State of Nevada
Department of Wildlife
Lake Mead Fish Hatchery
Facility Condition Analysis

LAKE MEAD FISH HATCHERY

245 Lakeshore Road
Boulder City, Nevada 89005

Site Number: 9897
STATE OF NEVADA PUBLIC WORKS DIVISION
FACILITY CONDITION ANALYSIS

Report Printed in November 2012

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Department of Wildlife
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The Facility Condition Analysis Program was created under the authority found in NRS 341.201. The State Public Works Division develops this report using cost estimates based on contractor pricing which includes materials, labor, location factors and profit and overhead. The costs of project design, management, special testing and inspections, inflation and permitting fees are not included. Cost estimates are derived from the R.S. Means Cost Estimating Guide and from comparable construction costs of projects completed by SPWD project managers.

The deficiencies outlined in this report were noted from a visual survey. This report does not address routine maintenance needs. Recommended projects do not include telecommunications, furniture, window treatments, space change, program issues, or costs that could not be identified or determined from the survey and available building information. If there are buildings without projects listed, this indicates that only routine maintenance needs were found. This report considers probable facility needs for a 10 year planning cycle.

This report is not a guarantee of funding and should not be used for budgeting purposes. This report is a planning level document for agencies and State Public Works Division to assess the needs of the Building and/or Site and to help support future requests for ADA upgrades / renovations, Capital Improvement Projects and maintenance. The final scope and estimate of any budget request should be developed by a qualified individual. Actual project costs will vary from those proposed in this report when the final scope and budget are developed.

Establishing a Facility Condition Needs Index (FCNI) for each building

The FCA reports identify maintenance items and establish construction cost estimates. These costs are summarized at the end of the report and noted as construction costs per square foot. A FCNI is commonly used by facility managers to make a judgment whether to recommend whole replacement of facilities, rather than expending resources on major repairs and improvements. The FCNI is a ratio between the proposed facility upgrade costs and facility replacement costs (FRC). Those buildings with indices greater than .50 or 50% are recommended to be considered for complete replacement.

Class Definitions

PRIORITY CLASS 1 - Currently Critical (Immediate to Two Years)

Projects in this category require immediate action to return a facility to normal operation, stop accelerated deterioration, correct a fire/life safety hazard, or correct an ADA requirement.

PRIORITY CLASS 2 - Necessary - Not Yet Critical (Two to Four Years)

Projects in this category include conditions requiring appropriate attention to preclude predictable deterioration or potential downtime and the associated damage or higher costs if deferred further.

PRIORITY CLASS 3 - (Four to Ten Years)

Projects in this category include items that represent a sensible improvement to existing conditions. These items are not required for the most basic function of a facility; however, Priority 3 projects will either improve overall usability and/or reduce long-term maintenance.

