sediment/Shoreline Stabilization: (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, mark ___ **NA** and proceed to 14I.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

*% Cover of **wetland** streambank or shoreline by species with stability ratings of >=6 (see **Appendix F**).*	*Duration of surface water adjacent to rooted vegetation*		
	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	1H	.9H	.7M
35-64%	.7M	**.6M**	.5M
35%	.3L	.2L	.1L

Comments: Moderate shoreline stabilization rating. Stream banks covered by sedge and other wetland species, with some bare/open areas along streams.

14I. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat Rating (14D.iii.)	**General Wildlife Habitat Rating (14C.iii.)**		
	E/H	M	L
E/H	H	H	M
M	H	M	M
L	M	M	**L**
N/A	H	M	L

ii. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

A	Vegetated component >5 acres						Vegetated component 1-5 acres						Vegetated component < 1 acre					
B	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low	
C	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.5M	.5M	.3L	**.3L**	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) **Vegetated Upland Buffer (VUB):** Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference? ___ *If yes, add 0.1 to the score in ii above.*

iv. Final Score and Rating: **0.30L** **Comments:** PEM wetlands are vegetated, some invasive vegetation present near wetland boundaries and in adjacent uplands. Upland vegetation band comprised of grasses, trees, and shrubs around each of the PEM wetlands in the AA.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)

i. Discharge Indicators

- X The AA is a slope wetland
- X Springs or seeps are known or observed
- ___ Vegetation growing during dormant season/drought
- ___ Wetland occurs at the toe of a natural slope
- ___ AA permanently flooded during drought periods
- ___ Wetland contains an outlet, but no inlet
- ___ Shallow water table and the site is saturated to the surface
- ___ Other:

ii. Recharge Indicators

- ___ Permeable substrate present without underlying impeding layer
- ___ Wetland contains inlet but no outlet
- ___ Stream is a known 'losing' stream; discharge volume decreases
- ___ Other:

iii. Rating (use the information from i and ii above and the table below to arrive at [circle] the functional points and rating)

	Duration of saturation at AA Wetlands *FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM*			
Criteria	P/P	S/I	T	None
Groundwater Discharge or Recharge	1H	**.7M**	.4M	.1L
Insufficient Data/Information	N/A			

Comments: Hydrologic source of all PEM wetlands in AA is naturally-occurring spring water.

14K. Uniqueness:

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland **or** plant association listed as "S1" by the MTNHP			AA does not contain previously cited rare types **and** structural diversity (#13) is high **or** contains plant association listed as "S2" by the MTNHP			AA does not contain previously cited rare types or associations **and** structural diversity (#13) is low-moderate		
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	.8H	.8H	.6M	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	**.7M**	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L

14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity)

i. Is the AA a known or potential rec./ed. site: (circle) **X** (if 'Yes' continue with the evaluation; if 'No' then mark ___ **NA** and proceed to the overall summary and rating page)

ii. Check categories that apply to the AA: ___ Educational/scientific study; ___ Consumptive rec.; **X** Non-consumptive rec.; ___ Other :

iii. Rating (use the matrix below to arrive at [circle] the functional points and rating)

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	.1M	**.05L**

Comments: AA is located in a privately-owned parcel without general access permission.

General Site Notes

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Wetlands 1, 3, 4, 10, 13, 16, 18, 20

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Estimated AA Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.00	1	0.00	
B. MT Natural Heritage Program Species Habitat	L	0.00	1	0.00	
C. General Wildlife Habitat	L	0.20	1	0.17	
D. General Fish Habitat	L	0.30	1	0.25	
E. Flood Attenuation	NA			0.00	
F. Short and Long Term Surface Water Storage	L	0.10	1	0.08	
G. Sediment/Nutrient/Toxicant Removal	L	0.10	1	0.08	
H. Sediment/Shoreline Stabilization	M	0.60	1	0.50	*
I. Production Export/Food Chain Support	L	0.30	1	0.25	*
J. Groundwater Discharge/Recharge	M	0.70	1	0.59	*
K. Uniqueness	M	0.70	1	0.59	*
L. Recreation/Education Potential (bonus points)	L	0.05	1	0.04	
Totals:		3.05	9.00	2.56	
Percent of Possible Score			33%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)

_____ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; **or**
_____ Score of 1 functional point for Uniqueness; **or**
_____ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; **or**
_____ Percent of possible score > 80% (round to nearest whole #).

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)

_____ Score of 1 functional point for MT Natural Heritage Program Species Habitat; **or**
_____ Score of .9 or 1 functional point for General Wildlife Habitat; **or**
_____ Score of .9 or 1 functional point for General Fish Habitat; **or**
_____ "High" to "Exceptional" ratings for **both** General Wildlife Habitat **and** General Fish/Aquatic Habitat; **or**
_____ Score of .9 functional point for Uniqueness; **or**
_____ Percent of possible score > 65% (round to nearest whole #).

Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)

Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)

_____ "Low" rating for Uniqueness; **and**
__X__ Vegetated wetland component 1 acre (do not include upland vegetated buffer); **and**
_____ Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: III

Summary Comments: AA qualifies as a category III wetland

Forecasted Functional Assessment Data Sheets

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Good Timber Ranch **2. MDT Project #:** **Control #:**

3. Evaluation Date: 02/08/2022 **4. Evaluator(s):** Howe, McConnell **5. Wetlands/Site #(s):** Wetlands 2, 6, 8, 12, 17, 19, Viejo Spring, Thoughtful Spring, Twin Spring, Smith Springs, Big Spring

6. Wetland Location(s): i. Legal: T03N,R45E,SW and SE 1/4 of Sec 22 **Latitude/Longitude:** 43.568913, -111.130715 : 43.570624, -111.135691 : 43.569021, -111.130645 : 43.56872, -111.12896 : 43.568388, -111.127034 :

iii. Watershed: 1704020401

Watershed Name, County: Trail Creek-Teton River, Teton County

7. a. Evaluating Agency:

b. Purpose of Evaluation:

1. ___ Wetlands potentially affected by MDT project
2. ___ Mitigation wetlands; pre-construction
3. ___ Mitigation wetlands; post-construction
4. X Other: Forecasted conditions

8. Wetland size: Min: 0.030 acres, Max: 1.230 acres, Avg: 0.200 acres (estimated)

9. Assessment area (AA): Min: 0.030 acres, Max: 1.230 acres, Avg: 0.200 acres (estimated)

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
S	SS	NA	PP	100.00

Abbreviations:

(see manual for definitions)

HGM Classes: Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**);

Cowardin Classes: Rock Bottom (**RB**), Unconsolidated bottom (**UB**), Aquatic Bed (**AB**), Unconsolidated Shore (**US**), Moss-lichen Wetland (**ML**), Emergent Wetland (**EM**), Scrub-Shrub Wetland (**SS**), Forested Wetland (**FO**)

Modifiers: Excavated (**E**), Impounded (**I**), Diked (**D**), Partly Drained (**PD**), Farmed (**F**), Artificial (**A**)

Water Regimes: Permanent / Perennial (**PP**), Seasonal / Intermittent (**SI**), Temporary / Ephemeral (**TE**)

11. Estimated relative abundance:

RARE (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (**ANVS**) list)

Conditions within AA	*Predominant conditions adjacent to (within 500 feet of) AA*		
	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is >=15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is <= 30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <= 15%.	low disturbance	**low disturbance**	moderate disturbance
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is <=	moderate disturbance	moderate disturbance	high disturbance
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.	high disturbance	high disturbance	high disturbance

Comments: (types of disturbance, intensity, season, etc.): Aquatic resources within AA will have been restored or enhanced to natural state. After improvements to aquatic resources are complete, fencing will have been placed around the spring sources to protect from future disturbance.
ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Noxious, nuisance, and other exotic veg species will have been removed during development and managed/suppressed after development is finished.
iii. Provide brief descriptive summary of AA and surrounding land use/habitat: Land-use will consist of minor rural development including some roads, buildings, and one field that will be cultivated for hay crop. Habitat within 500 feet of AA will consist of forested hills, open meadows, streams, and a pond/lake.

13. Structural Diversity: (based on number of "Cowardin" ***vegetated*** classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	**Initial Rating**	**Is current management preventing (passive) existence of additional vegetated classes?**		**Modified Rating**
>= 3 (or 2 if 1 is forested) classes	H	NA	NA	NA
2 (or 1 if forested) classes	**M**	NA	NA	NA
1 class, but not a monoculture	M	<-- NO	YES -->	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: Currently, this AA consists of PEM and PSS classes. After the project, this will be maintained; however, enhancements will occur in some areas to enhance structural diversity. For example, some dense portions of PSS habitat that do not support an understory will be thinned to allow for a PEM understory to grow.

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions): No usable habitat

Primary or critical habitat (list species) **Secondary habitat (list species)** **Incidental habitat (list species)**

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
Functional Points and Rating	1H	.9H	.8M	.7M	.3L	.1L	**0L**

Sources for documented use (e.g. observations, records, etc): According to USFWS IPaC tool, the federally listed species that appear in that area are grizzly bear, Canada lynx, and Monarch butterfly. The habitat in the AA and surrounding conditions is not likely to support those species.

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (list species) **Secondary habitat (list species)** **Incidental habitat (list species)**

Northern Leopard Frog(D)

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
***S1 Species:** Functional Points and Rating*	1H	.8H	.7M	.6M	.2L	.1L	0L
***S2 and S3 Species:** Functional Points and Rating*	**.9H**	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): A northern leopard frog, a tier 2 species, was observed in the AA during the baseline field investigation in June 2021. Several aquatic invertebrates (mollusks, snails) were observed in the AA. The mollusks and snails species were not identified, however, the IDFG conservation planner indicates that several of aquatic invertebrate species listed as tier 2 and tier 3 species have the potential to occur in this area. Additionally, the IDFG conservation planner tool indicates that several migratory bird species (tier 2-3) have the potential to occur in the AA.
The project will enhance the AA to provide higher quality habitat for amphibians, aquatic invertebrates, and migratory birds.

14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):
- ___ observations of abundant wildlife #s or high species diversity (during any period)
- ___ abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.
- ___ presence of extremely limiting habitat features not available in the surrounding area
- ___ interviews with local biologists with knowledge of the AA

Minimal (based on any of the following [check]):
- X few or no wildlife observations during peak use periods
- ___ little to no wildlife sign
- ___ sparse adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

Moderate (based on any of the following [check]):
- ___ observations of scattered wildlife groups or individuals or relatively few species during peak periods
- ___ common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, etc.
- ___ adequate adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

ii. Wildlife habitat features (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)	High								Moderate								Low			
Class cover distribution (all vegetated classes)	Even				Uneven				Even				Uneven				Even			
Duration of surface water in >=10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A
Low disturbance at AA (see #12i)	E	E	E	H	E	E	H	H	**E**	H	H	M	E	H	M	M	E	H	M	M
Moderate disturbance at AA (see #12i)	H	H	H	H	H	H	H	M	H	H	M	M	H	M	M	L	H	M	L	L
High disturbance at AA (see #12i)	M	M	M	L	M	M	L	L	M	M	L	L	M	L	L	L	L	L	L	L

iii. Rating (use the conclusions from i and ii above and the matrix below to arrive at [circle] the functional points and rating)

Evidence of wildlife use (i)	*Wildlife habitat features rating (ii)*			
	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	.9H	.7M	.5M	.3L
Minimal	**.6M**	.4M	.2L	.1L

Comments: The project will enhance habitat in aquatic features of the AA. Development will also occur near the AA, such as roads and houses. The development in the vicinity of the AA will be spread out over the whole property and will not be densely concentrated in one portion of the AA. Therefore, the general wildlife habitat rating is not expected to increase or decrease as a result of the project, but will likely remain the same.

14D. General Fish Habitat Rating: (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark ___ **NA** and proceed to 14E.)

Type of Fishery: Cold Water **(CW)** **X** Warm Water **(WW)** ___ **Use the CW or WW guidelines in the user manual to complete the matrix**

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA	Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral					
Aquatic hiding / resting / escape cover	Optimal		Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor	
Thermal cover optimal / suboptimal	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	**.8H**	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA: Identification of fish species during the initial field investigation in June 2021 was estimated based on professional judgement and experience. Species identification was not confirmed.

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? ___ *If yes, reduce score in i above by 0.1.*

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? ___ *If yes, add 0.1 to the adjusted score in* ***i*** *or* ***iia.***

iii. Final Score and Rating: 0.8H **Comments:** Project will be designed to enhance fish habitat in the AA. Streams will be enhanced to include optimal hiding/resting/escape habitat and thermal cover. Pool-riffle-fun complexes will also be installed as a result of the project.

14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark ___ **NA** and proceed to 14F.)

