Technical Memorandum

To:	Ken Bouwens Idaho Dept. of Fish and Game 2885 W. Kathleen Ave. Coeur d'Alene, ID 83815	Project:	Clark Fork Hatchery
From:	Randy Presleigh, PE William Zimmerman, PE	cc:	Derek Nelson, PE
Date:	May 27, 2016	Job No.:	16-046
Subject:	Site Evaluation Technical Memorandum		

1.0 Introduction

The Clark Fork Hatchery currently serves as a field station for the Idaho Department of Fish and Game (IDFG) and Avista. Since the facility was originally constructed as a hatchery, it is not meeting the current project requirements as a field station and requires renovation. McMillen Jacobs Associates (McMillen Jacobs) was contracted by Avista to perform an evaluation of the site and determine the best approach for upgrading the site to meet current program needs and goals.

1.1 Purpose

The purpose of this Technical Memorandum (TM) is to present planning alternatives and solutions for renovating the facility, implement solutions to better suit the current project goals, and aid in acquiring funding for the project preliminary design, final design and construction.

1.2 Background

The Clark Fork Hatchery is located approximately 2 miles north of Clark Fork in northern Idaho near Lake Pend Oreille. IDFG opened the facility in 1938 to meet fish rearing needs; however, during the late 1970s, Infectious Pancreatic Necrosis (IPN) was documented at the facility and could not be eradicated over the two decades to follow, resulting in the hatchery being closed in 2000. After being decommissioned as a hatchery, it was repurposed into a field station.

The field station supports IDFG and Avista staff working on Clark Fork Settlement Agreement (CFSA) projects, which were the result of a Federal Energy Regulatory Commission (FERC) relicensing for The Clark Fork Project in 1999. The goal of the CFSA is to work toward the protection and enhancement of natural resources along the lower Clark Fork River. The field station provides both office space and storage for associated project equipment. An Avista subcontractor, Hickey Brother Research, Inc. (HBR), has been utilizing portions of the facility to support the Lake Pend Oreille Trap and Gillnet Project since 2006. The program has shown to be a very valuable component of Avista's Appendix A and F5 programs associated with the FERC relicensing.

Since the facility is now valuable as a field station and IDFG has determined that reopening the facility as a hatchery is not feasible, upgrades are required to further meet the current uses and project goals. Prior to determining the approach for upgrading the facility, an evaluation of the existing facilities must be performed in order to determine suitability for re-purposing or if they should be demolished. In selecting an appropriate path moving forward, both the historic nature of the site as well as the condition of the existing utilities should be evaluated.

1.3 Historic Considerations

Since the facility was originally constructed in 1937, there are historic considerations that must be accounted for while moving forward with rehabilitation and upgrade of the hatchery. The Idaho State Historic Preservation Office (SHPO) oversees Section 106 of the National Historic Preservation Act in Idaho. Any Federal Nexus actions involving work on structures older than 50 years will require consultation with SHPO and affected tribes under Section 106 provisions. Consultation may involve a cultural/historical site survey, preparation of a report, and submittal of the report to consulting parties (SHPO, tribes, etc.) for a 30-day comment period. If adverse effects to cultural/historical resources are anticipated, further consultation may be required consisting of the preparation of a Mitigation Plan and development of a Memorandum of Understanding between all consulting parties.

1.4 Hazardous Materials

Due to the periods in which the various parts of the facility were constructed, there is the possibility that hazardous materials are present with the construction materials. Most specifically, lead and asbestos, which were commonly used in paint for lead and insulation, and wiring with asbestos. Demolishing a structure that contains these materials adds complexity and cost, due to the required abatement processes. The first step is to determine if these materials are present and in what form and quantity. If these hazardous materials are found, a more detailed cost could be provided by an abatement specialty contractor for performing the removal and disposal. The presence of these materials can easily double to triple the cost that would be required for a demolition or remodel without these materials present.

2.0 Existing Facility

The existing hatchery complex was constructed in incremental stages with the hatchery building, intake structures, raceways, and ponds being constructed first in 1937. The three residences were added in later years. The following paragraphs will provide a description of each of the existing facilities and their respective current usage. It should be noted that all of the structures, except the east-most residence, were built prior to 1950 and both lead paint and asbestos are expected to be present within the construction materials. For a visual representation of the hatchery site, please see the attached Figure 1. Each structure’s number tag on the figure will be used for identification in the following sections.

There are two general site features that should be identified as well. The existing dam, on the north side of the site, impounds the stream and creates a diversion around both the west and east sides of the project. An intake within the impoundment diverts water through wooden pipes toward both the hatchery building and raceways. If site improvements are to be made in the vicinity of these pipes, the pipes should be isolated and either removed or abandoned in place, and filled with sand or low-strength concrete.

Also, it is possible that a water line from the City of Clark Fork's potable water intake may pass through the project site. If extensive site work is to be performed, including rehabilitating or repurposing the project site, this water line location should be verified.