Site number: 9897

Facility Condition Needs Index Report

Index #	Building Name		Sq. Feet	Yr. Built	Survey Date	Cost to Repair: P1	Cost to Repair: P2	Cost to Repair: P3	Total Cost to Repair	Cost to Replace	FCNI
0914	NORTH EQUIPMENT STORAGE		1050		4/11/2012	$0	$1,050	$0	$1,050	$10,500	10%
	245 Lakeshore Road	Boulder City									
0912	OUTFLOW SHED		176	1975	4/11/2012	$0	$352	$0	$352	$3,520	10%
	245 Lakeshore Road	Boulder City									
2465	HATCHERY RESIDENCE #4		2350	2005	4/11/2012	$500	$23,500	$1,500	$25,500	$470,000	5%
	245 Lakeshore Road	Boulder City									
2464	HATCHERY RESIDENCE #3		2350	2005	4/11/2012	$500	$23,500	$1,500	$25,500	$470,000	5%
	245 Lakeshore Road	Boulder City									
0907	HATCHERY RESIDENCE #2		2350	2005	4/11/2012	$500	$23,500	$1,500	$25,500	$470,000	5%
	245 Lakeshore Road	Boulder City									
0654	HATCHERY RESIDENCE #1		2350	2005	4/11/2012	$500	$23,500	$1,500	$25,500	$470,000	5%
	245 Lakeshore Road	Boulder City									
0913	HATCHERY WATER AERATION TOWER		400	2005	4/11/2012	$0	$4,000	$0	$4,000	$120,000	3%
	245 Lakeshore Road	Boulder City									
2466	HATCHERY SHOP / FEED STORAGE		5360	2005	4/11/2012	$1,000	$32,160	$0	$33,160	$1,072,000	3%
	245 Lakeshore Road	Boulder City									
0655	VISITATION / HATCHERY BUILDING		26430	2005	4/11/2012	$1,500	$220,024	$0	$221,524	$7,222,050	3%
	245 Lakeshore Road	Boulder City									
0906	FILTER BUILDING		417	2005	4/11/2012	$0	$2,085	$0	$2,085	$83,400	3%
	245 Lakeshore Road	Boulder City									
2468	HATCHERY FEED BINS		500	2005	4/11/2012	$0	$500	$0	$500	$50,000	1%
	245 Lakeshore Road	Boulder City									
0656	LOWER REARING SHADE SHELTER		23760		4/11/2012	$0	$23,760	$0	$23,760	$2,376,000	1%
	245 Lakeshore Road	Boulder City									
2469	UPPER REARING BUILDING		34000	2005	4/11/2012	$0	$34,000	$0	$34,000	$5,950,000	1%
	245 Lakeshore Road	Boulder City									
0657	HATCHERY FIRE PUMP STATION		176	2005	4/11/2012	$0	$176	$0	$176	$44,000	0%
	245 Lakeshore Road	Boulder City									
9897	LAKE MEAD FISH HATCHERY SITE			1972	4/11/2012	$0	$97,200	$0	$97,200		0%
	245 Lakeshore Road	Boulder City									
	Report Totals.....:		**101,669**			**$4,500**	**$509,307**	**$6,000**	**$519,807**	**$18,811,470**	**3%**

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LAKE MEAD FISH HATCHERY SITE

BUILDING REPORT

Located on the West shore of Lake Mead, the Lake Mead Fish Hatchery encompasses over 17 acres. There are 14 structures that support the fish hatchery operations. Lake Mead supplies the water required for hatchery operations. The site and several structures have undergone a remodel which included new storage and hatchery buildings and site drainage and paving.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $97,200**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 9897LGT1

CRACK FILL & SEAL ASPHALT PAVING **Construction Cost $97,200**

It is important to maintain the asphalt concrete paving on the site. This project would provide for minor crack filling and sealing of the paving site wide including access roads, parking areas and maintenance yards. Striping is included in this estimate. This project should be scheduled on a 5 year cyclical basis to maintain the integrity of the paving and prevent premature failure. 162,000 square feet of asphalt area was used to generate this estimate.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**
Priority Class 2:	**$97,200**
Priority Class 3:	**$0**
Grand Total:	**$97,200**

UPPER REARING BUILDING

BUILDING REPORT

The Upper Rearing Building is a prefabricated steel structure covered by insulated metal siding panels on a concrete slab-on-grade foundation. The building contains raceways and water treatment equipment for fish rearing. At the time of the 2012 survey, the facility was not operating due to water temperature and mussel infestation.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $34,000**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 2469EXT1

EXTERIOR FINISHES **Construction Cost $34,000**

It is important to maintain the finish, weather resistance, and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is the caulking and sealing of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be caulked and sealed in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**34,000**
Year Constructed:	**2005**
Exterior Finish 1:	**100 % Prefinished Metal Pa**
Exterior Finish 2:	**0 %**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % S-2**
IBC Occupancy Type 2:	**0 %**
Construction Type:	**Steel & Concrete**
IBC Construction Type:	**II-B**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**	**Project Construction Cost per Square Foot:**	**$1.00**
Priority Class 2:	**$34,000**	**Total Facility Replacement Construction Cost:**	**$5,950,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$175**
Grand Total:	**$34,000**	**FCNI:**	**1%**

HATCHERY FEED BINS

BUILDING REPORT

There are a total of five Hatchery Feed Bins on a 10'x50' concrete pad. The feed bins are of prefabricated galvanized steel construction. The bins are used for the storage and delivery of fish food.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $500**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 2468EXT1