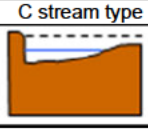
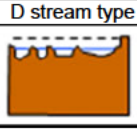
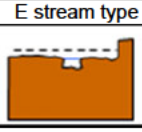
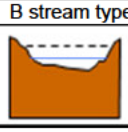
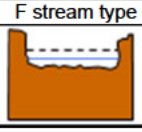
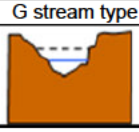
i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly entrenched - C, D, E stream types			Moderately entrenched – B stream type			Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains **no outlet or restricted outlet**	1H	.9H	.6M	.8H	.7M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.8H	.5M	**.7M**	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

20 feet /	10 =	**2.00**
Flood-prone width	*Bankfull width*	*Entrenchment ratio (ER)*



Slightly Entrenched ER = >2.2			**Moderately Entrenched ER = 1.41 – 2.2**	**Entrenched ER = 1.0 – 1.4**		
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type
						

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? ___ **Comments:** Big spring creek has a functional floodplain in its current condition which is currently choked by a decadent stand of hawthorn and willow. The project would thin the riparian vegetation in the floodplain and the creation of pool-riffle-run complexes, broadening stream sinuosity, and possibly adding a side channel would improve the portions of the AA that have a floodplain.

14F. Short and Long Term Surface Water Storage: (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, mark ___ **NA** and proceed to 14G.)

i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 to 5 acre feet			<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond **>= 5 out of 10 years**	1H	.9H	.8H	.8H	.6M	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond **< 5 out of 10 years**	.9H	.8H	.7M	.7M	.5M	.4M	**.3L**	.2L	.1L

Comments: The project will improve aquatic resources in the AA; however, the short term and long term surface water storage capacity will likely remain the same.

14G. Sediment/Nutrient/Toxicant Retention and Removal: (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, mark ___ **NA** and proceed to 14H.)

i. Rating

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				Waterbody on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use with potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.			
% cover of wetland vegetation in AA	>= 70%		< 70%		>= 70%		< 70%	
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains **no or restricted outlet**	1H	.8H	.7M	.5M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	**.7M**	.6M	.4M	.4M	.3L	.2L	.1L

Comments: Bank stabilization, sediment removal, and re-vegetation efforts associated with the project will help to keep sedimentation to a minimum.

14H Sediment/Shoreline Stabilization: (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, mark ___ **NA** and proceed to 14I.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

*% Cover of **wetland** streambank or shoreline by species with stability ratings of >=6 (see **Appendix F**).*	*Duration of surface water adjacent to rooted vegetation*		
	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	**1H**	.9H	.7M
35-64%	.7M	.6M	.5M
35%	.3L	.2L	.1L

Comments: Stream banks will be replanted with willow and hawthorn overstory with wetland forbs and grasses in the understory. Planting of vegetation will create at least >65% in herbaceous stratum, this mix of vegetation is rated for a stability rating of greater than 6.

14I. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat Rating (14D.iii.)	**General Wildlife Habitat Rating (14C.iii.)**		
	E/H	M	L
E/H	H	**H**	M
M	H	M	M
L	M	M	L
N/A	H	M	L

ii. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

A	Vegetated component >5 acres						Vegetated component 1-5 acres						Vegetated component < 1 acre					
B	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low	
C	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	**.9H**	.6M	.7M	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.5M	.5M	.3L	.3L	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) **Vegetated Upland Buffer (VUB):** Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference? ___ *If yes, add 0.1 to the score in ii above.*

iv. Final Score and Rating: **0.90H**

Comments: Generally, conditions of production export/food chain support are likely to remain the same. The AA may not have a >50 foot-wide vegetated upland buffer around >75% of the AA circumference after the project, as development of roads and homes or future maintenance of property could potentially remove this vegetated barrier.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)

i. Discharge Indicators

- X The AA is a slope wetland
- X Springs or seeps are known or observed
- ___ Vegetation growing during dormant season/drought
- X Wetland occurs at the toe of a natural slope
- ___ AA permanently flooded during drought periods
- ___ Wetland contains an outlet, but no inlet
- ___ Shallow water table and the site is saturated to the surface
- ___ Other:

ii. Recharge Indicators

- ___ Permeable substrate present without underlying impeding layer
- ___ Wetland contains inlet but no outlet
- ___ Stream is a known 'losing' stream; discharge volume decreases
- ___ Other:

iii. Rating (use the information from i and ii above and the table below to arrive at [circle] the functional points and rating)

	Duration of saturation at AA Wetlands *FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM*			
Criteria	P/P	S/I	T	None
Groundwater Discharge or Recharge	**1H**	.7M	.4M	.1L
Insufficient Data/Information	N/A			

Comments: Hydrology source of all aquatic resources in the AA are natural springs. Many of the spring sources in the AA will be restored, enhanced, or improved as a result of the project.

14K. Uniqueness:

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland **or** plant association listed as "S1" by the MTNHP			AA does not contain previously cited rare types **and** structural diversity (#13) is high **or** contains plant association listed as "S2" by the MTNHP			AA does not contain previously cited rare types or associations **and** structural diversity (#13) is low-moderate		
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	**1H**	.9H	.8H	.8H	.6M	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L

Comments: "Uniqueness" parameters will remain unchanged from the existing conditions as a result of the project.

14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity)

i. Is the AA a known or potential rec./ed. site: (circle) **X** (if 'Yes' continue with the evaluation; if 'No' then mark ___ **NA** and proceed to the overall summary and rating page)

ii. Check categories that apply to the AA: ___Educational/scientific study; ___Consumptive rec.; **X** Non-consumptive rec.; ___Other :

iii. Rating:

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	**.1M**	.05L

Comments: Elevated boardwalk will be constructed over many areas in the AA, which will provide education and non-consumptive recreation opportunities for the landowners and others.

General Site Notes
The project is forecasted to enhance aquatic resources in the AA from "Category II wetlands" to "Category I wetlands".

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S):

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Wetland Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.00	1	0.00	
B. MT Natural Heritage Program Species Habitat	H	0.90	1	1.86	
C. General Wildlife Habitat	M	0.60	1	1.24	
D. General Fish Habitat	H	0.80	1	1.66	*
E. Flood Attenuation	M	0.70	1	1.45	
F. Short and Long Term Surface Water Storage	L	0.30	1	0.62	
G. Sediment/Nutrient/Toxicant Removal	M	0.70	1	1.45	*
H. Sediment/Shoreline Stabilization	H	1.00	1	2.07	
I. Production Export/Food Chain Support	H	0.90	1	1.86	
J. Groundwater Discharge/Recharge	H	1.00	1	2.07	
K. Uniqueness	H	1.00	1	2.07	*
L. Recreation/Education Potential (bonus points)	M	0.10	1	0.21	*
Totals:		8.00	11.00	16.56	
Percent of Possible Score			73%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)

___ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; **or**

__X__ Score of 1 functional point for Uniqueness; **or**

___ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; **or**

___ Percent of possible score > 80% (round to nearest whole #).

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)

___ Score of 1 functional point for MT Natural Heritage Program Species Habitat; **or**

___ Score of .9 or 1 functional point for General Wildlife Habitat; **or**

___ Score of .9 or 1 functional point for General Fish Habitat; **or**

___ "High" to "Exceptional" ratings for **both** General Wildlife Habitat **and** General Fish/Aquatic Habitat; **or**

___ Score of .9 functional point for Uniqueness; **or**

__X__ Percent of possible score > 65% (round to nearest whole #).

Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)

Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)

___ "Low" rating for Uniqueness; **and**

___ Vegetated wetland component 1 acre (do not include upland vegetated buffer); **and**

___ Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: I

Summary Comments: Top 4 functions are fish habitat, sediment/nutrient/toxicant removal, uniqueness, and recreation. The project will design the site specifically for fish habitat. The banks of the streams in the AA will be stabilized and re-vegetated to reduce sedimentation and to promote a diverse riparian area, the aquatic resources in the AA will maintain their high level of uniqueness compared to other aquatic resources in the region, and the project will design facilities for the property owners to enjoy the aquatic resources and engage in recreational activities without degrading their function or condition.

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Good Timber Ranch **2. MDT Project #:** **Control #:**

3. Evaluation Date: 02/09/2022 **4. Evaluator(s):** Howe, McConnell **5. Wetlands/Site #(s):** Wetlands 5, 7, 9, 11, 15

6. Wetland Location(s): i. Legal: T03N,R45E,SW and SE 1/4 of Sec 22

Latitude/Longitude: 43.569659, -111.131148 : 43.569502, -111.13075 : 43.569867, -111.130254 : 43.569772, -111.129683 : 43.569073, -111.127731 : 43.568561, -111.127666 :

iii. Watershed:

Watershed Name, County: Trail Creek-Teton River Watershed, Teton County

7. a. Evaluating Agency:

b. Purpose of Evaluation:

1. ___ Wetlands potentially affected by MDT project
2. ___ Mitigation wetlands; pre-construction
3. ___ Mitigation wetlands; post-construction
4. X Other: Forecasted conditions

8. Wetland size: 0.840 acres (measured)

0.840 acres (measured)

9. Assessment area (AA):

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
S	SS	NA	PP	100.00

Abbreviations: *(see manual for definitions)*

HGM Classes: Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**);

Cowardin Classes: Rock Bottom (**RB**), Unconsolidated bottom (**UB**), Aquatic Bed (**AB**), Unconsolidated Shore (**US**), Moss-lichen Wetland (**ML**), Emergent Wetland (**EM**), Scrub-Shrub Wetland (**SS**), Forested Wetland (**FO**)

Modifiers: Excavated (**E**), Impounded (**I**), Diked (**D**), Partly Drained (**PD**), Farmed (**F**), Artificial (**A**)

Water Regimes: Permanent / Perennial (**PP**), Seasonal / Intermittent (**SI**), Temporary / Ephemeral (**TE**)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

COMMON

12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (**ANVS**) list)

Conditions within AA	*Predominant conditions adjacent to (within 500 feet of) AA*		
	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is >=15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is <= 30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <= 15%.	low disturbance	**low disturbance**	moderate disturbance
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is <=	moderate disturbance	moderate disturbance	high disturbance
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.	high disturbance	high disturbance	high disturbance

Comments: (types of disturbance, intensity, season, etc.): Aquatic resources within AA will be restored to a more natural, higher functioning condition as a result of the project. After improvements to aquatic resources are complete, fencing will be placed around some of the spring sources to protect from future disturbance.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Noxious, nuisance, and other exotic veg species will have been removed during development and managed/suppressed after development is finished.

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: Land-use will consist of minor rural development including some roads, buildings, and one field that will be cultivated for hay crop. Habitat within 500 feet of AA will consist of forested hills, open meadows, streams, and a pond/lake.

13. Structural Diversity: (based on number of "Cowardin" ***vegetated*** classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	**Initial Rating**	**Is current management preventing (passive) existence of additional vegetated classes?**		**Modified Rating**
>= 3 (or 2 if 1 is forested) classes	H	NA	NA	NA
2 (or 1 if forested) classes	**M**	NA	NA	NA
1 class, but not a monoculture	M	<-- NO	YES -->	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: Scrub-shrub is currently the main habitat type in the AA. Restoration and enhancement measure will include mechanical thinning of PSS habitats, which will promote the growth of PEM herbaceous layer and allow for a more diverse vegetation community.

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions): No usable habitat

Primary or critical habitat (list species) **Secondary habitat (list species)** **Incidental habitat (list species)**

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
Functional Points and Rating	1H	.9H	.8M	.7M	.3L	.1L	**0L**

Sources for documented use (e.g. observations, records, etc): According to USFWS IPaC tool, the federally listed species that potentially occur in the in AA are grizzly bear, Canada lynx, and Monarch butterfly. The current conditions in the AA and conditions after the project will likely not support those species.

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (list species) **Secondary habitat (list species)** **Incidental habitat (list species)**

Northern Leopard Frog(D)

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
***S1 Species:** Functional Points and Rating*	1H	.8H	.7M	.6M	.2L	.1L	0L
***S2 and S3 Species:** Functional Points and Rating*	**.9H**	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): A northern leopard frog, a tier 2 species of greatest conservation need, was observed in aquatic habitats adjacent to the AA during the baseline field investigation in June 2021, and is likely to occur within the AA. Several aquatic invertebrates (mollusks, snails) were observed in the AA. The mollusks and snails species were not identified, however, the IDFG conservation planner indicates that several of aquatic invertebrate species listed as tier and tier 3 species have the potential to occur in this area. Additionally, the IDFG conservation planner tool indicates that several migratory bird species (tier 2-3) have the potential to occur in the AA. The project will enhance the AA to provide higher quality habitat for amphibians, aquatic invertebrates, and migratory birds.