2.1 Garage and Storage (Building [bldg.] 1)

Immediately adjacent to the main facility entrance is an existing garage with two stalls and a storage area. The garage is constructed of a concrete slab-on-grade foundation with perimeter concrete stem walls that extend above grade, wood-framed siding, wooden roof trusses, and a corrugated metal roof. The corrugated metal roof is attached to a slip-sheeted roof membrane over the wood trusses. The top surface of the metal roof showed signs of rusting and appeared to allow water leakage to the interior of the structure. In general, the structure appeared to be in a satisfactory condition structurally with no immediate concerns about the short-term integrity of the garage. At a minimum, if the building is selected for long-term use by the project, the following actions are recommended:

- Removing existing paint and repaint the building ($7,500 – $10,000)
- Removing corrugated metal roof, install continuous plywood roof membrane and new metal roof ($30,000 - $40,000)

The garage is currently used by IDFG for dry storage of equipment including boats and trailers. The space is unheated and also houses the electrical panels and controls for the existing groundwater pumps. These panels and controls appear to operate the main facility domestic water pumps.

2.2 Hatchery Building (Bldg. 2)

The hatchery building was one of the structures originally constructed with the facility. It is constructed of a concrete slab-on-grade foundation with perimeter concrete stem walls that extend above grade, wood-framed siding, wooden roof trusses, and a corrugated metal roof. The top surface of the metal roof did not appear rusted, but the underside of the roof membrane was not able to be observed. The structure generally appears to be in satisfactory condition with no immediate concerns about the short-term integrity of the structure; however, it should be noted that the existing brick chimneys on the front of the building appear to be of unreinforced masonry construction and may not meet current seismic code. There is also a concrete pedestal supporting a wood column within the hatchery building that has been damaged. At a minimum, if the building is selected for long-term use by the project, the following actions are recommended:

- Examining seismic stability of the existing brick chimneys and, if determined to not meet current code requirements, removing or stabilizing the chimneys ($10,000 to $20,000)
- Repairing or stabilizing the interior concrete support pedestal ($5,000)
- Removing existing paint and repainting the building ($10,000 to $15,000)

The building is currently used by HBR's team for support of their project efforts. HBR's crew have made several upgrades to the building including installation of a propane unit heater, installation of a plywood false ceiling, blown-in attic insulation, and electrical upgrades. The electrical upgrades were started from near the main building panel and include overhead lighting installed within the false ceiling. Moving

forward, HBR has requested that the existing concrete raceways inside the hatchery building be removed to provide more space, and that the existing windows be replaced.

2.3 Shop and Storage (Bldg. 3)

Adjacent to the hatchery building is a building originally constructed for cold storage and includes both a walk-in freezer and a cooler. The building has a concrete slab-on-grade foundation, wood-framed above-grade construction, and a corrugated metal roof. The freezer and cooler both include large doors, as well as insulated construction that appears to be finished with a tar-type material. It is suspected that there may be asbestos within the insulation for the freezer and cooler. The building appears to be in a satisfactory condition with no immediately obvious signs of lack of structural integrity. At a minimum, if the building is selected for long-term use by the project, the following actions are recommended:

- Removing existing paint and repainting the building ($7,500 - $10,000)

Currently, the building is used as storage and a small workshop for project personnel. The cooler and freezer have not been used for an extended period of time and are simply used as dry storage. The small workshop is also used by facility staff for fish study work.

2.4 Garage and Residence (Bldg. 4 and 5)

This residence and detached garage are located on the north side near the facility entrance. The garage is currently being used for storage and the residence is currently being used for office space and storage. They both have concrete foundations, above-grade wood-framed construction and a corrugated metal roof. The top surface of the metal roof at the garage showed signs of rusting and appeared to allow water leakage to the interior of the structure. A crack was observed at the foundation stem wall for the garage, but did not appear to be a cause for major concern. The structures both generally appear to be in satisfactory condition with no immediate concerns about the short-term integrity of the structures. The residence and garage were constructed shortly after the hatchery completion and are expected to have materials that contain lead and asbestos. At a minimum, if the buildings are selected for long-term use by the project, the following actions are recommended:

- Removing existing paint and repainting both buildings ($7,500 - $10,000 Each)
- Removing corrugated metal roof at garage, installing continuous plywood roof membrane and new metal roof ($30,000 - $40,000 Each)

The residence is the primary office space for IDFG personnel with the living room having been converted into an office and the bathroom and kitchen being used for lab work. Extensive renovations to this residence would be required in order to maximize personnel efficiency and complete the project tasks.