EXTERIOR FINISHES **Construction Cost $500**

It is important to maintain the finish, weather resistance, and appearance of the structure. This project would provide funding to protect the exterior of the structure. Included in the cost is the caulking and sealing of the flashing, fixtures and all other penetrations. It is recommended that the structure be painted and sealed in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**500**
Year Constructed:	**2005**
Exterior Finish 1:	**100 % Open / Steel Columns**
Exterior Finish 2:	**0 %**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % U**
IBC Occupancy Type 2:	**0 %**
Construction Type:	**Steel Tower Structure**
IBC Construction Type:	**I-B**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**	**Project Construction Cost per Square Foot:**	**$1.00**
Priority Class 2:	**$500**	**Total Facility Replacement Construction Cost:**	**$50,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$100**
Grand Total:	**$500**	**FCNI:**	**1%**

HATCHERY SHOP / FEED STORAGE

BUILDING REPORT

The Hatchery Shop / Feed Storage Building is a prefabricated metal structure covered by insulated metal siding on a concrete foundation. There is a large maintenance shop / garage which has evaporative cooling provided by two roof mounted units and a storage room for fish food. The structure is in excellent condition.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $1,000**

Currently Critical **Immediate to Two Years**

Project Index #: 2466HVA1

CONDENSATE LINE REPAIRS **Construction Cost $1,000**

The building has two roof-mounted evaporative coolers that are leaking water and damaging the roof. The condensate lines have leaks in them and since the water is untreated, it is staining the standing seam metal roof and will cause corrosion and rusting if left unrepaired. This project would provide for replacement of the condensate lines to prevent any further damage.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $32,160**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 2466EXT1

EXTERIOR FINISHES **Construction Cost $5,360**

It is important to maintain the finish, weather resistance, and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is the caulking and sealing of the flashing, fixtures and all other penetrations. It is recommended that the building be caulked and sealed in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

Project Index #: 2466INT1

INTERIOR FINISHES **Construction Cost $26,800**

The interior finishes are in fair condition. It is recommended that the painted interior walls be painted at least once in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. The open framed walls and ceilings with exposed insulation should be covered by netting to prevent the birds from destroying the insulation. Alternatively, the walls could be covered by gypsum board and painted at an increased cost. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**5,360**
Year Constructed:	**2005**
Exterior Finish 1:	**100 % Prefinished Metal Pa**
Exterior Finish 2:	**0 %**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % S-2**
IBC Occupancy Type 2:	**0 %**
Construction Type:	**Steel Building**
IBC Construction Type:	**II-B**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$1,000**	**Project Construction Cost per Square Foot:**	**$6.19**
Priority Class 2:	**$32,160**	**Total Facility Replacement Construction Cost:**	**$1,072,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$200**
Grand Total:	**$33,160**	**FCNI:**	**3%**

HATCHERY RESIDENCE #4

BUILDING REPORT

The Hatchery Residence #4 is a wood frame structure covered by an exterior insulation and finish system (EIFS) on a concrete foundation. The roof is composition asphalt shingles, windows are double pane, and there is a fire sprinkler system located in the living area. The floor coverings are carpet and linoleum, and there is a finished double car garage attached.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $500**

Currently Critical **Immediate to Two Years**

Project Index #: 2465SFT1

FIRE SEPARATION UPGRADE **Construction Cost $500**

Section R309.2 of the 2012 International Residential Code states that, "The garage shall be separated from the residence and its attic area by not less than 1/2" Type X gypsum board applied to the garage side." The attic access in the ceiling of the garage is only covered by a piece of plywood which does not meet this requirement. Without the proper fire-rated assembly between the garage and the attic, the safety of the occupants and the protection of the structure are compromised. This project would provide for the purchase and installation of the gypsum board at the attic access to meet the requirements of the code.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $23,500**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 2465EXT1

EXTERIOR FINISHES **Construction Cost $11,750**

It is important to maintain the finish, weather resistance, and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is power washing, priming and painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

Project Index #: 2465INT1

INTERIOR FINISHES **Construction Cost $11,750**

The interior finishes are in fair condition. It is recommended that the interior walls and ceilings be painted at least once in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability. This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

PRIORITY CLASS 3 PROJECTS **Total Construction Cost for Priority 3 Projects: $1,500**

Long-Term Needs **Four to Ten Years**

Project Index #: 2465PLM1

WATER HEATER REPLACEMENT **Construction Cost $1,500**

There is a 40 gallon electric water heater in the building. The average life span of a water heater is eight to ten years. With the passage of time and constant use, this unit is showing signs of wear and should be scheduled for replacement in the next 4-5 years. It is recommended that a new electric water heater be installed. Removal and disposal of the existing equipment is included in this estimate.