14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):
- ___ observations of abundant wildlife #s or high species diversity (during any period)
- ___ abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.
- ___ presence of extremely limiting habitat features not available in the surrounding area
- ___ interviews with local biologists with knowledge of the AA

Minimal (based on any of the following [check]):
- X few or no wildlife observations during peak use periods
- ___ little to no wildlife sign
- ___ sparse adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

Moderate (based on any of the following [check]):
- ___ observations of scattered wildlife groups or individuals or relatively few species during peak periods
- ___ common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, etc.
- ___ adequate adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

ii. Wildlife habitat features (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)	High								Moderate								Low			
Class cover distribution (all vegetated classes)	Even				Uneven				Even				Uneven				Even			
Duration of surface water in >=10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A
Low disturbance at AA (see #12i)	E	E	E	H	E	E	H	H	**E**	H	H	M	E	H	M	M	E	H	M	M
Moderate disturbance at AA (see #12i)	H	H	H	H	H	H	H	M	H	H	M	M	H	M	M	L	H	M	L	L
High disturbance at AA (see #12i)	M	M	M	L	M	M	L	L	M	M	L	L	M	L	L	L	L	L	L	L

iii. Rating (use the conclusions from i and ii above and the matrix below to arrive at [circle] the functional points and rating)

Evidence of wildlife use (i)	*Wildlife habitat features rating (ii)*			
	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	.9H	.7M	.5M	.3L
Minimal	**.6M**	.4M	.2L	.1L

Comments: Current condition of AA is primarily PSS habitat. The project will improve the aquatic resources and riparian areas to include herbaceous PEM habitat areas, which will create a more even habitat cover.

14D. General Fish Habitat Rating: (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark ___ **NA** and proceed to 14E.)

Type of Fishery: Cold Water **(CW)** **X** Warm Water **(WW)** ___ **Use the CW or WW guidelines in the user manual to complete the matrix**

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA	Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral					
Aquatic hiding / resting / escape cover	Optimal		Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor	
Thermal cover optimal / suboptimal	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	**.8H**	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA: Current condition of AA is primarily PSS habitat. The project will improve the aquatic resources and riparian areas to include herbaceous PEM habitat areas, which will create a more even habitat cover.

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? ___ *If yes, reduce score in i above by 0.1.*

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? ___ *If yes, add 0.1 to the adjusted score in* ***i*** *or* ***iia.***

iii. Final Score and Rating: 0.8H **Comments:** Project will be designed to enhance fish habitat in the AA. Streams will be enhanced to include optimal hiding/resting/escape habitat and thermal cover. Pool-riffle-fun complexes will also be installed, and stream sinuosity will be increased as a result of the project.

14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark ___ **NA** and proceed to 14F.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly entrenched - C, D, E stream types			Moderately entrenched – B stream type			Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains **no outlet or restricted outlet**	1H	.9H	.6M	.8H	.7M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.8H	.5M	.7M	**.6M**	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

20 /	10 =	**2.00**
Flood-prone width	*Bankfull width*	*Entrenchment ratio (ER)*



Slightly Entrenched ER = >2.2			**Moderately Entrenched ER = 1.41 – 2.2**	**Entrenched ER = 1.0 – 1.4**		
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? ___ **Comments:** Smith Springs creek has a fairly large floodplain, which provides space for side channels and stream modifications. The channel will be re-contoured to improve sinuosity, and pool-riffle-run complexes would be constructed within the limits of the floodplain.

14F. Short and Long Term Surface Water Storage: (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, mark ___ **NA** and proceed to 14G.)

i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 to 5 acre feet			<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond **>= 5 out of 10 years**	1H	.9H	.8H	.8H	.6M	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond **< 5 out of 10 years**	.9H	.8H	.7M	.7M	.5M	.4M	**.3L**	.2L	.1L

Comments: The project will improve aquatic resources in the AA; however, the short term and long term surface water storage capacity will likely remain the same.

14G. Sediment/Nutrient/Toxicant Retention and Removal: (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, mark ___ **NA** and proceed to 14H.)

i. Rating

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				Waterbody on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use with potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.			
% cover of wetland vegetation in AA	>= 70%		< 70%		>= 70%		< 70%	
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains **no or restricted outlet**	1H	.8H	.7M	.5M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	**.7M**	.6M	.4M	.4M	.3L	.2L	.1L

Comments: Bank stabilization, sediment removal, and re-vegetation efforts associated with the project will help to keep sedimentation in the future.

14H Sediment/Shoreline Stabilization: (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, mark ___ **NA** and proceed to 14I.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

*% Cover of **wetland** streambank or shoreline by species with stability ratings of >=6 (see **Appendix F**).*	*Duration of surface water adjacent to rooted vegetation*		
	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	1H	.9H	.7M
35-64%	**.7M**	.6M	.5M
35%	.3L	.2L	.1L

Comments: Stream banks will be replanted with willow and hawthorn overstory with wetland forbs and grasses in the understory. Planting of vegetation will increase vegetation cover on the shoreline to at least create at least >65% in herbaceous stratum, this mix of vegetation is rated for a stability rating of greater than 6.

14I. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat Rating (14D.iii.)	**General Wildlife Habitat Rating (14C.iii.)**		
	E/H	M	L
E/H	H	**H**	M
M	H	M	M
L	M	M	L
N/A	H	M	L

ii. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

A	Vegetated component >5 acres						Vegetated component 1-5 acres						Vegetated component < 1 acre					
B	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low	
C	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	.9H	.6M	.7M	.4M	.5M	.3L	**.8H**	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.5M	.5M	.3L	.3L	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) **Vegetated Upland Buffer (VUB):** Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference? ___ *If yes, add 0.1 to the score in ii above.*

iv. Final Score and Rating: **0.80H** **Comments:** Generally, conditions of production export/food chain support are likely to remain the same. The AA may not have a >50 foot-wide vegetated upland buffer around >75% of the AA circumference after the project, as development of roads and homes or future maintenance of property could potentially remove this vegetated barrier

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)

i. Discharge Indicators

- X The AA is a slope wetland
- X Springs or seeps are known or observed
- ___ Vegetation growing during dormant season/drought
- ___ Wetland occurs at the toe of a natural slope
- ___ AA permanently flooded during drought periods
- ___ Wetland contains an outlet, but no inlet
- ___ Shallow water table and the site is saturated to the surface
- ___ Other:

ii. Recharge Indicators

- ___ Permeable substrate present without underlying impeding layer
- ___ Wetland contains inlet but no outlet
- ___ Stream is a known 'losing' stream; discharge volume decreases
- ___ Other:

iii. Rating (use the information from i and ii above and the table below to arrive at [circle] the functional points and rating)

	Duration of saturation at AA Wetlands *FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM*			
Criteria	P/P	S/I	T	None
Groundwater Discharge or Recharge	**1H**	.7M	.4M	.1L
Insufficient Data/Information	N/A			

Comments: Some springs area present within the AA. Many of the springs that are present will be restored and all will be preserved. The hydrology source of all aquatic resources in the AA is a spring.

14K. Uniqueness:

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland **or** plant association listed as "S1" by the MTNHP			AA does not contain previously cited rare types **and** structural diversity (#13) is high **or** contains plant association listed as "S2" by the MTNHP			AA does not contain previously cited rare types or associations **and** structural diversity (#13) is low-moderate		
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	**.9H**	.8H	.8H	.6M	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L

Comments: Uniqueness of the aquatic resources in the AA will likely remain in current state after the project is finished.

14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity)

i. Is the AA a known or potential rec./ed. site: (circle) **X** (if 'Yes' continue with the evaluation; if 'No' then mark ___ **NA** and proceed to the overall summary and rating page)

ii. Check categories that apply to the AA: ___Educational/scientific study; ___Consumptive rec.; **X** Non-consumptive rec.; ___Other :

iii. Rating:

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	**.1M**	.05L

Comments: Elevated boardwalk will be constructed over aquatic resources within and adjacent to the AA, which will provide education and non-consumptive recreation opportunities for the landowners and others.

General Site Notes
The project is forecasted to enhance aquatic resources in the AA from "Category III wetlands" to "Category II wetlands"

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Wetlands 5, 7, 9, 11, 15

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Wetland Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.00	1	0.00	
B. MT Natural Heritage Program Species Habitat	H	0.90	1	0.76	
C. General Wildlife Habitat	M	0.60	1	0.50	
D. General Fish Habitat	H	0.80	1	0.67	*
E. Flood Attenuation	M	0.60	1	0.50	
F. Short and Long Term Surface Water Storage	L	0.30	1	0.25	
G. Sediment/Nutrient/Toxicant Removal	M	0.70	1	0.59	*
H. Sediment/Shoreline Stabilization	M	0.70	1	0.59	*
I. Production Export/Food Chain Support	H	0.80	1	0.67	
J. Groundwater Discharge/Recharge	H	1.00	1	0.84	
K. Uniqueness	H	0.90	1	0.76	
L. Recreation/Education Potential (bonus points)	M	0.10	1	0.08	*
Totals:		7.40	11.00	6.21	
Percent of Possible Score			67%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)

___ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; **or**
___ Score of 1 functional point for Uniqueness; **or**
___ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; **or**
___ Percent of possible score > 80% (round to nearest whole #).

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)

___ Score of 1 functional point for MT Natural Heritage Program Species Habitat; **or**
___ Score of .9 or 1 functional point for General Wildlife Habitat; **or**
___ Score of .9 or 1 functional point for General Fish Habitat; **or**
___ "High" to "Exceptional" ratings for **both** General Wildlife Habitat **and** General Fish/Aquatic Habitat; **or**
__X__ Score of .9 functional point for Uniqueness; **or**
__X__ Percent of possible score > 65% (round to nearest whole #).

Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)

Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)

___ "Low" rating for Uniqueness; **and**
__X__ Vegetated wetland component 1 acre (do not include upland vegetated buffer); **and**
___ Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: II

Summary Comments: Fish habitat selected as prominent function, as the project will be designed to create prime fish habitat. Sediment/nutrient/toxicant retention and shoreline stabilization will be improved as a result of the project. existing sediment will be removed from stream channels, banks will be re-vegetated with PEM and PSS habitat, preventing future sedimentation and toxicant problems. Additionally, the project will be designed to create an area where the property owners can enjoy recreation activities.

MDT Montana Wetland Assessment Form (revised March 2008)

1. Project Name: Good Timber Ranch **2. MDT Project #:** **Control #:**

3. Evaluation Date: 02/09/2022 **4. Evaluator(s):** Howe, McConnell **5. Wetlands/Site #(s):** Rocky Spring, Sedge Spring, Wetlands 1,3,4,10, 13, 16, 18, 20

6. Wetland Location(s): i. Legal: T03N,R45E,SW and SE 1/4 of Sec 22 **Latitude/Longitude:**

43.570662, -111.13066 :
43.570474, -111.13142 :
43.570155, -111.131586 :
43.569321, -111.126924 :
43.567828, -111.123885 :
43.570582, -111.13621 :
43.569931, -111.129711 :
43.568784, -111.12732 :

iii. Watershed:

Watershed Name, County: Trail Creek-Teton River Watershed, Teton County

7. a. Evaluating Agency:

b. Purpose of Evaluation:

1. ___ Wetlands potentially affected by MDT project
2. ___ Mitigation wetlands; pre-construction
3. ___ Mitigation wetlands; post-construction
4. X Other: Forecasted conditions

8. Wetland size: 1.070 acres (measured)

9. Assessment area (AA): 1.070 acres (measured)

10. Classification of Wetland and Aquatic Habitats in AA

HGM Class (Brinson)	Class (Cowardin)	Modifier (Cowardin)	Water Regime	% of AA
S	EM	NA	PP	100.00

Abbreviations: *(see manual for definitions)*

HGM Classes: Riverine (**R**), Depressional (**D**), Slope (**S**), Mineral Soil Flats (**MSF**), Organic Soil Flats (**OSF**), Lacustrine Fringe (**LF**);

Cowardin Classes: Rock Bottom (**RB**), Unconsolidated bottom (**UB**), Aquatic Bed (**AB**), Unconsolidated Shore (**US**), Moss-lichen Wetland (**ML**), Emergent Wetland (**EM**), Scrub-Shrub Wetland (**SS**), Forested Wetland (**FO**)

Modifiers: Excavated (**E**), Impounded (**I**), Diked (**D**), Partly Drained (**PD**), Farmed (**F**), Artificial (**A**)

Water Regimes: Permanent / Perennial (**PP**), Seasonal / Intermittent (**SI**), Temporary / Ephemeral (**TE**)

11. Estimated relative abundance: (of similarly classified sites within the same Major Montana Watershed Basin, see definitions)

ABUNDANT

12. General condition of AA:

i. Disturbance: (use matrix below to determine [circle] appropriate response – see instructions for Montana-listed noxious weed and aquatic nuisance vegetation species (**ANVS**) list)

Conditions within AA	*Predominant conditions adjacent to (within 500 feet of) AA*		
	Managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or buildings; and noxious weed or ANVS cover is >=15%.	Land not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to minor clearing; contains few roads or buildings; noxious weed or ANVS cover is <= 30%.	Land cultivated or heavily grazed or logged; subject to substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.
AA occurs and is managed in predominantly natural state; is not grazed, hayed, logged, or otherwise converted; does not contain roads or occupied buildings; and noxious weed or ANVS cover is <= 15%.	low disturbance	**low disturbance**	moderate disturbance
AA not cultivated, but may be moderately grazed or hayed or selectively logged; or has been subject to relatively minor clearing, fill placement, or hydrological alteration; contains few roads or buildings; noxious weed or ANVS cover is <=	moderate disturbance	moderate disturbance	high disturbance
AA cultivated or heavily grazed or logged; subject to relatively substantial fill placement, grading, clearing, or hydrological alteration; high road or building density; or noxious weed or ANVS cover is > 30%.	high disturbance	high disturbance	high disturbance

Comments: (types of disturbance, intensity, season, etc.): The project will restore to natural state, or will enhance aquatic resources to a higher-functioning state. After improvements to aquatic resources are complete, fencing will have been placed around the spring sources to protect from future disturbance. Some aquatic resources in this AA will be removed, and a the project will create a lake in their place.

ii. Prominent noxious, aquatic nuisance, & other exotic vegetation species: Noxious, nuisance, and other exotic veg species will be removed during development and managed/suppressed after development is finished.

iii. Provide brief descriptive summary of AA and surrounding land use/habitat: Land-use will consist of minor rural development including some roads, buildings, and one field that will be cultivated for hay crop. Habitat within 500 feet of AA will consists of forested hills, open meadows, streams, and a pond/lake.