2.5 Garage and Residence (Bldg. 6 and 7)

This residence and detached garage are located on the north side of the facility, adjacent to one of the water diversion and weir structures. They are both constructed with a concrete slab-on-grade foundation, and wood-framed siding. The residence has a corrugated metal roof; the garage has a modern standing-seam metal roof. This residence differs from the one near the entrance as it has a basement which regularly floods throughout the year. During inspections of the house during the site visit, a long vertical

crack was seen at an upstairs living room wall. This crack appears to be a settlement crack potentially caused by high groundwater levels and basement flooding. Both the flooding and the settlement crack raise concerns with the long term integrity of the residence. The garage showed no immediate signs of structural concern. At a minimum, if the buildings are selected for long-term use by the project; the following actions are recommended:

- Removing existing paint and repainting garage ($7,500 - $10,000)
- Long-term use of the residence is not recommended

The residence is currently empty and no one has resided in it for several years. The garage is currently used as dry storage for project equipment.

2.6 Residence (Bldg. 8)

This residence is located on the east edge of the project site and is the most recently constructed building on the site. It shares an access road with an adjacent property that will need to be maintained during any construction activities or future rehabilitation of the hatchery site. The residence includes an attached garage and is constructed with a concrete foundation, wood framing, and asphalt shingle roof. The residence appeared in overall good shape and there were no immediate structural or integrity concerns.

The residence is currently utilized by HBR staff as living quarters for onsite personnel. Per conversations with the HBR lead, there are no immediate concerns or upgrades that are required and the space is currently meeting HBR needs.

2.7 Summer Quarters (Bldg. 9)

Located adjacent to the existing large raceways is a summer quarters building. This building is constructed with a concrete foundation, wood-framed siding, wooden roof trusses, and a corrugated metal roof. The interior of the building is currently unused; however, the roof line extends off one side of the structure over an open storage area that is being used. Wooden roof trusses and the interior ceiling framing are exposed to the elements via the attached storage area and a large opening on one of the gabled ends. Spotting caused by water leakage could be seen on the interior ceiling. The exterior siding, windows and doors are in poor condition with significant paint peeling and some wood warping. The exposed elements of the structure cause concern for the long-term integrity of the structure. Additionally, the electrical system within the building is in poor condition and has been prone to failure in the past. It is not expected that this building could be used for any future program needs.

2.8 Raceways and Ponds (Structures 10, 11, 12, and 13)

On the southern and eastern sides of the facility there are numerous raceways and ponds once used for fish-rearing purposes. The eastern-most large raceway is still currently utilized for fish rearing, while all of the others have been abandoned. The raceways are in various states of disrepair and would need extensive rehabilitation if they were to be utilized in the future.

2.9 Existing Well and Septic Systems

Currently at the hatchery, there is an existing groundwater well located between the hatchery building and bldg. 1. The well controls are located within bldg. 1 and the well serves all of the facilities and residences on the site. It was assumed for this analysis that the well will be re-utilized in the future, but will require some minor work. The well pump will need to be either replaced or refurbished and the controls system upgraded for an approximate cost of $15,000 to $20,000. This cost could increase significantly if a new well is required or more extensive rehabilitation of the existing well is required.

There was not a lot of information on the septic systems for the hatchery readily available at the time of this study. The septic systems are currently functioning but it is assumed they will require renovation in the next phase of the project to allow for long-term reliable operations. For the purpose of this study, it was assumed the septic systems would be inspected and minor repairs performed at an approximate cost of $20,000 to $30,000. If more extensive efforts are required, this cost would increase significantly.

3.0 Current Program Needs

3.1 Background

IDFG, Avista, and HBR have provided a list of requirements to be included in the rehabilitation and/or newly constructed facilities at the field station. These items are detailed as follows.

3.1.1 Avista

Avista's program needs can be summarized into five areas:

- Office Space – Currently, Avista utilizes the residence (bldg. 5) for their offices. Office upgrades should include a minimum of 250 square feet (SF) of office space for 1 full-time and 2 part-time personnel.
- Storage Space – The residence (bldg. 5) currently provides heated storage while the garages (bldg. 4 and 1) provide dry, unheated storage for Avista. The garages can also house boats and trucks; however, the garages cannot provide both parking and storage at the same time. Storage facilities need to provide a minimum of 400 SF of heated storage, 1,000 SF of unheated dry storage, and space to park.
- Shop Space – Shop space is currently provided in the cold-storage building (bldg. 3). Avista requests a minimum of 200 SF for shop space.
- Lab Space – A combination of spaces is currently used to meet the lab space needs including the kitchen in the residence (bldg. 5), the cold-storage building (bldg. 3), and the freezer in the garage (bldg. 1). Avista would prefer to have their storage needs met in one location, with a minimum of 400 SF of lab space including a freezer/refrigerator space, deep sinks, bench space, and potentially a shower/guest toilet.
- Housing – A bunk in the residence (bldg. 5) provides current housing, though it is rarely used. Avista would like housing needs to be met through two parking pads with water, electric and sewer hookups for two camper trailers. Additionally, a bunk should be added to the lab/office area to house occasional overnight guests.