BUILDING INFORMATION:

Gross Area (square feet):	**2,350**
Year Constructed:	**2005**
Exterior Finish 1:	**100 % Painted Stucco / EIFS**
Exterior Finish 2:	**0 %**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % R-3**
IBC Occupancy Type 2:	**0 %**
Construction Type:	**Wood Framing**
IBC Construction Type:	**V-B**
Percent Fire Supressed:	**90 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$500**	**Project Construction Cost per Square Foot:**	**$10.85**
Priority Class 2:	**$23,500**	**Total Facility Replacement Construction Cost:**	**$470,000**
Priority Class 3:	**$1,500**	**Facility Replacement Cost per Square Foot:**	**$200**
Grand Total:	**$25,500**	**FCNI:**	**5%**

HATCHERY RESIDENCE #3

BUILDING REPORT

The Hatchery Residence #3 is a wood framed structure covered by an exterior insulation and finish system (EIFS) on a concrete foundation. The roof is composition asphalt shingles, windows are double pane, and there is a fire sprinkler system located in the living area. The floor coverings are carpet and linoleum, and there is a finished double car garage attached.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $500**

Currently Critical **Immediate to Two Years**

Project Index #: 2464SFT1

FIRE SEPARATION UPGRADE **Construction Cost $500**

Section R309.2 of the 2012 International Residential Code states that, "The garage shall be separated from the residence and its attic area by not less than 1/2" Type X gypsum board applied to the garage side." The attic access in the ceiling of the garage is only covered by a piece of plywood which does not meet this requirement. Without the proper fire-rated assembly between the garage and the attic, the safety of the occupants and the protection of the structure are compromised. This project would provide for the purchase and installation of the gypsum board at the attic access to meet the requirements of the code.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $23,500**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 2464EXT1

EXTERIOR FINISHES **Construction Cost $11,750**

It is important to maintain the finish, weather resistance and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is power washing, priming and painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

Project Index #: 2464INT1

INTERIOR FINISHES **Construction Cost $11,750**

The interior finishes are in fair condition. It is recommended that the interior walls and ceilings be painted at least once in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability. This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

PRIORITY CLASS 3 PROJECTS **Total Construction Cost for Priority 3 Projects: $1,500**

Long-Term Needs **Four to Ten Years**

Project Index #: 2464PLM1

WATER HEATER REPLACEMENT **Construction Cost $1,500**

There is a 40 gallon electric water heater in the building. The average life span of a water heater is eight to ten years. With the passage of time and constant use, this unit is showing signs of wear and should be scheduled for replacement in the next 4-5 years. It is recommended that a new electric water heater be installed. Removal and disposal of the existing equipment is included in this estimate.

BUILDING INFORMATION:

Gross Area (square feet):	**2,350**
Year Constructed:	**2005**
Exterior Finish 1:	**100 % Painted Stucco / EIFS**
Exterior Finish 2:	**0 %**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % R-3**
IBC Occupancy Type 2:	**0 %**
Construction Type:	**Wood Framing**
IBC Construction Type:	**V-B**
Percent Fire Supressed:	**90 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$500**	**Project Construction Cost per Square Foot:**	**$10.85**
Priority Class 2:	**$23,500**	**Total Facility Replacement Construction Cost:**	**$470,000**
Priority Class 3:	**$1,500**	**Facility Replacement Cost per Square Foot:**	**$200**
Grand Total:	**$25,500**	**FCNI:**	**5%**

NORTH EQUIPMENT STORAGE

BUILDING REPORT

The North Equipment Storage Building is a steel framed structure with a metal roof on a concrete slab-on-grade foundation. The building is used for general storage of hatchery equipment.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $1,050**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0914EXT1

EXTERIOR FINISHES

Construction Cost $1,050

It is important to maintain the finish, weather resistance and appearance of the structure. This project would provide for painting of the structure and it is recommended that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**1,050**
Year Constructed:	
Exterior Finish 1:	**100 % Open / Steel Post**
Exterior Finish 2:	**%**
Number of Levels (Floors):	**Basement? No**
IBC Occupancy Type 1:	**100 % S-2**
IBC Occupancy Type 2:	**%**
Construction Type:	**Steel**
IBC Construction Type:	**V-N**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**	**Project Construction Cost per Square Foot:**	**$1.00**
Priority Class 2:	**$1,050**	**Total Facility Replacement Construction Cost:**	**$10,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$10**
Grand Total:	**$1,050**	**FCNI:**	**11%**