13. Structural Diversity: (based on number of "Cowardin" ***vegetated*** classes present [do not include unvegetated classes], see #10 above)

Existing # of "Cowardin" Vegetated Classes in AA	**Initial Rating**	**Is current management preventing (passive) existence of additional vegetated classes?**		**Modified Rating**
>= 3 (or 2 if 1 is forested) classes	H	NA	NA	NA
2 (or 1 if forested) classes	**M**	NA	NA	NA
1 class, but not a monoculture	M	<-- NO	YES -->	L
1 class, monoculture (1 species comprises >= 90% of total cover)	L	NA	NA	NA

Comments: The project will create additional vegetated classes in the AA. Specifically, a PSS band will be planted around the proposed lake, along with a PEM understory.

SECTION PERTAINING to FUNCTIONS & VALUES ASSESSMENT

14A. Habitat for Federally Listed or Proposed Threatened or Endangered Plants or Animals:

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions): No usable habitat

Primary or critical habitat (list species) **Secondary habitat (list species)** **Incidental habitat (list species)**

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
Functional Points and Rating	1H	.9H	.8M	.7M	.3L	.1L	**0L**

Sources for documented use (e.g. observations, records, etc): Currently, this AA consists of PEM and PSS classes. After the project, this will be maintained; however, enhancements will occur in some areas to enhance structural diversity. For example, some dense portions of PSS habitat that do not support an understory will be thinned to allow for a PEM understory to grow.

14B. Habitat for plant or animals rated S1, S2, or S3 by the Montana Natural Heritage Program: (not including species listed in14A above)

i. AA is Documented (D) or Suspected (S) to contain (circle one based on definitions contained in instructions):

Primary or critical habitat (list species) **Secondary habitat (list species)** **Incidental habitat (list species)**

Northern leopard frog(D)

ii. Rating (use the conclusions from i above and the matrix below to arrive at [circle] the functional points and rating)

Highest Habitat Level	*doc/primary*	*sus/primary*	*doc/secondary*	*sus/secondary*	*doc/incidental*	*sus/incidental*	*None*
***S1 Species:** Functional Points and Rating*	1H	.8H	.7M	.6M	.2L	.1L	0L
***S2 and S3 Species:** Functional Points and Rating*	**.9H**	.7M	.6M	.5M	.2L	.1L	0L

Sources for documented use (e.g. observations, records, etc): A northern leopard frog, a tier 2 species of greatest conservation need, was observed in aquatic habitats adjacent to the AA during the baseline field investigation in June 2021, and is likely to occur within the AA. Several aquatic invertebrates (mollusks, snails) were observed in the AA. The mollusks and snails species were not identified, however, the IDFG conservation planner indicates that several of aquatic invertebrate species listed as tier and tier 3 species have the potential to occur in this area. Additionally, the IDFG conservation planner tool indicates that several migratory bird species (tier 2-3) have the potential to occur in the AA. The project will enhance the AA to provide higher quality habitat for amphibians, aquatic invertebrates, and migratory birds.

14C. General Wildlife Habitat Rating:

i. Evidence of overall wildlife use in the AA (circle substantial, moderate, or low based on supporting evidence):

Substantial (based on any of the following [check]):
- ___ observations of abundant wildlife #s or high species diversity (during any period)
- ___ abundant wildlife sign such as scat, tracks, nest structures, game trails, etc.
- ___ presence of extremely limiting habitat features not available in the surrounding area
- ___ interviews with local biologists with knowledge of the AA

Minimal (based on any of the following [check]):
- ___ few or no wildlife observations during peak use periods
- ___ little to no wildlife sign
- ___ sparse adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

Moderate (based on any of the following [check]):
- X observations of scattered wildlife groups or individuals or relatively few species during peak periods
- X common occurrence of wildlife sign such as scat, tracks, nest structures, game trails, etc.
- ___ adequate adjacent upland food sources
- ___ interviews with local biologists with knowledge of the AA

ii. Wildlife habitat features (Working from top to bottom, circle appropriate AA attributes in matrix to arrive at rating. Structural diversity is from #13. For class cover to be considered evenly distributed, the most and least prevalent vegetated classes must be within 20% of each other interms of their percent composition of the AA (see #10). Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; T/E = temporary/ephemeral; and A = absent [see instructions for further definitions of these terms])

Structural diversity (see #13)	High								Moderate								Low			
Class cover distribution (all vegetated classes)	Even				Uneven				Even				Uneven				Even			
Duration of surface water in >=10% of AA	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A	P/P	S/I	T/E	A
Low disturbance at AA (see #12i)	E	E	E	H	E	E	H	H	**E**	H	H	M	E	H	M	M	E	H	M	M
Moderate disturbance at AA (see #12i)	H	H	H	H	H	H	H	M	H	H	M	M	H	M	M	L	H	M	L	L
High disturbance at AA (see #12i)	M	M	M	L	M	M	L	L	M	M	L	L	M	L	L	L	L	L	L	L

iii. Rating (use the conclusions from i and ii above and the matrix below to arrive at [circle] the functional points and rating)

Evidence of wildlife use (i)	*Wildlife habitat features rating (ii)*			
	Exceptional	High	Moderate	Moderate
Substantial	1E	.9H	.8H	.7M
Moderate	**.9H**	.7M	.5M	.3L
Minimal	.6M	.4M	.2L	.1L

Comments: The proposed lake in the lower reach will likely add additional wildlife habitat, which will increase the existing value from moderate to high

14D. General Fish Habitat Rating: (Assess this function if the AA is used by fish or the existing situation is "correctable" such that the AA could be used by fish [i.e., fish use is precluded by perched culvert or other barrier, etc.]. If the AA is not used by fish, fish use is not restorable due to habitat constraints, or is not desired from a management perspective [such as fish entrapped in a canal], then mark ___ **NA** and proceed to 14E.)

Type of Fishery: Cold Water **(CW)** **X** Warm Water **(WW)** ___ **Use the CW or WW guidelines in the user manual to complete the matrix**

i. Habitat Quality and Known / Suspected Fish Species in AA (use matrix to arrive at [circle] the functional points and rating)

Duration of surface water in AA	Permanent / Perennial						Seasonal / Intermittent						Temporary / Ephemeral					
Aquatic hiding / resting / escape cover	Optimal		Adequate		Poor		Optimal		Adequate		Poor		Optimal		Adequate		Poor	
Thermal cover optimal / suboptimal	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S	O	S
FWP Tier I fish species	1E	.9H	.8H	.7M	.6M	.5M	.9H	.8H	.7M	.6M	.5M	.4M	.7M	.6M	.5M	.4M	.3L	.2L
FWP Tier II or Native Game fish species	.9H	.8H	.7M	.6M	.5M	.5M	.8H	.7M	.6M	.5M	.4M	.4M	.6M	.5M	.4M	.3L	.2L	.2L
FWP Tier III or Introduced Game fish	**.8H**	.7M	.6M	.5M	.5M	.4M	.7M	.6M	.5M	.4M	.4M	.3L	.5M	.4M	.3L	.2L	.2L	.1L
FWP Non-Game Tier IV or No fish species	.5M	.5M	.5M	.4M	.4M	.3L	.4M	.4M	.4M	.3L	.3L	.2L	.2L	.2L	.2L	.1L	.1L	.1L

Sources used for identifying fish sp. potentially found in AA: Identification of fish species during the initial field investigation was estimated based on professional judgement and experience. Species identification was not confirmed.

ii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1)

a) Is fish use of the AA significantly reduced by a culvert, dike, or other man-made structure or activity or is the waterbody included on the current final MDEQ list of waterbodies in need of TMDL development with listed "Probable Impaired Uses" including cold or warm water fishery or aquatic life support, or do aquatic nuisance plant or animal species (see Appendix E) occur in fish habitat? ___ *If yes, reduce score in i above by 0.1.*

b) Does the AA contain a documented spawning area or other critical habitat feature (i.e., sanctuary pool, upwelling area, etc.- specify in comments) for native fish or introduced game fish? ___ *If yes, add 0.1 to the adjusted score in* ***i*** *or* ***iia.***

iii. Final Score and Rating: 0.8H **Comments:** The creation of the lake and improvement of streams in the AA will result in prime fish habitat.

14E. Flood Attenuation: (Applies only to wetlands subject to flooding via in-channel or overbank flow. If wetlands in AA are not flooded from in-channel or overbank flow, mark ___ **NA** and proceed to 14F.)

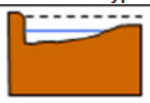
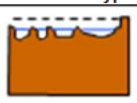
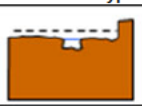
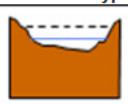
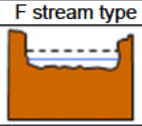
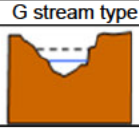
i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Estimated or Calculated Entrenchment (Rosgen 1994, 1996)	Slightly entrenched - C, D, E stream types			Moderately entrenched – B stream type			Entrenched-A, F, G stream types		
% of flooded wetland classified as forested and/or scrub/shrub	75%	25-75%	<25%	75%	25-75%	<25%	75%	25-75%	<25%
AA contains **no outlet or restricted outlet**	1H	.9H	.6M	.8H	.7M	**.5M**	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.8H	.5M	.7M	.6M	.4M	.3L	.2L	.1L

Entrenchment ratio (ER) estimation – see User's Manual for additional guidance. Entrenchment ratio = (flood-prone width)/(bankfull width) Flood-prone width = estimated horizontal projection of where 2 x maximum bankfull depth elevation intersects the floodplain on each side of the stream.

20 /	10 =	**2.00**
Flood-prone width	*Bankfull width*	*Entrenchment ratio (ER)*



Slightly Entrenched ER = >2.2			**Moderately Entrenched ER = 1.41 – 2.2**	**Entrenched ER = 1.0 – 1.4**		
C stream type	D stream type	E stream type	B stream type	A stream type	F stream type	G stream type
						

ii. Are ≥10 acres of wetland in the AA subject to flooding **AND** are man-made features which may be significantly damaged by floods located within 0.5 mile downstream of the AA (circle)? ___ **Comments:** Flood attenuation in the AA will increase as a result of the project. The proposed lake will provide a additional flood attenuation capacity and a restricted outlet.

14F. Short and Long Term Surface Water Storage: (Applies to wetlands that flood or pond from overbank or in-channel flow, precipitation, upland surface flow, or groundwater flow. If no wetlands in the AA are subject to flooding or ponding, mark ___ **NA** and proceed to 14G.)

i. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Abbreviations for surface water durations are as follows: P/P = permanent/perennial; S/I = seasonal/intermittent; and T/E = temporary/ephemeral [see instructions for further definitions of these terms].)