3.1.2 HBR

HBR's program needs can be summarized into three areas:

- Net Loft – The hatchery building (bldg. 2) provides space for the net loft. Upgrades should include removal of the concrete raceways inside the hatchery building, installation of 220-volt electrical outlets for a welder, and the addition of insulation and windows to the hatchery building.
- Existing Netter House – The existing residence (bldg. 8) adequately meets the housing needs of the HBR workers; however, an independent water and septic system could be added.
- Storage Space – HBR's long-term storage needs are currently met by offsite facilities. HBR would like to relocate their storage to the project site. Storage requirements include space to store trap nets and boats.

3.1.3 Other

Other items to be considered for upgrade to the site include:

- Removing unnecessary structures and buildings;
- Revamping the production water system;
- Consolidating and simplifying the electrical system;
- Providing independent pressure tanks for domestic water supply;
- Improving the efficiency of heating and energy systems; and
- Improving the septic system onsite.

4.0 Implementation Alternatives

There are two general approaches that can be taken in order to re-purpose the existing hatchery into a facility that is more in line with the current program needs. Either the existing structures can be renovated, or new facilities can be constructed. This section presents one possible alternative for each of these approaches.

It is assumed that the modifications to the existing domestic water system and existing netter house (bldg. 8), and improvement to the site septic systems, would be performed regardless of whether a renovation approach or new construction approach is selected for implementation.

4.1 Rehabilitation

The most basic approach would be to develop a strategy for renovating the existing structures and facilities to better align with the current program needs. This goal would require extensive rework of several of the facilities to be accomplished.

The existing garages (bldg. 1, 4, and 7) would be maintained to provide the necessary dry, cold storage that the program requires. These structures would need to be stripped and repainted if long-term integrity of the structures is desired. These stripping activities could be more cumbersome than a typical repaint due to the possibility of lead paint being present. Additionally, some roofing upgrades would need to be performed to ensure long-term integrity of bldg. 1 and 4.

The existing hatchery building would be upgraded to include installation of new windows, removal of the concrete rearing troughs, upgrades to the electrical systems from the panel to the lighting system, and repair of the damaged concrete pedestal. Further study of the brick chimney would be required to determine whether or not it should be removed or stabilized to comply with seismic concerns.

To meet the needs for the office, lab, bunkroom, and shower facilities, the existing residence would require extensive renovation. Two residences are available for this purpose; however, bldg. 5 is the recommended building. This is due to the fact that there are significant long-term integrity concerns with bldg. 6 due to the flooding of the basement and apparent foundation settlement. Bldg. 5 is large enough to house the desired program space sizes; however, the current layout is not advantageous to program needs.

An extensive renovation of bldg. 5 would need to occur in order to meet these program needs. During this process, there is the potential to expose hazardous materials, such as lead and asbestos, due to the period of time when the building was constructed.

The existing netter residence (bldg. 8) currently meets the program needs for HBR; however, the domestic water system and septic system should be inspected to determine functionality and long-term reliability.

There are currently no facilities that adequately meet the needs of the program for shop space and for accessible covered parking. These facilities would either have to be removed from the program's needs or be newly constructed. In addition, the upgrades and desire for independent domestic water tanks would have to be added into bldg.1, removing some of the available dry storage.

RV pads for overnight stays could be located near the existing basketball court between bldg. 5 and 6. These RV spots would serve as overnight or semi-permanent housing for seasonal employees.

The existing raceways and ponds, as well as bldg. 3, 7 and 9, could either be abandoned in place or demolished in the future as funding becomes available. The shop space within bldg. 3 is not adequate and does not meet the current program needs. The raceways and ponds could simply be filled in with gravel or fill material and brought up to site grade.

4.2 New Construction

The most straight-forward approach would be to simply construct new facilities to meet the program needs. This approach limits the impact on the existing program operations as the current facilities can be utilized until construction is completed, and also allows for the majority of the demolition to be performed in a second phase as funding becomes available.

The current spaces utilized by HBR (the hatchery building, residence [bldg. 8], and the parking area adjacent to bldg. 3) would require improvements as previously discussed. The hatchery building would need new windows, minor electrical upgrades, concrete rearing troughs removed and a seismic assessment of the existing chimney. The netter residence would require some potential improvements to the domestic water system and septic system.

To provide for the needs of the IDFG and Avista programs, a new field station and covered parking structure with storage and a shop could be constructed. These facilities would provide an efficient and focused space designed with the purpose of specifically accomplishing each of the program needs.

The first structure would be a pole-barn style shelter that would enclose approximately 1000 SF of cold storage, 3 covered parking spaces for program vehicles and boats, and an approximately 200 SF shop. The shop would be an enclosed space with a unit heater to provide personnel comfort. The cold-storage space would be enclosed with a chain link fence to provide secure storage while minimizing cost.

The second structure would be the field station administrative building. The building would be approximately 2,420 SF and include warm storage, a lab, a mudroom, office space, a bunk room, bathroom and shower, a staff breakroom with a kitchenette, and a mechanical/electrical space. This building would be constructed on a concrete foundation with wood or metal framing above grade and a metal roof. The size and configuration of each one of these spaces would be tailored during final design to ensure maximum effectiveness within the program needs.