HATCHERY WATER AERATION TOWER

BUILDING REPORT

The Hatchery Water Aeration Tower is constructed of pre-cast concrete on the base and natural CMU on the upper walls. It has a standing seam metal roof. The building is used to maintain and adjust the oxygen levels in the water supplying the hatchery raceways.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $4,000**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0913EXT1

EXTERIOR/ INTERIOR FINISHES **Construction Cost $4,000**

It is important to maintain the finish, weather resistance, and appearance of the building. This project would provide funding to protect the interior and exterior of the building. Included in the cost are cleaning and sealing the concrete masonry units and caulking of the flashing, fixtures and all other penetrations. It is recommended that the building be sealed and caulked in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**400**
Year Constructed:	**2005**
Exterior Finish 1:	**40 % Precast Concrete**
Exterior Finish 2:	**60 % Natural CMU**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % U**
IBC Occupancy Type 2:	**%**
Construction Type:	**Concrete and Steel**
IBC Construction Type:	**II-A**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**	**Project Construction Cost per Square Foot:**	**$10.00**
Priority Class 2:	**$4,000**	**Total Facility Replacement Construction Cost:**	**$120,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$300**
Grand Total:	**$4,000**	**FCNI:**	**3%**

OUTFLOW SHED

BUILDING REPORT

The Outflow Shed is located on the southwest side of the site; down, in the outflow stream. The building is constructed with steel columns, metal roofing and a concrete masonry wall. The structure is open on three sides. It has a concrete weir with monitoring equipment to document the water flow to Lake Mead. This building was not included in the Hatchery Rehabilitation Project of 2005.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $352**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0912EXT1

EXTERIOR FINISHES **Construction Cost $352**

It is important to maintain the finish, weather resistance, and appearance of the structure. This project would provide for painting of the structure and it is recommended that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**176**
Year Constructed:	**1975**
Exterior Finish 1:	**75 % Open**
Exterior Finish 2:	**25 % Painted Steel**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % U**
IBC Occupancy Type 2:	**%**
Construction Type:	**Concrete and Steel**
IBC Construction Type:	**V-B**
Percent Fire Supressed:	**%**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**	**Project Construction Cost per Square Foot:**	**$2.00**
Priority Class 2:	**$352**	**Total Facility Replacement Construction Cost:**	**$4,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$20**
Grand Total:	**$352**	**FCNI:**	**9%**

HATCHERY RESIDENCE #2

BUILDING REPORT

The Hatchery Residence #2 is a wood framed structure covered by an exterior insulation and finish system (EIFS) on a concrete foundation. The roof is composition asphalt shingles, windows are double pane, and there is a fire sprinkler system located in the living area. The floor coverings are carpet and linoleum, and there is a finished double car garage attached. This is the only residence where the alarm system sounds in case of problems that occur in the raceways.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $500**

Currently Critical **Immediate to Two Years**

Project Index #: 0907SFT1

FIRE SEPARATION UPGRADE **Construction Cost $500**

Section R309.2 of the 2012 International Residential Code states that, "The garage shall be separated from the residence and its attic area by not less than 1/2" Type X gypsum board applied to the garage side." The attic access in the ceiling of the garage is only covered by a piece of plywood which does not meet this requirement. Without the proper fire-rated assembly between the garage and the attic, the safety of the occupants and the protection of the structure are compromised. This project would provide for the purchase and installation of the gypsum board at the attic access to meet the requirements of the code.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $23,500**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0907EXT1

EXTERIOR FINISHES **Construction Cost $11,750**

It is important to maintain the finish, weather resistance, and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is power washing, priming and painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

Project Index #: 0907INT1

INTERIOR FINISHES **Construction Cost $11,750**

The interior finishes are in fair condition. It is recommended that the interior walls and ceilings be painted at least once in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability. This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

PRIORITY CLASS 3 PROJECTS **Total Construction Cost for Priority 3 Projects: $1,500**

Long-Term Needs **Four to Ten Years**

Project Index #: 0907PLM1

WATER HEATER REPLACEMENT **Construction Cost $1,500**

There is a 40 gallon electric water heater in the building. The average life span of a water heater is eight to ten years. With the passage of time and constant use, this unit is showing signs of wear and should be scheduled for replacement in the next 4-5 years. It is recommended that a new electric water heater be installed. Removal and disposal of the existing equipment is included in this estimate.