Estimated maximum acre feet of water contained in wetlands within the AA that are subject to periodic flooding or ponding	>5 acre feet			1.1 to 5 acre feet			<=1 acre foot		
Duration of surface water at wetlands within the AA	P/P	S/I	T/E	P/P	S/I	T/E	P/P	S/I	T/E
Wetlands in AA flood or pond **>= 5 out of 10 years**	1H	.9H	.8H	.8H	.6M	.5M	.4M	.3L	.2L
Wetlands in AA flood or pond **< 5 out of 10 years**	.9H	.8H	.7M	**.7M**	.5M	.4M	.3L	.2L	.1L

Comments: The construction of the proposed lake will increase surface water storage. The lake will hold an estimated amount between 1.1 and 5.5 acre feet of water.

14G. Sediment/Nutrient/Toxicant Retention and Removal: (Applies to wetlands with potential to receive sediments, nutrients, or toxicants through influx of surface or ground water or direct input. If no wetlands in the AA are subject to such input, mark ___ **NA** and proceed to 14H.)

i. Rating

Sediment, nutrient, and toxicant input levels within AA	AA receives or surrounding land use with potential to deliver levels of sediments, nutrients, or compounds at levels such that other functions are not substantially impaired. Minor sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.				Waterbody on MDEQ list of waterbodies in need of TMDL development for "probable causes" related to sediment, nutrients, or toxicants or AA receives or surrounding land use with potential to deliver high levels of sediments, nutrients, or compounds such that other functions are substantially impaired. Major sedimentation, sources of nutrients or toxicants, or signs of eutrophication present.			
% cover of wetland vegetation in AA	>= 70%		< 70%		>= 70%		< 70%	
Evidence of flooding / ponding in AA	Yes	No	Yes	No	Yes	No	Yes	No
AA contains **no or restricted outlet**	**1H**	.8H	.7M	.5M	.5M	.4M	.3L	.2L
AA contains **unrestricted outlet**	.9H	.7M	.6M	.4M	.4M	.3L	.2L	.1L

Comments: The proposed lake and stream enhancements will increase the AA's capacity for toxicant retention and removal. Additional riparian vegetation will be planted to stabilize the banks, and the lake will provide an area to retain sediment, toxicants, and nutrients.

14H Sediment/Shoreline Stabilization: (Applies only if AA occurs on or within the banks or a river, stream, or other natural or man-made drainage, or on the shoreline of a standing water body which is subject to wave action. If 14H does not apply, mark ___ **NA** and proceed to 14I.)

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

*% Cover of **wetland** streambank or shoreline by species with stability ratings of >=6 (see **Appendix F**).*	*Duration of surface water adjacent to rooted vegetation*		
	Permanent / Perennial	Seasonal / Intermittent	Temporary / Ephemeral
>= 65%	**1H**	.9H	.7M
35-64%	.7M	.6M	.5M
35%	.3L	.2L	.1L

Comments: The planting of additional vegetation along the stream banks and lake shore, and the improvements to stream channels will enhance the sediment/shoreline stabilization.

14I. Production Export/Food Chain Support:

i. Level of Biological Activity (synthesis of wildlife and fish habitat ratings [circle])

General Fish Habitat Rating (14D.iii.)	**General Wildlife Habitat Rating (14C.iii.)**		
	E/H	M	L
E/H	**H**	H	M
M	H	M	M
L	M	M	L
N/A	H	M	L

ii. Rating (Working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating. Factor A = acreage of vegetated wetland component in the AA; Factor B = level of biological activity rating from above (14I.i.); Factor C = whether or not the AA contains a surface or subsurface outlet; the final three rows pertain to duration of surface water in the AA, where P/P, S/I, and T/E are as previously defined, and A = "absent" [see instructions for further definitions of these terms].)

A	Vegetated component >5 acres						Vegetated component 1-5 acres						Vegetated component < 1 acre					
B	High		Moderate		Low		High		Moderate		Low		High		Moderate		Low	
C	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No
P/P	1H	.7M	.8H	.5M	.6M	.4M	**.9H**	.6M	.7M	.4M	.5M	.3L	.8H	.6M	.6M	.4M	.3L	.2L
S/I	.9H	.6M	.7M	.4M	.5M	.3L	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.5M	.5M	.3L	.3L	.2L
T/E/A	.8H	.5M	.6M	.3L	.4M	.2L	.7M	.4M	.5M	.2L	.3L	.1L	.6M	.4M	.4M	.2L	.2L	.1L

iii. Modified Rating (NOTE: Modified score cannot exceed 1 or be less than 0.1.) **Vegetated Upland Buffer (VUB):** Area with >= 30% plant cover, = 15% noxious weed or ANVS cover, and that is not subjected to periodic mechanical mowing or clearing (unless for weed control).

a) Is there an average >= 50 foot-wide vegetated upland buffer around >= 75% of the AA circumference? ___ *If yes, add 0.1 to the score in ii above.*

iv. Final Score and Rating: **0.90H** **Comments:** The addition of the lake and riparian areas around the lake and streams will likely increase food production export.

14J. Groundwater Discharge/Recharge: (check the appropriate indicators in i & ii below)

i. Discharge Indicators

- X The AA is a slope wetland
- X Springs or seeps are known or observed
- ___ Vegetation growing during dormant season/drought
- ___ Wetland occurs at the toe of a natural slope
- ___ AA permanently flooded during drought periods
- ___ Wetland contains an outlet, but no inlet
- ___ Shallow water table and the site is saturated to the surface
- X Other: The creation of the lake will likely receive additional groundwater discharge.

ii. Recharge Indicators

- ___ Permeable substrate present without underlying impeding layer
- ___ Wetland contains inlet but no outlet
- ___ Stream is a known 'losing' stream; discharge volume decreases
- ___ Other:

iii. Rating (use the information from i and ii above and the table below to arrive at [circle] the functional points and rating)

	Duration of saturation at AA Wetlands *FROM GROUNDWATER DISCHARGE OR WITH WATER THAT IS RECHARGING THE GROUNDWATER SYSTEM*			
Criteria	P/P	S/I	T	None
Groundwater Discharge or Recharge	**1H**	.7M	.4M	.1L
Insufficient Data/Information	N/A			

Comments: Source of all aquatic features in the AA are all natural springs. The proposed lake will also likely add capacity for groundwater recharge.

14K. Uniqueness:

i. Rating (working from top to bottom, use the matrix below to arrive at [circle] the functional points and rating)

Replacement potential	AA contains fen, bog, warm springs or mature (>80 yr-old) forested wetland **or** plant association listed as "S1" by the MTNHP			AA does not contain previously cited rare types **and** structural diversity (#13) is high **or** contains plant association listed as "S2" by the MTNHP			AA does not contain previously cited rare types or associations **and** structural diversity (#13) is low-moderate		
Estimated relative abundance (#11)	rare	common	abundant	rare	common	abundant	rare	common	abundant
Low disturbance at AA (#12i)	1H	.9H	**.8H**	.8H	.6M	.5M	.5M	.4M	.3L
Moderate disturbance at AA (#12i)	.9H	.8H	.7M	.7M	.5M	.4M	.4M	.3L	.2L
High disturbance at AA (#12i)	.8H	.7M	.6M	.6M	.4M	.3L	.3L	.2L	.1L

Comments: Natural springs occur in the AA, and are the source of all aquatic resources in the AA. Some very unique features such as sedge spring occur in the AA.

14L. Recreation/Education Potential: (affords "bonus" points if AA provides recreation or education opportunity)

i. Is the AA a known or potential rec./ed. site: (circle) **X** (if 'Yes' continue with the evaluation; if 'No' then mark ___ **NA** and proceed to the overall summary and rating page)

ii. Check categories that apply to the AA: ___ Educational/scientific study; **X** Consumptive rec.; **X** Non-consumptive rec.; ___ Other :

iii. Rating:

Known or Potential Recreation or Education Area	Known	Potential
Public ownership or public easement with general public access (no permission required)	.2H	.15H
Private ownership with general public access (no permission required)	.15H	.1M
Private or public ownership without general public access, or requiring permission for public access	**.1M**	.05L

Comments: Site will create recreation opportunities such as fishing and swimming for the landowners and guests.

General Site Notes
The project is forecasted to enhance aquatic resources in AA from "Category III" wetlands to "Category II" wetlands

FUNCTION & VALUE SUMMARY & OVERALL RATING FOR WETLAND/SITE #(S): Rocky Spring, Sedge Spring, Wetlands 1,3,4,10, 13, 16, 18, 20

Function & Value Variables	Rating	Actual Functional Points	Possible Functional Points	Functional Units: (Actual Points x Wetland Acreage)	Indicate the four most prominent functions with an asterisk (*)
A. Listed/Proposed T&E Species Habitat	L	0.00	1	0.00	
B. MT Natural Heritage Program Species Habitat	H	0.90	1	0.96	
C. General Wildlife Habitat	H	0.90	1	0.96	
D. General Fish Habitat	H	0.80	1	0.86	*
E. Flood Attenuation	M	0.50	1	0.54	
F. Short and Long Term Surface Water Storage	M	0.70	1	0.75	*
G. Sediment/Nutrient/Toxicant Removal	H	1.00	1	1.07	*
H. Sediment/Shoreline Stabilization	H	1.00	1	1.07	
I. Production Export/Food Chain Support	H	0.90	1	0.96	
J. Groundwater Discharge/Recharge	H	1.00	1	1.07	
K. Uniqueness	H	0.80	1	0.86	
L. Recreation/Education Potential (bonus points)	M	0.10	1	0.11	*
Totals:		8.60	11.00	9.21	
Percent of Possible Score			78%		

Category I Wetland: (must satisfy one of the following criteria; otherwise go to Category II)

____ Score of 1 functional point for Listed/Proposed Threatened or Endangered Species; **or**
____ Score of 1 functional point for Uniqueness; **or**
____ Score of 1 functional point for Flood Attenuation and answer to Question 14E.ii is "yes"; **or**
____ Percent of possible score > 80% (round to nearest whole #).

Category II Wetland: (Criteria for Category I not satisfied and meets any one of the following criteria; otherwise go to Category IV)

____ Score of 1 functional point for MT Natural Heritage Program Species Habitat; **or**
__X__ Score of .9 or 1 functional point for General Wildlife Habitat; **or**
____ Score of .9 or 1 functional point for General Fish Habitat; **or**
____ "High" to "Exceptional" ratings for **both** General Wildlife Habitat **and** General Fish/Aquatic Habitat; **or**
____ Score of .9 functional point for Uniqueness; **or**
__X__ Percent of possible score > 65% (round to nearest whole #).

Category III Wetland: (Criteria for Categories I, II, or IV not satisfied)

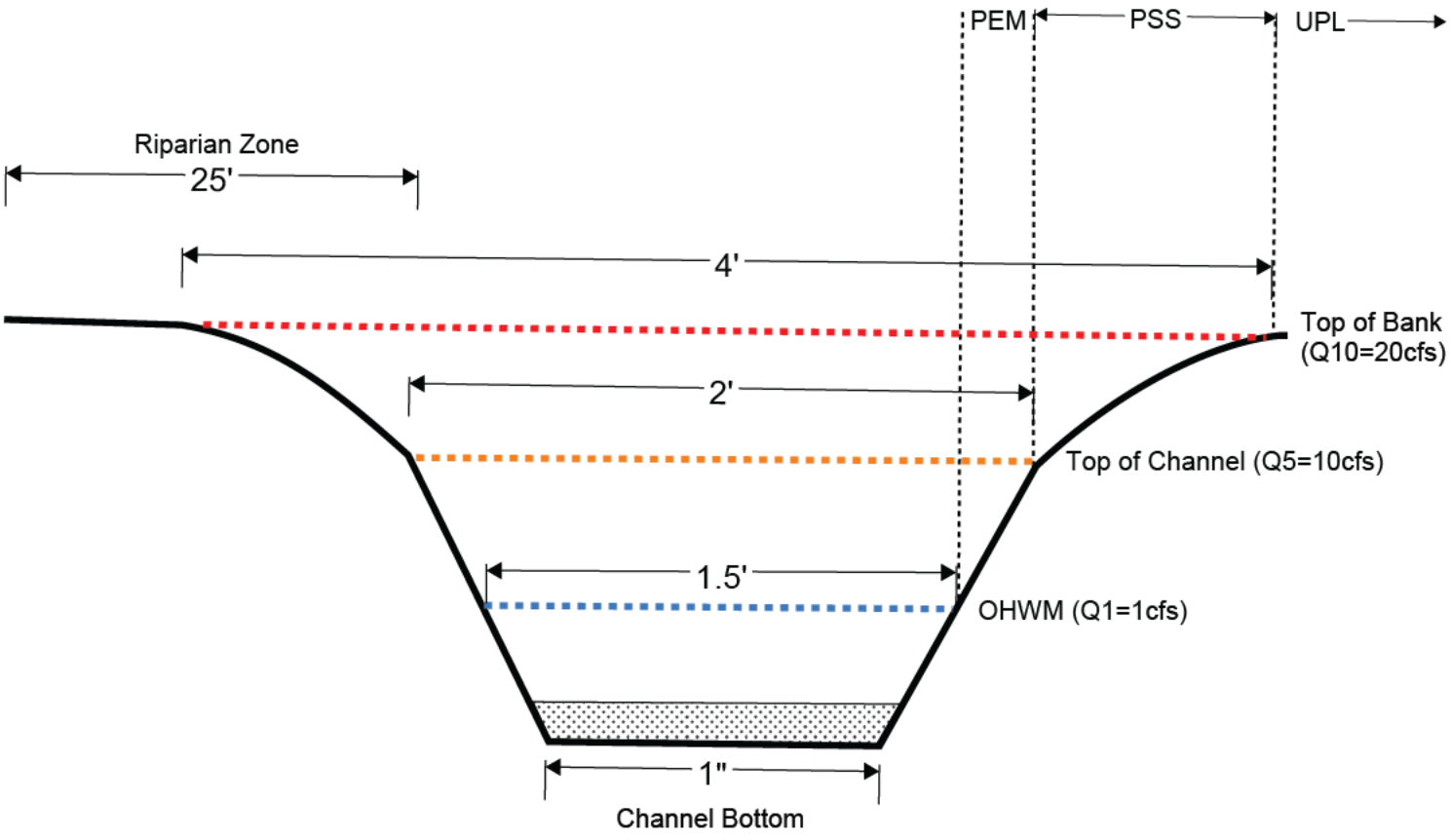
Category IV Wetland: (Criteria for Categories I or II are not satisfied and all of the following criteria are met; otherwise go to Category III)