Based on the understanding from the site visit and the overall facility layout, it is expected that these structures could be placed between existing bldg. 5 and 6. This would require removal of a couple of the large trees onsite, but would not impact the area to the south of the main access road that is primarily utilized by HBR. This location would also have no impact on the access to the property on the eastern edge of the facility.

Bldg. 5 would potentially require demolition while constructing the new buildings, depending on the final design size and location for each of the new facilities. This would have minimal impact on current program operations as bldg. 5 is not utilized. Lastly, it is recommended that this building be demolished due to the concerns with the flooding and settling of the foundation.

This approach would allow the demolition or restoration of the other buildings to be done in subsequent phases as funding becomes available. There is the potential for construction of the new facilities during one project and then removal of the other buildings in subsequent projects as funding becomes available.

5.0 Anticipated Costs

This section presents planning budgetary cost estimates for each approach that provide relative costs between the two different approaches. These costs are for planning purposes and reflect the high-level conceptual evaluation provided here. The planning estimates are expected to have a contingency of plus or minus fifty percent (+/- 50%) based on the final design documents and variance in site conditions. Note that these tables include only the costs for the facilities being extensively modified. The costs associated

with rehabilitating the hatchery building and the netter residence water and septic systems are the only necessary site improvements under the rehabilitation cost estimate; however, with the new construction estimate, potential site improvements may be required in order to perform final site grading, accommodate existing buried water lines, etc.

Table 1. Rehabilitation Cost Estimate

Item	Units	Qty	Price per Unit	Total Cost (Low)	Total Cost (High)
Existing Well Rehabilitation	EA	1	$15,000 - $20,000	$15,000	$20,000
Existing Septic System Rehabilitation	EA	1	$20,000 - $30,000	$20,000	$30,000
Renovation to Bldg. 5	SF	~1,500	$125	$187,500	$562,500
Bldg. 5 Roof Replacement	EA	1	$30,000 - $40,000	$30,000	$40,000
Pole Barn for Covered Parking and Shop*	SF	1,000	$100 - $125	$100,000	$125,000
Demolition of Bldg. 6	EA	1	$20,000 - $60,000	$20,000	$60,000
RV Space	EA	2	$7,500	$15,000	$15,000
			Total	$387,500	$852,500

*Includes necessary Site Improvements

Table 2. New Construction Cost Estimate

Item	Units	Qty	Price per Unit	Total Cost (Low)	Total Cost (High)
Site Improvements	LS	1	$100,000 - $200,000	$100,000	$200,000
Existing Well Rehabilitation	EA	1	$15,000 - $20,000	$15,000	$20,000
Existing Septic System Rehabilitation	EA	1	$20,000 - $30,000	$20,000	$30,000
Admin Building Construction	SF	~2,420	$160	$387,200	$387,200
Pole Barn for Shop, Storage, and Parking	SF	~2,100	$85	$178,500	$178,500
Demolition of Bldg. 6	EA	1	$20,000 - $60,000	$20,000	$60,000
RV Space	EA	2	$7,500	$15,000	$15,000
			Total	$735,700	$890,700

The prices in Tables 1 and 2 are assumed to include all associated capital construction dollars, including general conditions, overhead, profit, and any applicable taxes. They do not include any funds for engineering, permitting, or planning efforts. Typical engineering costs approximately 10%, planning 5-10%, and permitting 3-8% of the construction capital costs. These cost estimates have been developed by using previous project capital construction dollars for similar projects in similar regions of the country.

It should be noted that the cost listed for demolition of bldg. 6 and the renovation of bldg. 5 is given as a range based on the concern of the presence of lead paint and asbestos. These price ranges could vary significantly depending on the type and quantity of materials discovered. If the materials are present, this could easily reach the high end of the range provided for renovation or demolition as extensive efforts will be needed to remove and dispose of the materials properly. Table 3 provides expected ranges for demolition of other structures on the facility should the new construction alternative be selected and future uses desire other structures to be demolished.

Table 3. Structure Demolition Cost Estimate

Item	Cost (Low)	Cost (High)
Bldg. 1 – Garage	$10,000	$30,000
Bldg. 3 – Cold Storage	$25,000	$75,000
Bldg. 4 – Garage	$10,000	$30,000
Bldg. 5 – Residence	$15,000	$45,000
Bldg. 7 – Garage	$10,000	$30,000
Bldg. 9 – Summer Quarters	$10,000	$30,000

6.0 Alternative Evaluation

Table 4 summaries both the advantages and disadvantages of each of the approaches.

Table 4. Alternative Advantages and Disadvantages

Alternative	Advantages	Disadvantages
Rehabilitation	- Low upfront capital cost	- Cannot be performed in phases - Requires temporary facilities during construction - Increased long-term O&M costs
New Construction	- Maximum effectiveness for project goals - Minimal long-term O&M costs - Construction can be completed in phases	- High upfront capital cost

7.0 Recommendations and Next Steps

7.1 Recommendations

Both alternatives presented within this TM represent feasible and constructible approaches for upgrading the Clark Fork Hatchery site to meet the current program's needs; however, it is evident that construction of the new facilities is the preferred solution if this site is intended to be a long-term field station for CFSA program work.