BUILDING INFORMATION:

Gross Area (square feet):	**2,350**
Year Constructed:	**2005**
Exterior Finish 1:	**100 % Painted Stucco / EIFS**
Exterior Finish 2:	**%**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % R-3**
IBC Occupancy Type 2:	**%**
Construction Type:	**Wood Framing**
IBC Construction Type:	**V-B**
Percent Fire Supressed:	**90 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$500**	**Project Construction Cost per Square Foot:**	**$10.85**
Priority Class 2:	**$23,500**	**Total Facility Replacement Construction Cost:**	**$470,000**
Priority Class 3:	**$1,500**	**Facility Replacement Cost per Square Foot:**	**$200**
Grand Total:	**$25,500**	**FCNI:**	**5%**

FILTER BUILDING

BUILDING REPORT

The Filter Building is located on the east side of the site. The building is constructed of CMU, steel trusses, metal roof on a concrete slab. The building contains the water filtering equipment for the hatchery.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $2,085**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0906EXT1

EXTERIOR FINISHES

Construction Cost $2,085

It is important to maintain the finish, weather resistance, and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost are cleaning and sealing the concrete masonry units and caulking of the flashing, fixtures and all other penetrations. It is recommended that the building be sealed and caulked in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**417**
Year Constructed:	**2005**
Exterior Finish 1:	**100 % Natural CMU**
Exterior Finish 2:	**%**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % S-2**
IBC Occupancy Type 2:	**%**
Construction Type:	**Concrete Masonry Units and Steel**
IBC Construction Type:	**II-A**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**	**Project Construction Cost per Square Foot:**	**$5.00**
Priority Class 2:	**$2,085**	**Total Facility Replacement Construction Cost:**	**$83,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$200**
Grand Total:	**$2,085**	**FCNI:**	**3%**

HATCHERY FIRE PUMP STATION

BUILDING REPORT

The Hatchery Fire Pump Station is a prefabricated steel structure on a concrete foundation. The building contains the fire protection pump, motor and equipment for the entire hatchery fire protection system.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $176**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0657EXT1

EXTERIOR FINISHES

Construction Cost $176

It is important to maintain the finish, weather resistance, and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is the caulking and sealing of the flashing, fixtures and all other penetrations. It is recommended that the building be caulked and sealed in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**176**
Year Constructed:	**2005**
Exterior Finish 1:	**100 % Prefinished metal pan**
Exterior Finish 2:	**%**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % S-2**
IBC Occupancy Type 2:	**%**
Construction Type:	**Prefabricated Steel Building**
IBC Construction Type:	**II-A**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**	**Project Construction Cost per Square Foot:**	**$1.00**
Priority Class 2:	**$176**	**Total Facility Replacement Construction Cost:**	**$44,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$250**
Grand Total:	**$176**	**FCNI:**	**0%**

LOWER REARING SHADE SHELTER

BUILDING REPORT

The Lower Rearing Shade Shelter is a structural steel post and beam structure on a concrete foundation. The building contains concrete raceways for fish rearing and is open on all four sides.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $23,760**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0656EXT1

EXTERIOR FINISHES **Construction Cost $23,760**

It is important to maintain the finish, weather resistance, and appearance of the structure. This project would provide for painting of the structure and it is recommended that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**23,760**
Year Constructed:	
Exterior Finish 1:	**100 % Open / Steel Post**
Exterior Finish 2:	**%**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % S-2**
IBC Occupancy Type 2:	**%**
Construction Type:	**Steel**
IBC Construction Type:	**II-B**
Percent Fire Supressed:	**0 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$0**	**Project Construction Cost per Square Foot:**	**$1.00**
Priority Class 2:	**$23,760**	**Total Facility Replacement Construction Cost:**	**$2,376,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$100**
Grand Total:	**$23,760**	**FCNI:**	**1%**

VISITATION / HATCHERY BUILDING

BUILDING REPORT

The Visitation / Hatchery Building is constructed of CMU in the office area and a structural steel frame with prefinished insulated metal siding panels in the hatchery portion. The roof has 6-translucent roof windows with a single-ply membrane roof covering. The building has a carport attached, 22'x81', (included in Gross sq. ft.). The public visitation area has ADA accessible restrooms and has two ground mounted HVAC packaged systems for heating and cooling. The facility was closed during the survey of 2012.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $1,500**