____ "Low" rating for Uniqueness; **and**
____ Vegetated wetland component 1 acre (do not include upland vegetated buffer); **and**
____ Percent of possible score 35% (round to nearest whole #).

OVERALL ANALYSIS AREA RATING: II

Summary Comments: Recreation has been added as a primary function because the project will enhance aquatic resources in the AA with the intent to create recreational opportunities such as fishing and swimming.

Attachment E – Reference Stream Segment Typical Cross Section



Good Timber Ranch Joint Application for Permits	Lower Big Springs Creek Reference Stream Segment	Typical Cross Section



Good Timber Ranch Joint Application for Permits	Lower Big Springs Creek Reference Stream Segment	Photo

Attachment F – Project Action Results Summary

Aquatic Resource					Area of Effect														
Name	Type	Extent			Permanent Loss			Temporary Loss*			Restoration			Enhancement			Creation		
		SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF	SF	Acres	LF
Upper Reach Action Area																			
Viejo Spring/Wetland 2	PSS	4791	0.11																
Wetland 6	PEM	3816	0.09								1260	0.029							
Wetland 8	PSS	1428	0.03								1077	0.025							
Wetland 12	PSS	8093	0.19								8093	0.186							
Wetland 16	PEM	1593	0.037		1593	0.037													
Wetland 17	PSS	18739	0.43		1101	0.025					753	0.017							
Wetland 19	PSS	39780	0.913								17325	0.398							
Thoughtful Spring Creek	Riverine			114									45						
Twin Springs Creek	Riverine			47									47						
Smith Springs Creek	Riverine			300									300						
Alder Spring Creek	Riverine			260			30						45						
Big Springs Creek	Riverine			425									373						
Middle Reach Action Area																			
Wetland 5	PSS	4200	0.096					1641	0.038		2589	0.059							
Wetland 7	PSS	2768	0.064					2107	0.048					702	0.016				
Wetland 9	PSS	5834	0.134					5834	0.134										
Wetland 11	PSS	148237	3.403					6949	0.160					7878	0.181				
Wetland 14	PSS	1526	0.035								1526	0.035							
Wapiti Spring/Wetland 15	PSS	1135	0.026		1135	0.026													
Wetland 19	PSS	13990	0.321								690	0.016		13300	0.305				
Pole Creek Diversion Wetlands	PSS																11000	0.253	
Thoughtful Spring Creek	Riverine			514						388			277						
Twin Springs Creek	Riverine			288			168									120			
Forgotten Spring Creek	Riverine			428			366									62			
Smith Springs Creek	Riverine			708			338									370			
Alder Spring Creek	Riverine			800									225						118
Big Springs Creek	Riverine			530									120			558			
Pole Creek Diversion	Riverine																		1187
Lower Reach Action Area																			
Rocky Spring/Wetland 1	PSS	2142	0.049											1689	0.039	90			
Wetland 3	PEM	24949	0.573					3898	0.089					21208	0.487				
Wetland 4/Sedge Pond	PEM	1610	0.037											1610	0.037				
Wetland 10	PEM	3356	0.077					3356	0.077										
Wetland 13	PEM	1967	0.045					1967	0.045										
Sedge Spring/Wetland 18	PEM	1395	0.032																
Wetland 20	PEM	316	0.007																
Northside Wetland	PSS																35003	0.804	
Lake Washaki	PEM																39335	0.903	
Lake Washaki	PSS																16766	0.385	
Rocky Spring Creek	Riverine			135												88			
Thoughtful Spring Creek	Riverine			370						227			227						236
Forgotten Spring Creek	Riverine			260			260												
Smith Springs Creek	Riverine			203			175						27						
Big Springs Creek	Riverine			1157			565									593			
Lake Washaki	Lacustrine																111265	2.554	
SUBTOTAL	**Riverine**			6,539			1,902			227			1,686			1,881			1,541
	Lacustrine																111,265	2.55	
	PEM	39,002	0.90		1,593	0.04		9,221	0.21					22,818	0.52		39,335	0.90	
	PSS	252,663	5.80		2,236	0.05		16,531	0.38		32,053	0.74		36,869	0.85	90	62,769	1.44	
GRAND TOTAL		**291,665**	**6.70**	**6,539**	**3,829**	**0.088**	**1,902**	**25,752**	**0.59**	**227**	**32,053**	**0.74**	**1,686**	**59,687**	**1.37**	**1,971**	**213,369**	**4.90**	**1,541**

NOTES: SF=Square Feet, LF=Linear Feet, PEM=Palustrine Emergent, PSS=Palustrine Scrub-shrub, *Aquatic resources temporarily lost will be relocated to the riparian wetland habitat around Lake Washakie, Pole Creek Diversion, and/or to the North Side Wetlands.

Upper Reach Action Area						
Resource Impacted	Project Action	Max Area of Impact			Max Volumes (cubic yards)	
		Square Feet	Acres	Linear Feet	Dredge	Fill
Thoughtful Spring Creek	RES 1,5,6	135	0.003	45	2	
Wetland 6	RES2,6	1260	0.029		2	
Twin Spring/Wetland 8	RES 1,4,5	1077	0.025	47	2	5
Smith Spring Creek	RC1, RES1,2	600	0.014	300	10	10
Wetland 12	RES2,3, 6, CH4	8093	0.186		45	50
Alder Spring	RES1,2,4,5,6, HE1, RC2	100	0.002	45	2	20
Wetland 16	RC2	1593	0.037		0	150
Wetland 17	RC2	1101	0.025		5	20
Big Springs Creek	RC2, RES1,3,4	850	0.020	422	30	
Wetland 19	RES1,4,6, CH4	30624	0.703		10	50
	SUBTOTAL	**45,433**	**1.04**	**859**	**107**	**305**
Middle Reach Action Area						
Resource Impacted	Project Action	Max Area of Impact			Max Volumes (cubic yards)	
		Square Feet	Acres	Linear Feet	Dredge	Fill
Thoughtful Spring Creek	RES2,4,5, CH3	600	0.014	300	45	0
Wetland 5	RES2,4	1641	0.038		5	
Thoughtful Spring Creek*	Excavation	388	0.009	388	**	
Wetland 5*	Excavation, RC4	2589	0.059		200	
Twin Springs Creek	CH3, RES2,4,5	240	0.006	120	20	10
Wetland 7	RES2, RC4	702	0.016		5	
Twin Springs Creek*	Excavation	168	0.004	168	**	
Wetland 7*	Excavation, RC4	2107	0.048		160	
Forgotten Spring Creek*	Excavation	732	0.017	366	**	
Wetland 9*	Excavation, RC4	5834	0.134		450	
Smith Springs Creek	CH2,3	740	0.017	370	27	50
Wetland 11	HE2, RES2, RC4	7871	0.181		10	10
Smith Springs Creek*	Excavation	776	0.018	388	**	
Wetland 11*	Excavation, RC4	6949	0.160		500	
Alder Spring Creek	RES4,5	450	0.010	225	15	5
Wetland 14	RC2, RC4	1526	0.035		18	
Wetland 15	Excavation, RC4	1135	0.026		84	84
Big Springs Creek	RES4,5, CH1,2,3, HE1,	1600	0.037	800	120	50
Wetland 19	RES2, RC2, CH2	13989	0.321		20	
	SUBTOTAL	**50,037**	**1.15**	**3,125**	**1,679**	**209**
Lower Reach Action Area						
Resource Impacted	Project Action	Max Area of Impact			Max Volumes (cubic yards)	
		Square Feet	Acres	Linear Feet	Dredge	Fill
Rocky Spring	RES5	180	0.004	90	8	
Wetland 1	RES2,5	1689	0.039		**	
Wetland 3	HE6	21208	0.487		30	30
Wetland 3*	Excavation, RC4	3898	0.089		290	
Wetland 4/ Sedge Pond	RC2,4, HE6	1610	0.037		120	120
Wetland 10*	Excavation, RC4	3356	0.077		250	
Smith Springs Creek	Excavation	230	0.005	203	**	
Wetland 13*	Excavation, RC4	1967	0.045		145	
Forgotten Spring Creek	Excavation	260	0.006	260	**	
Lower Big Springs Creek*	Excavation, RC4	1130	0.026	565	42	
Lower Big Springs Creek	RES2, CH2,3,HE1	1186	0.027	593	40	100
Thoughtful Spring Creek*	Excavation, RC4	454	0.010	227	16	
Lake Washakie	Excavation	307535	7.060		**	
	SUBTOTAL	**344,703**	**7.91**	**1,938**	**941**	**250**
	GRAND TOTAL	**440,173**	**10.10**	**5,922**	**2,727**	**764**

NOTES: *Temporary loss due to excavation of Lake Washakie, **dredge accounted for in associated wetland

Upper Reach AA			
Assessment Variable	**Existing Functional Condition**	**Forecasted Functional Condition**	**Results**
Possible Functional Points	7	11.00	4.00
Actual Functional Points	4.35	8.00	3.65
Functional Units	9.05	16.56	7.51
Percent Possible Score	62%	73%	11%
Wetland Category	2	1	Upgrade
Middle Reach AA			
Assessment Variable	**Existing Functional Condition**	**Forecasted Functional Condition**	**Results**
Possible Functional Points	7.00	11.00	4.00
Actual Functional Points	2.85	7.40	4.55
Functional Units	2.00	6.22	4.22
Percent Possible Score	40%	67%	27%
Wetland Category	3	2	Upgrade
Lower Reach AA			
Assessment Variable	**Existing Functional Condition**	**Forecasted Functional Condition**	**Results**
Possible Functional Points	9.00	11.00	2.00
Actual Functional Points	3.05	8.60	5.55
Functional Units	2.56	9.21	6.65
Percent Possible Score	33%	78%	45%
Wetland Category	3	2	Upgrade

Attachment G – IPaC Report

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
Phone: (208) 378-5243 Fax: (208) 378-5262

In Reply Refer To:
Consultation Code: 01EIFW00-2022-SLI-0648
Event Code: 01EIFW00-2022-E-01796
Project Name: Good Timber Ranch

January 18, 2022

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)

(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (https://ww.fws.gov/migratorybirds/pdf/management/eagleconservtionplanguidance.pdf). Additionally, wind energy projects should follow the wind energy guidelines (https://www.fws.gov/ecologica-servces/energy-develpment/wind/html) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: https://www.fws.ov/bidsbird-enthusiasts/threats-to-birds/collisions/communication-towers.php.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Wetlands

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Idaho Fish And Wildlife Office
1387 South Vinnell Way, Suite 368
Boise, ID 83709-1657
(208) 378-5243

Project Summary

Consultation Code: 01EIFW00-2022-SLI-0648
Event Code: Some(01EIFW00-2022-E-01796)
Project Name: Good Timber Ranch
Project Type: DEVELOPMENT
Project Description: Residential development and site restoration
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@43.56806305,-111.13702680819449,14z