The new construction approach allows for phasing of the project, which would minimize impact to the existing program operations and minimize potential project overrun costs. The new facilities could be constructed independently of one another while the existing facilities would be maintained and

temporarily utilized during project construction. For instance, the first phase could be construction of the new admin building with staff concurrently utilizing the existing residences for program operations. Once construction is completed, the staff could move into the new admin building, and then the covered parking and storage pole barn could be constructed in the next phase while the existing storage spaces would be utilized. Finally, any desired demolition of the existing structures could be performed after construction of the new facilities is complete and the existing structures are abandoned.

By constructing the new facilities, there is minimal risk to the long-term operations of the facility as the maintenance risk associated with aging structures and the potential impact to the CFSA program due to maintenance delays or concerns with the integrity of the buildings would be eliminated. In addition, if the rehabilitation method is selected, temporary space must be made available for operations staff. If hazardous materials are identified during the rehabilitation, this could lead to potentially high upfront capital expenditures that were not budgeted.

It is McMillen Jacobs' recommendation that IDFG and Avista implement a phased approach in constructing the new facilities in order to meet the project's long-term needs and goals.

7.2 Next Steps

The next steps in determining the most appropriate path forward for the hatchery renovation would be to take both alternatives to a preliminary or 30% design level. Under this design effort several of the underlying conditions could be explored further, refining the approach. A site survey and preliminary geotechnical evaluation could be performed to fully understand the site capabilities and restrictions. The buildings could be reviewed by hazardous material experts to determine the presence, type and quantity of any lead, asbestos, or other hazardous materials. By advancing both approaches to a 30% level, a more detailed cost estimate of each could be performed, better refining the project costs. This design effort could also further explore the items listed in Section 3.1.3 to determine if they are necessary for inclusion in the selected project approach. The approximate costs for performing this study are as listed below:

- Site Survey: $5,000 - $10,000;
- Geotechnical Evaluation: $10,000 - $15,000;
- 30% Level Design Documents: (Including approx. 20 drawings): $40,000 to $70,000; and
- Cost Estimate for Alternatives with TM and Construction Schedules: $10,000 - $15,000.