Currently Critical **Immediate to Two Years**

Project Index #: 0655SFT1

DIESEL FUEL TANK SHUTOFF REPLACEMENT **Construction Cost $1,500**

The existing emergency shutoff switch for the diesel fuel tank and delivery system is due for replacement. The switch is over 30 years old, does not have a sign to identify it, and is difficult to locate. This project would replace the existing switch with a new mushroom switch and install clear signage to identify and locate the switch.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $220,024**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0655EXT1

EXTERIOR FINISHES **Construction Cost $52,524**

It is important to maintain the finish, weather resistance, and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Approximately 1/8 of the exterior of the building is sealed concrete masonry units, the rest is steel framing with metal siding. Included in the cost are cleaning and sealing the concrete masonry units and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be sealed and caulked in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

Project Index #: 0655ELE1

GENERATOR REPLACEMENT **Construction Cost $150,000**

The raceways have automatic monitors controlling the PH levels, oxygen levels and automatic fish feeders. Water is apportioned between the hatchery and residences after it enters the system through an aeration tower. During power outages, water is re-circulated back to the aeration tower and a portion of this contaminated water eventually ends up at the tap of the residences and the water in the raceways becomes potentially deadly for the fish. The building has a back-up generator system to prevent this hazard that was installed in 1973. The generator is constantly breaking down and has been rebuilt several times. The exhaust mufflers are within 6" from the wood timbers on the exterior of the building and should be re-routed. This project would provide for a new diesel powered 375 KVA generator including required connections to utility systems and relocating the exhaust mufflers.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

Project Index #: 0655INT1

INTERIOR FINISHES **Construction Cost $17,500**

The interior finishes are in fair condition. Approximately 3,500 square feet of the building is finished with painted gypsum board. It is recommended that the painted interior walls and ceilings be painted at least once in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability.
This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

BUILDING INFORMATION:

Gross Area (square feet):	**26,430**
Year Constructed:	**2005**
Exterior Finish 1:	**50 % Prefinished Metal Pa**
Exterior Finish 2:	**50 % Natural CMU**
Number of Levels (Floors):	**2 Basement? No**
IBC Occupancy Type 1:	**50 % B**
IBC Occupancy Type 2:	**50 % S-2**
Construction Type:	
IBC Construction Type:	**II-A**
Percent Fire Supressed:	**50 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$1,500**	**Project Construction Cost per Square Foot:**	**$8.38**
Priority Class 2:	**$220,024**	**Total Facility Replacement Construction Cost:**	**$7,222,000**
Priority Class 3:	**$0**	**Facility Replacement Cost per Square Foot:**	**$273**
Grand Total:	**$221,524**	**FCNI:**	**3%**

HATCHERY RESIDENCE #1

BUILDING REPORT

The Hatchery Residence #1 is a wood framed structure covered by an exterior insulation and finish system (EIFS) on a concrete foundation. The roof is composition asphalt shingles, windows are double pane, and there is a fire sprinkler system located in the living area. The floor coverings are carpet and linoleum, and there is a finished double car garage attached.

PRIORITY CLASS 1 PROJECTS **Total Construction Cost for Priority 1 Projects: $500**

Currently Critical **Immediate to Two Years**

Project Index #: 0654SFT1

FIRE SEPARATION UPGRADE **Construction Cost $500**

Section R309.2 of the 2012 International Residential Code states that, "The garage shall be separated from the residence and its attic area by not less than 1/2" Type X gypsum board applied to the garage side." The attic access in the ceiling of the garage is only covered by a piece of plywood which does not meet this requirement. Without the proper fire-rated assembly between the garage and the attic, the safety of the occupants and the protection of the structure are compromised. This project would provide for the purchase and installation of the gypsum board at the attic access to meet the requirements of the code.