Counties: Teton County, Idaho

Endangered Species Act Species

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Canada Lynx *Lynx canadensis* Population: Wherever Found in Contiguous U.S. There is **final** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/3652	Threatened
Grizzly Bear *Ursus arctos horribilis* Population: U.S.A., conterminous (lower 48) States, except where listed as an experimental population There is **proposed** critical habitat for this species. The location of the critical habitat is not available. Species profile: https://ecos.fws.gov/ecp/species/7642	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

---

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Jan 1 to Aug 31
Black Rosy-finch *Leucosticte atrata* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9460	Breeds Jun 15 to Aug 31

NAME	BREEDING SEASON
Cassin's Finch *Carpodacus cassinii* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Evening Grosbeak *Coccothraustes vespertinus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Golden Eagle *Aquila chrysaetos* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lewis's Woodpecker *Melanerpes lewis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Olive-sided Flycatcher *Contopus cooperi* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

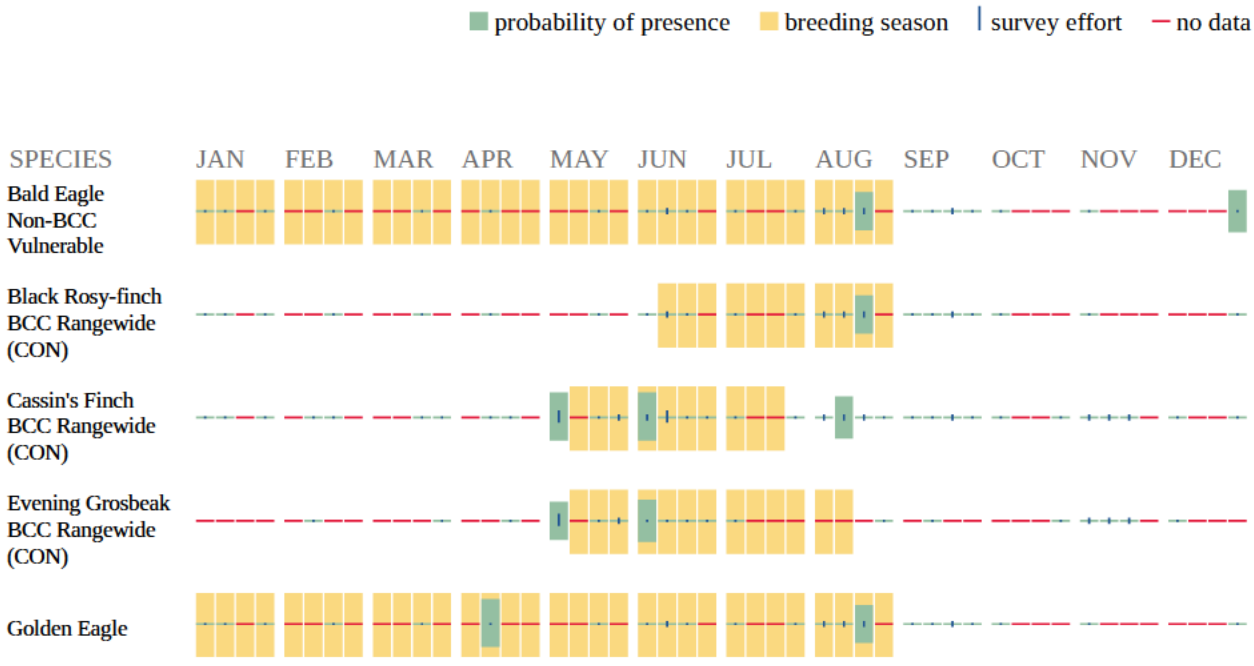
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

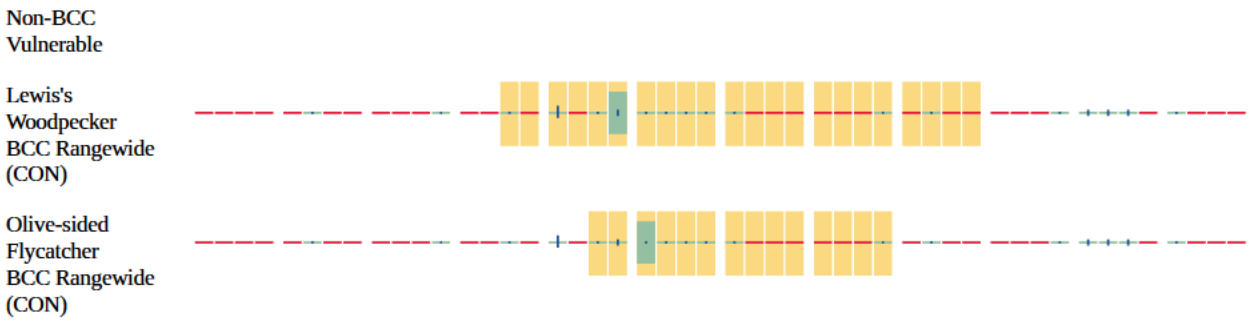
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?
The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?
To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects
For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides

birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?
If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report
The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

WETLAND INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE VISIT HTTPS://WWW.FWS.GOV/WETLANDS/DATA/MAPPER.HTML OR CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

Attachment H – Class 1 Records Search Results

SHPO Records Request Correspondence

From: Cassie Dishman <Cassie.Dishman@ishs.idaho.gov> **On Behalf Of** Record Search
Sent: Tuesday, February 22, 2022 11:30 AM
To: Aaron Woods <aaronw@horrocks.com>
Subject: RE: Good Timber Ranch Aquatic Resource Restoration Project (SHPO Record Search #22168)

Dear Aaron:

RE: Good Timber Ranch Aquatic Resource Restoration Project **(SHPO Record Search #22168)**

Please refer to the SHPO Record Search number when writing up your pre-field search in your final report.

I have conducted a cultural resource file search for the above-cited project. Below is a table listing the count of previously recorded sites and previously conducted cultural resource inventories within the designated search locale **(1 mile buffer)**.

RESOURCE TYPE	COUNT
Archaeological Sites (ASI)	**10**
Historic Sites (IHSI)	**2**
Linear Sites	**3**
Historic Districts	**0**
Isolated finds	**0**
Survey Reports	**19**

The current cost for this record search is $180. You may be interested in requesting digital copies of site forms and reports. Archaeology and architectural site forms may be purchased for $4 per site. Scanned reports may be purchased for $10 per report. If a report has not been scanned and the requester would like SHPO staff to scan a report there will be a $15 per hour charge in addition to the price of the report. Each request will include a processing fee of $10 per CD or $5 per email. The cost of digital documents will be sent on one invoice.

The information contained in this database is confidential and may not be released to unauthorized individuals or organizations. There are no guarantees as to the data's accuracy or completeness, and changes will occur frequently. The absence of information concerning cultural resources in a particular location does not necessarily indicate that none exist in the area. The absence of information concerning cultural resources in a particular location may be due to a lack of survey investigations in that area.

If you have any further questions or comments you may contact me at (208) 488-7464 or by e-mail at recordsearch@ishs.idaho.gov . Thank you for consulting with us.

SHPO Records Request Results

Archaeological Sites (ASI)

2/22/2022

SMITHSONIAN	ZONE	EASTING	NORTHING	ATTRIBUTES	SITE NAME	OWNERSHIP	ELIGIBILITY	FINDING DATE

As agreed-withholding archaeological/historic information

Total Count 10

Historic Sites (IHSI)

02/22/2022

IHSI #	Zone	EAST	NORTH	PROPERTY NAME	STREET	CITY	NR Ref #	Date Listed	Eligibility	Finding Date

As agreed-withholding archaeological/historic information

Total Count 2

Linear Sites Inventory

2/22/2022

SMITHSONIAN	IHSI	SITE NAME	TYPE	COMMENTS	ELIGIBILITY	Elig DATE

Other

As agreed-withholding archaeological/historic information

Trails Count 1

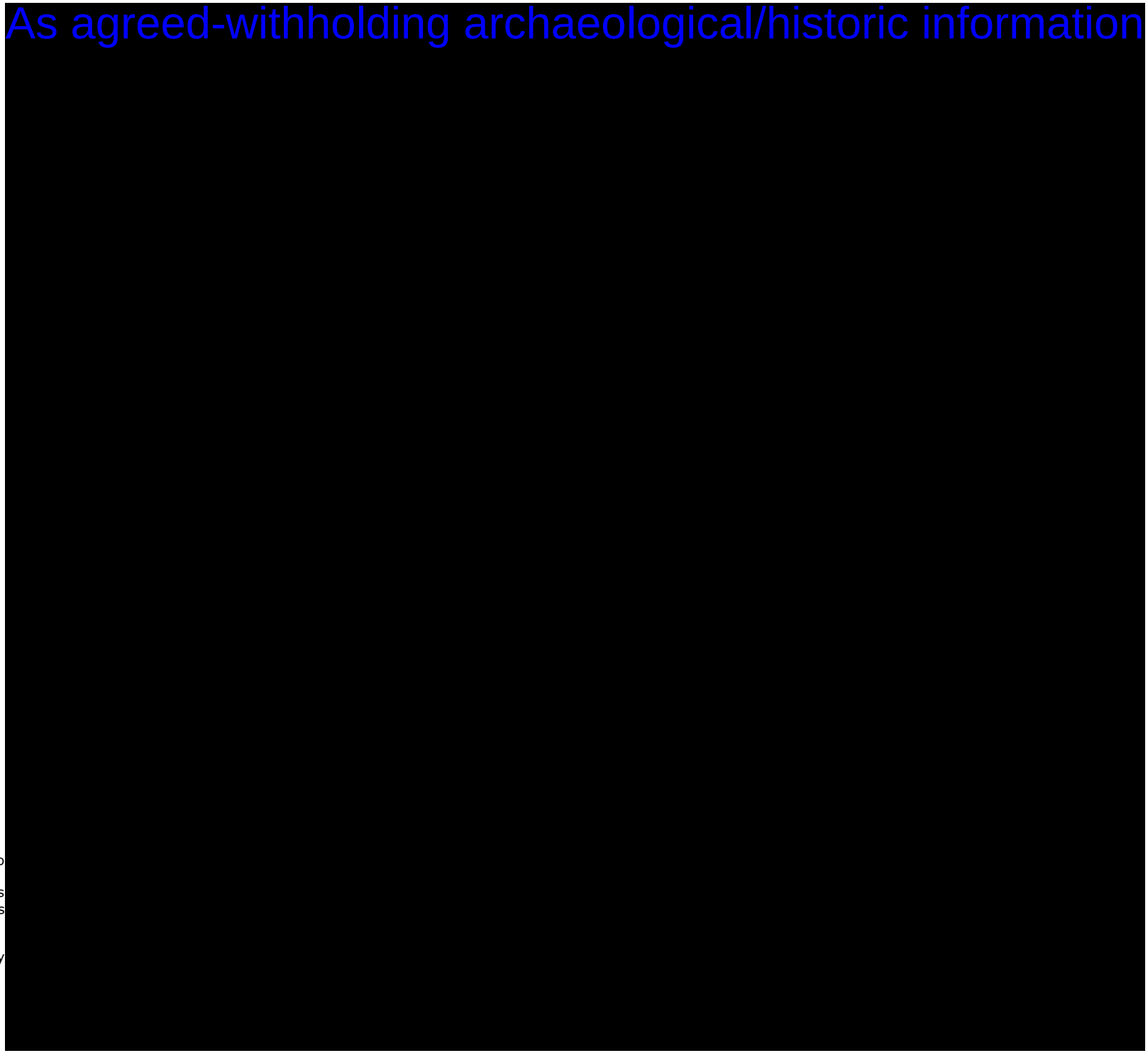
Grand Total 3

IDAHO

State Historic Preservation Offi

Cultural Resource Databas

As agreed-withholding archaeological/historic information



Legend

ASI_lyr

SITE_CLASS

- Historic
- Prehistoric
- Historic (IHSI)
- Other
- Trails

Site_Polygon_lyr

SITE_CLASS

- Historic
- Prehistoric

PROJECT #

- 22168

The information contained in this databas is confidential and may not be released to unauthorized individuals or organizations. There are no guarantees as to the data's accuracy or completeness, and changes will occur frequently. The absence o information concerning cultural resources i a particular location does not necessarily indicate that none exist in the area. Th absence of information concerning cultura resources in a particular location may b due to a lack of survey investigations in tha area.