PROPOSED SITE PLAN

SCALE: NTS

N

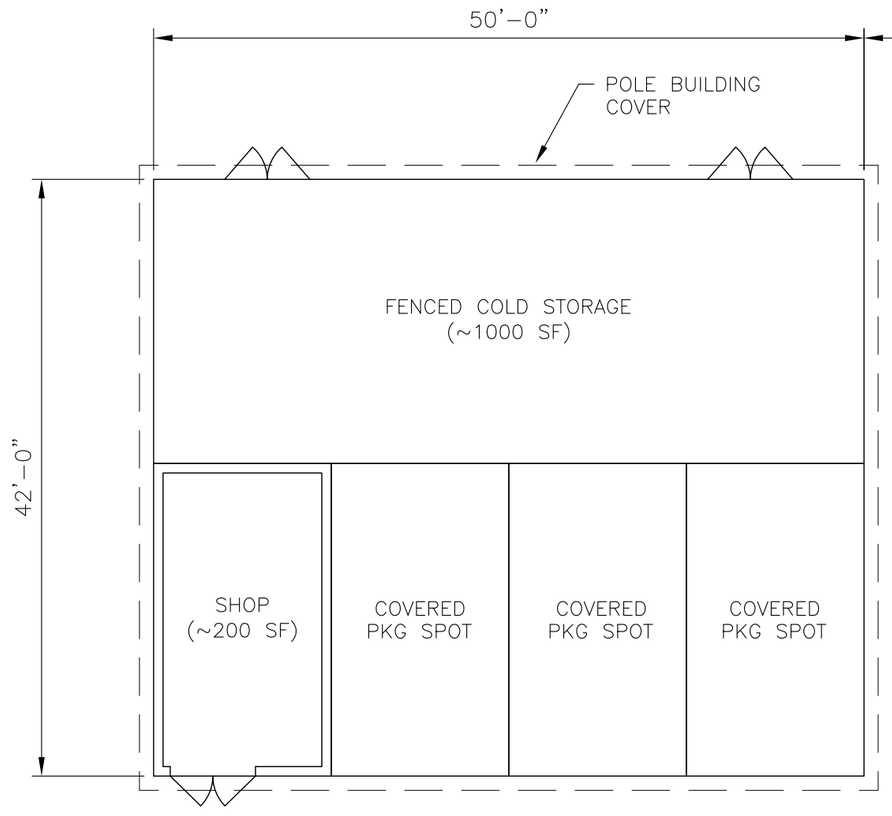
McMILLEN JACOBS ASSOCIATES

IDAHO FISH AND GAME

CLARK FORK HATCHERY

PROPOSED SITE PLAN

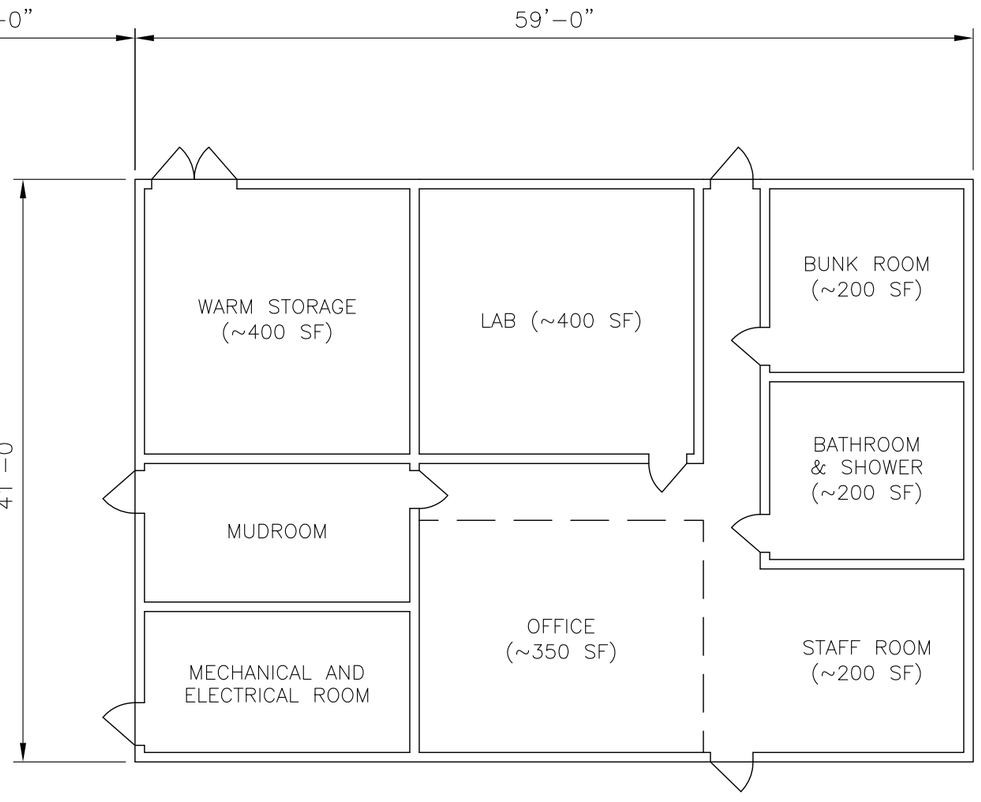
FIG-1



SHOP/STORAGE PLAN

SCALE: 3/32"= 1'–0"

0' 8' 16'



ADMIN BUILDING PLAN

SCALE: 3/32"= 1'–0"

0' 8' 16'

McMILLEN JACOBS ASSOCIATES

IDAHO FISH AND GAME

CLARK FORK HATCHERY

PROPOSED STORAGE AND
ADMIN BUILIDNG PLANS

FIG-2

Photo Log

Photo 1. Building 1 – Garage and Storage Exterior.

Photo 2. Building 1 – Garage and Storage Interior.

Photo 3. Building 2 – Hatchery Exterior.

Photo 4. Building 2 – Hatchery Interior. Concrete Raceways, nets & misc. item storage, and office space with desk.

Photo 5. Building 2 – Hatchery Interior. Concrete spalling.

Photo 6. Building 2 – Hatchery Exterior. Peeling Paint.

Photo 7. Building 3 – Cold Storage Exterior.

Photo 8. Building 3 – Cold Storage Interior.

Photo 9. Building 3 – Cold Storage. Electrical Panels.

Photo 10. Building 3 – Cold Storage. Water piping and bladders.

Photo 11. Building 4 – Garage (left). Building 5 – Residence (right).

Photo 12. Building 4 – Garage. Crack in foundation.

Photo 13. Building 6 – Residence Exterior.

Photo 14. Building 6 – Residence Interior.

Photo 15. Building 7 – Garage and Water Pump Exterior.

Photo 16. Building 7 – Garage and Water Pump Exterior.

Photo 17. Building 8 – Residence Exterior.

Photo 18. Building 9 – Summer Quarters Exterior.

Photo 19. Building 9 – Summer Quarters Interior.

Photo 20. Building 9 – Summer Quarters Exposed Roof Trusses and Interior Ceiling Framing.

Photo 21. Structure 10 – Large Raceways.

Photo 22. Structure 10 – Large Raceways.

Photo 23. Structure 11 – Small Raceways.

Photo 24. Structure 12 – Dirt Ponds.

Photo 25. Structure 13 – Broodstock Ponds.