PRIORITY CLASS 2 PROJECTS **Total Construction Cost for Priority 2 Projects: $23,500**

Necessary - Not Yet Critical **Two to Four Years**

Project Index #: 0654EXT1

EXTERIOR FINISHES **Construction Cost $11,750**

It is important to maintain the finish, weather resistance, and appearance of the building. This project would provide funding to protect the exterior of the building excluding the roof. Included in the cost is power washing, priming and painting and caulking of the windows, flashing, fixtures and all other penetrations. It is recommended that the building be painted in the next 3-4 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

Project Index #: 0654INT1

INTERIOR FINISHES **Construction Cost $11,750**

The interior finishes are in fair condition. It is recommended that the interior walls and ceilings be painted at least once in the next 2-3 years and that this project be scheduled on a cyclical basis to maintain the integrity of the structure. Prior to painting, all surfaces should be repaired and prepped. An epoxy-based paint should be utilized in wet areas for durability. This project or a portion thereof was previously recommended in the FCA report dated 10/11/2005. It has been amended accordingly to reflect conditions observed during the most recent survey date of 04/11/2012.

PRIORITY CLASS 3 PROJECTS **Total Construction Cost for Priority 3 Projects: $1,500**

Long-Term Needs **Four to Ten Years**

Project Index #: 0654PLM1

WATER HEATER REPLACEMENT **Construction Cost $1,500**

There is a 40 gallon electric water heater in the building. The average life span of a water heater is eight to ten years. With the passage of time and constant use, this unit is showing signs of wear and should be scheduled for replacement in the next 4-5 years. It is recommended that a new electric water heater be installed. Removal and disposal of the existing equipment is included in this estimate.

BUILDING INFORMATION:

Gross Area (square feet):	**2,350**
Year Constructed:	**2005**
Exterior Finish 1:	**100 % Painted Stucco / EIFS**
Exterior Finish 2:	**%**
Number of Levels (Floors):	**1 Basement? No**
IBC Occupancy Type 1:	**100 % R-3**
IBC Occupancy Type 2:	**%**
Construction Type:	**Wood Framed**
IBC Construction Type:	**V-B**
Percent Fire Supressed:	**90 %**

PROJECT CONSTRUCTION COST TOTALS SUMMARY:

Priority Class 1:	**$500**	**Project Construction Cost per Square Foot:**	**$10.85**
Priority Class 2:	**$23,500**	**Total Facility Replacement Construction Cost:**	**$470,000**
Priority Class 3:	**$1,500**	**Facility Replacement Cost per Square Foot:**	**$200**
Grand Total:	**$25,500**	**FCNI:**	**5%**

NOTES:

The deficiencies outlined in this report were noted from a visual survey. The costs do not represent the cost of a complete facility renovation or maintenance needs. Recommended projects do not include telecommunications, furniture, window treatment, space change, program issues, relocation, swing space, or costs that could not be identified or determined from the survey and available building information.

Individual projects and costs noted herein may be impacted by new construction materials or methods, agency projects, and pending or proposed Capital Improvement Projects (CIP).

This report was created under the authority found in NRS 341.201 by the State Public Works Division and should be utilized as a planning level document.

REPORT DEVELOPMENT:

State Public Works Division | 515 E. Musser Street, Suite 102 | (775) 684-4141 voice
Facilities Condition Analysis | Carson City, Nevada 89701-4263 | (775) 684-4142 facsimile

Lake Mead Fish Hatchery Site – FCA Site #9897
Description: ADA accessible parking at Visitor's Center public entrance.

Upper Rearing Building – FCA Building #2469
Description: Exterior of the building.

Hatchery Feed Bins – FCA Building #2468
Description: Exterior of the structure.

Hatchery Shop / Feed Storage – FCA Building #2466
Description: Exterior of the building.

Hatchery Residence #4 – FCA Building #2465
Description: Exterior of the residence.

Hatchery Residence #3 – FCA Building #2464
Description: Exterior of the residence.

North Equipment Storage – FCA Building #0914
Description: Exterior of the building.

Hatchery Water Aeration Tower – FCA Building #0913
Description: Exterior of the building.

Hatchery Residence #2 – FCA Building #0907
Description: Exterior of the residence.

Filter Building – FCA Building #0906
Description: Exterior of the building.

Hatchery Fire Pump Station – FCA Building #0657
Description: Exterior of the building.

Lower Rearing Shade Shelter – FCA Building #0656
Description: Exterior of the building.

Visitation / Hatchery Building – FCA Building #0655
Description: Exterior of the building.

Visitation / Hatchery Building – FCA Building #0655
Description: Interior of the hatchery area.

Visitation / Hatchery Building – FCA Building #0655
Description: Interior of the visitation area.

Hatchery Residence #1 – FCA Building #0654
Description: Exterior view of the residence.