STATE HISTORIC PRESERVATION OFFICE / IDAHO STATE HISTORICAL SOCIETY

Date: 2/22/2022
Author: Cassie Dishman

T3N R45E | Teton County
Fourth of July Peak, ID 7.5' USGS Quad

1:24,000

0 485 970 1,940 Meters

Exhibit D

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
IDAHO FALLS REGULATORY OFFICE
900 NORTH SKYLINE DRIVE, SUITE A
IDAHO FALLS, IDAHO 83402-1700

June 21, 2022

WALLA WALLA DISTRICT
REGULATORY DIVISION

SUBJECT: NWW-2021-303-I02, Good Timber Ranch

Mr. Nathan Godfrey
Good Timber Ranch, LLC
PO Box 181
Victor, Idaho 83455

Dear Mr. Godfrey:

We have determined that your proposed project "Good Timber Ranch" is authorized in accordance with Department of the Army (DA) **Nationwide Permit (NWP) No. 27: Aquatic Habitat Restoration, Establishment, and Enhancement Activities**. This project is located at 10702 S 1000 W, within Section 22 of Township 3 North, Range 45 East, near coordinates 43.569557º N latitude and -111.130571º W longitude, near Victor, Teton County, Idaho. Please refer to File Number NWW-2021-303-I02 in all future correspondence with our office regarding this project.

Project activities include the discharge dirt, wood, and rock fill and dredge material into wetland and waters on the ranch to restore, establish, and enhance aquatic resources. Specific treatment areas and types are detailed in your March 8, 2022, Joint Application for Permits. All work shall be done in accordance with the information provided and drawings enclosed with your March 8, 2022, Joint Application for Permits.

DA permit authorization is necessary because your project may involve the discharge of dredged and fill material into waters of the U.S. This authorization is outlined in Section 404 of the Clean Water Act (33 U.S.C. 1344).

You must comply with all general and regional conditions for this verification letter to remain valid and to avoid possible enforcement actions. The general and regional permit conditions for *NWP No. 27: Aquatic Habitat Restoration, Establishment, and Enhancement Activities* are attached and also available online[1].

[1] http://www.nww.usace.army.mil/Business-With-Us/Regulatory-Division/Nationwide-Permits/

You must also comply with the conditions detailed in the attached Section 401 Water Quality Certification (WQC) issued by the Idaho Department of Environmental Quality (IDEQ) on December 4, 2020. If you have any questions regarding the conditions set forth in the WQC, please contact IDEQ directly at 208-528-2650, Idaho Falls Regional Office.

Nationwide Permit General Condition 30 (Compliance Certification) requires that every permittee who has received NWP verification must submit a signed certification regarding the completed work and any required mitigation. This Compliance Certification form is enclosed for your convenience and must be completed and returned to us within 30 days of your project's completion.

This letter of authorization does not convey any property rights, or any exclusive privileges and does not authorize any injury to property or excuse you from compliance with other Federal, State, or local statutes, ordinances, regulations, or requirements which may affect this work.

This verification is valid until **March 14, 2026**, unless the NWP is modified, suspended or revoked. If your project, as permitted under this NWP verification, is modified in any way you must contact our office prior to commencing any work activities. In the event that you have not completed construction of your project by March 14, 2026, please contact us at least 60-days prior to this date. A new application and verification may be required.

We actively use feedback to improve our delivery and provide you with the best possible service. If you would like to provide feedback, please take our online survey[2]. If you have questions or if you would like a paper copy of the survey, please contact the Walla Walla District Regulatory. For more information about the Walla Walla District Regulatory program, you can visit us online[3].

[2] https://regulatory.ops.usace.army.mil/customer-service-survey/
[3] http://www.nww.usace.army.mil/Business-With-Us/Regulatory-Division/

If you have any questions or need additional information about this permit authorization, you can contact me by phone at 208-522-1645, by mail at the address in the letterhead, or email at james.m.joyner@usace.army.mil. For informational purposes, a copy of this letter has been sent to: Mike McConnell (Horrocks), Alex Bell (IDEQ), and Aaron Golart (IDWR).

Sincerely,

James M. Joyner

James M. Joyner
Chief, Upper Snake/Idaho Panhandle Branch

Encls
Transfer of Nationwide Permit Form

TRANSFER OF NATIONWIDE PERMIT

When the structures or work authorized by this Nationwide Permit, **NWW-2021-303-I02, Good Timber Ranch**, are still in existence at the time the property is transferred. The terms and conditions of this Nationwide Permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this Nationwide Permit, the associated liabilities and compliance with the terms and conditions the transferee must sign and date below.

Name of New Owner:

Street Address:

Mailing Address:

City, State, Zip:

Phone Number:

_____ _____

Signature of TRANSFEREE *DATE*

COMPLIANCE CERTIFICATION

US Army Corps of Engineers
Walla Walla District

Permit Number: NWW-2021-303-I02

Name of Permittee: Good Timber Ranch, LLC

Date of Issuance: June 21, 2022

Upon completion of the activity authorized by this permit and any mitigation required by the permit, please sign this certification and return it to the following address:

U.S. Army Corps of Engineers
Walla Walla District
Idaho Falls Regulatory Office
900 North Skyline Rd., Suite A
Idaho Falls, Idaho 83402-1718

Please note that your permitted activity is subject to a compliance inspection by a U.S. Army Corps of Engineers representative. If you fail to comply with all terms and conditions of this permit, the permit is subject to suspension, modification, or revocation and you are subject to an enforcement action by this office.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit. The required mitigation was also completed in accordance with the permit conditions.

_____ _____

Signature of PERMITEE *DATE*

Exhibit E


TETON COUNTY, IDAHO
Planning Department / Building Department / Code Compliance / Public Works
STOP WORK
DO NOT REMOVE THIS NOTICE
Owner: Good Timber Ranch LLC
Property Address: 1365 Good Timber Ranch Rd
Timber Ranch Rd, TBD Good Timber Ranch Rd
Legal Description:
SEC 22 T5N R43E
This property has been inspected and the following items were found not to comply with the Teton County Land Development Code (LDC) and the International Building Code (IBC):
Grading without Grading & Erosion Control Permit
Teton County Land Development Code Chapter 5 (Section 5-3-1 Grading Standards) states:
B. Applicability
1. Grading for all developments (roads, structures, building sites, landscaping, utilities, etc.) are required to meet the provisions of this section.
Existing grading and pavement has been observed on all currently listed slopes
Construction without proper permit - Stop Removing Soil
International Building Code (IBC) Chapter 1 Section 105 PERMITS
105.1 Required. Any owner or owner's authorized agent who intends to construct, which is regulated by this code, or to cause any such work to be performed, shall first make application to the building official and obtain the required permits.
The signs that were removed in 2021 did not include details for the retaining wall
Construction on an expired permit
International Building Code (IBC) Chapter 1 Section 105 PERMITS
105.5 Expiration. Every permit issued shall become invalid unless the work on the site authorized by such permit is commenced within 180 days after the date the work is commenced.
or abandoned for a period of 180 days after the date the work is commenced.
Permit # [illegible] was issued on October 13, 2021. No inspections have been requested or performed and does not have commencement from the owner.
Other structures have been constructed on one or more of the parcels listed above adding the potential for similar violations by construction without proper permits. Additional information is needed for all of the developments on site.
NO FURTHER WORK MAY BE DONE WITHOUT APPROVAL OF THE COUNTY PLANNING, BUILDING AND PUBLIC WORKS DEPARTMENTS
Please contact Teton County immediately. LDC 1-3 Violating any provisions of the LDC shall constitute an offense punishable as a misdemeanor. These punishments shall not relieve Teton County from seeking further civil remedies for each violation. Every day or portion thereof during which a violation is commenced, continued or permitted is a separate offense and is punishable as such.
7/23/2024
Wendy Koch, Building Official
(Date)

TRENTADUE Law Office PLLC

Exhibit F

Anna Trentadue <anna@trentaduelawoffice.com>

Re: re Good Timber discovery

1 message

Anna Trentadue <anna@trentaduelawoffice.com> Tue, May 13, 2025 at 11:31 AM
To: Elisheva Patterson <elisheva@racineolson.com>

Hi there -
I do see an issue: It looks like the dates in your email below don't match what's proposed in the scheduling order?? Can you clarify or make changes to the proposed order so it's clear which schedule we are talking about?

Also - in the scheduling order it looks like expert reports would be due significantly before discovery closes. Under the previous chart, we would have 39 days to get that information to our experts for them to incorporate into their reports.

Thoughts?

On Mon, May 12, 2025 at 4:30 PM Elisheva Patterson <elisheva@racineolson.com> wrote:

> Hi Anna,
>
> I know you're still waiting on discovery responses from me and on that front I apologize. I'm still waiting on a few items to come in from our experts. Rather than submitting a partial response I'd like to get you a full response by next Monday, May 19th.
>
> Given this, and your need to perhaps submit another discovery request, I would propose updating the scheduling order request such that written discovery must be tendered May 28th (giving you a week and a half to review our responses and submit new ones to us). Please let me know if that would work. We could push back further the discovery-tendering deadline another week if you think that's needed.
>
> I've attached the updated stipulation with the above proposed dates. Please let me know if you are okay with me adding your electronic signature.
>
> **Elisheva Patterson**
> Attorney
>
> RACINE OLSON
> ATTORNEYS | PROBLEM SOLVED
>
> 201 E. Center Street / P.O. Box 1391
> Pocatello, Idaho 83204
> (208)232-6101 - Phone
> (208)232-6109 - Fax
>
> racineolson.com
>
> **CONFIDENTIALITY NOTICE** - This email and its attachments may contain information that is confidential, privileged, or otherwise protected from disclosure. If you believe this email may have been sent to you in error, please notify the sender immediately.

Exhibit G

Little Warm Creek Restoration Project, Teton County, ID

PRELIMINARY ESTIMATE OF RESTORATION COSTS

5/29/2025

ITEM	UNIT	TOTAL QUANT.	UNIT PRICE	AMOUNT $	Notes
1. PROJECT DESIGN AND PERMITTING					
SITE SURVEY, DESIGN, PERMITTING	LS	1	25,000.00	$25,000	Cost to survey the stream reach, compile design details and specifications, submit permit applications to Teton County, Army Corps, Idaho Department of Water Resources
2. CONSTRUCTION GENERAL ITEMS					
MOBILIZATION AND DEMOBILIZATION (SEE BELOW)	LS	1	SEE BELOW	SEE BELOW	
WATER MANAGEMENT	EA	1	$75,000	$75,000	Install 6" pump to de-water work areas. Move dewatering system downstream as work progresses. Operate and maintain de-watering system throughout project implementation.
3. CHANNEL RESTORATION					
EXCAVATION OF CHANNEL SEDIMENTS	FT	4,300	$50	$215,000	Cost to excavate silt and sediment from stream channel. Assumes 4,300 ft reach and 3 ft width. 1 foot of sediment to be removed (the surface layer of fine sediments that is now intermingled with native sediment). Estimated 478 cy of material.
PLACEMENT OF CLEAN SUBSTRATE	FT	4,300	$65	$279,500	Cost to place clean oversized screened rock to re-establish pre-disturbance substrate and channel profile/conditions. Estimated 4,300 ft reach and the placement of 478 cy oversized screened rock.
4. POND RESTORATION					
REMOVAL OF SEDIMENT FROM POND	HRS	32	$420	$13,440	Tracked excavator and haul truck to remove fine sediment deposited within pond.
ON SITE DISPOSAL OF EXCAVATED SEDIMENT	HRS	8	$200	$1,600	Spreading and cleanup of spoils berm (dozer)
5. MATERIALS					
OVERSIZED SCREENED ROCK (PURCHASE)	CY	478	$20	$9,560	Cost to purchase oversized screened rock for placement in cleaned out stream channel
OVERSIZED SCREENED ROCK (DELIVERY)	HRS	48	$200	$9,600	Cost to deliver oversized screened rock (trucking)
EXCAVATED SILT AND SEDIMENT REMOVAL (TRUCKING)	HRS	48	$200	$9,600	Cost to haul away silt and sediment removed from stream channel
EXCAVATED SILT AND SEDIMENT REMOVAL (LOADING TRUCKS)	HRS	48	$220	$10,560	Cost to load trucks with silt and sediment removed from the stream channel
6. REVEGETATION					
BROADCAST SEEDING DISTURBED AREAS	AC	2	$4,000	$8,000	Cost to acquire native seed mix and broadcast across areas of temporary disturbance (equipment haul routes, stockpile areas, access routes).
SHRUB PLANTINGS	EA	75	$75	$5,625	Cost to purchase and install nursery grown shrubs to replace woody vegetation damaged during implementation.
7. SITE RECLAMATION AND SEEDING					
PROJECT CLEANUP & REPAIRS	LS	1	$10,000	$10,000	Remove garbage, haul off debris, decommission access routes and staging, etc. at end of project.
	SUBTOTAL			$672,485	
	MOBILIZATION (10%)			$67,200	
	SUBTOTAL			$739,685	
	CONTINGENCY (10%)			$74,000	
				$814,000	**TOTAL OPINION OF PROBABLE CONSTRUCTION COST (Rounded to the nearest thousand dollars)**