IDAHO DEPARTMENT OF FISH AND GAME
PANHANDLE REGION
2885 West Kathleen Avenue
Coeur d'Alene, Idaho 83815

C.L. "Butch" Otter / Governor
Virgil Moore / Director

To: Will Zimmerman
McMillan Jacobs Associates

From: Ken Bouwens KB

Date: May 12, 2016

Subject: Comments on Site Evaluation Technical Memorandum

Thank you for the opportunity to review your draft Site Evaluation Technical Memorandum for the Clark Fork Field Station. I have listed below a few comments that would improve the document and help us move forward in our planning process.

1) It would be helpful to provide a heading, similar to what was provided for "Historic Conditions" for the lead paint and asbestos discussion. This is an important unknown, and providing some further discussion on the subject would be very helpful. We recognize you aren't in a position to provide details, but some further discussion on potential costs of abatement and how to get the information we need to properly determine abatement costs would help us make our decisions.

2) The cost estimate for well and septic is very high without some sort of explanation as to why the cost is inflated. Please provide justification for these estimates and a rough price comparison for a more "traditional" system.

3) Cost estimates associates with the recommended actions for each building would be helpful.

4) In Table 1, please list costs common to both alternatives (e.g. septic) in both tables so the bottom line comparison between options include all costs. As written, at first glance rehabilitation/remodeling is the obvious choice fiscally. The cost estimates in Table 1 include a +/- 50% contingency, but it is unclear if this also includes the potential tripling of the costs mentioned earlier in the document if lead and asbestos become a problem. It would be helpful to include a price range in the cost estimates in Table 1 (low, high), especially since the uncertainty in cost is less for new construction than it would be for renovation. It would be helpful to include the hazmat abatement costs into the "high" category (even if it is rough) so the reader can quickly identify comparable costs. If it is not included, a footnote in the table (so it can stand alone) stating such is in order.

5) A bit more detail on demo costs (by structure) would be helpful. The price range approach (as discussed in comment #4) would be helpful.

6) A "Next Steps" section identifying and explaining things beyond the scope of this document like how to refine cost estimates, answer the hazmat question, permitting steps etc. would be very helpful. Some of the bullets listed in the "Other" section could be further explained in this section.

I look forward to discussing these comments with you. Please contact me at (208) 770-3766 at your convenience. It has been a pleasure working with you and we appreciate your assistance with our planning process.

Review Comments

Project: Clark For Hatchery Evaluation TM

Location: Clark Fork, Idaho

☒ IDFG ☐ ☐ ITR	**Design Document** ☒ D. Memo ☐ P&S ☐ BCOE	**Discipline** ☐ Concept ☐ Preliminary ☐ Final	☐ Arch. ☐ Civil ☐ Mech/Elect. ☐ Struct.	**COMMENT RESPONSE** **(Concur or Do Not Concur)**	**Document Revision** **C-correction made (if not, explain)**	Back Check By: (initials)
Date: 05/12/16	**Reviewer: Ken Bouwens**	**Telephone: 208-770-3766**				
Item No.	**Doc.**	**COMMENTS**		Action taken on Comments by: William Zimmerman		
1		It would be helpful to provide a heading, similar to what was provided for "Historic Conditions" for the lead paint and asbestos discussion. This is an important unknown, and providing some further discussion on the subject would be very helpful. We recognize you aren't in apposition to provide details, but some further discussion on potential costs of abatement and how to get the information we need to properly determine abatement costs would help us make our decisions.		Concur	Section 1.4 has been added to the TM to address hazardous materials	DSN
2		The cost estimate for well and septic is very high without some sort of explanation as to why the installed cost is inflated. Please provide justification for these estimates and a rough price comparison for a more "traditional" system.		Do Not Concur, the Draft TM should have been more clear in associating these costs with all site improvements, not only the septic and wells	Text has been added to clarify	DSN
3		Cost estimated associated with the recommended actions for each building would be helpful.		Concur	Approximate costs have been added	DSN
4		In Table 1, please list costs common to both alternatives (e. g. septic) in both tables so the bottom line in comparison between options include all costs. As written, at first glance rehabilitation/remodeling is the obvious choice fiscally. The costs estimates in Table 1 include a +/- 50% contingency, but it is unclear if this also includes the potential tripling of the costs mentioned earlier in the document if lead and asbestos become a problem. It would be helpful to include a price range in the cost estimates in able 1 (low, high), especially since the uncertainty in cost is less for new construction than it would be for renovation. It would be helpful to include the hazmat abatement costs in the "high" category (even if it is rough) so the reader can quickly identify comparable costs. If it is not included, a footnote in the table (so it can stand alone) stating such is in order.		Concur	Ranges have been added for some of the more uncertain work	DSN
5		A bit more detail on demo costs (by structure) would be helpful. The price range approach (as discussed in comment #4) would be helpful.		Concur	A table has been added to the TM	DSN
6		A "Next Steps" section identifying and explaining things beyond the scope of this document like how to refine cost estimates, answer the hazmat questions, permitting steps, etc. would be very helpful. Some of the bullets listed in the "Other: section could be further explained in this section.		Concur	Section has been added.	DSN