# Fish Health Inspection Report

**Company:** Blackwater Creek Koi Farms  
**Site Manager:** Joe Pawlak  
**Current Inspection:** 14-Nov-12  
**Prior Inspections:** 31-Jan-12

**Facility:** Eustis Facility  
**Location:** 30540 State Rd 44  
Eustis, FL 32736  
US

**Water Source:** Well  
**Water Treatment:** None

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**Type of Fish Examined:** Hatchery

<table>
<thead>
<tr>
<th>Species</th>
<th>Lot ID</th>
<th>Age</th>
<th>Number in Lot</th>
<th>Eggs (E) or Fish (F) Origin</th>
<th>Sample Date(s)</th>
<th>Virus</th>
<th>Parasite</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Cyprinus carpio koi</em></td>
<td>M12-640</td>
<td>~12 mo</td>
<td>110,000</td>
<td>(E) Blackwater Creek Koi Farms (FL)</td>
<td>14-Nov-12</td>
<td>P24B</td>
<td>P9B</td>
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<td>neg</td>
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<tr>
<td><em>Carassius auratus</em></td>
<td>M12-641</td>
<td>~12 mo</td>
<td>5,000</td>
<td>(E) Blackwater Creek Koi Farms (FL)</td>
<td>14-Nov-12</td>
<td>P24B</td>
<td>P9B</td>
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<td>neg</td>
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</tr>
</tbody>
</table>

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**Notes:** * See other side of sheet for explanations of Pathogens - Methods and Results coding  
All lots were tested according to World Organization for Animal Health (OIE) "Manual of Diagnostic Tests for Aquatic Animals" (2009) protocols. At the time of collection, all fish were visually examined by Kathleen Hartman, DVM (USDA/APHIS/VS) for the presence of gross clinical signs consistent with Epizootic Ulcerative Syndrome (EUS). None of the fish examined from lot M12-640 or M12-641 had clinical signs of EUS.

**Samples Collected By:** Kathleen Hartman, DVM  
**Affiliation:** USDA, APHIS, VS  
**Telephone:** (813) 671-5230

**Client Reference #:**

**Inspecting Biologist:**

William R. Keleher, Jr., Fish Health Inspector

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* Notes are located on the last Page of this report
In lots of fish less than one year of age, the age is listed in arabic numerals followed by mo. for month; for fish older than one year, the age is expressed in arabic numerals followed by a plus sign to indicate “older than”. 

Findings are reported in columns from top to bottom for each lot as follows: number of fish examined; methods used; results. Positive results include the number of positive individuals (or pools). 

Results are reported as (-) if negative and as # +/- # sampled if positive. 

For BKD, approximate levels of infection are also reported (e.g., 10/50 fields). 

PATHOGEN ABBREVIATIONS 
- EHNV: Epizootic Hematopoietic Necrosis virus 
- IHNV: Infectious Hematopoietic Necrosis virus 
- IPNV: Pancreatic Necrosis virus 
- ISAV: Infectious Salmon Anemia virus 
- KHV: Koi Herpes virus 
- RSIV: Red Sea Bream Iridovirus 
- SVCV: Spring Viremia of Carp virus 
- VHSV: Viral Hemorrhagic Septicemia virus 
- EUS: Epizootic ulcerative syndrome 
- GYRO: Gyrodactylus salaris 

VIRAL PATHOGENS: 
- First letter = sampling method 
  - A = whole fry homogenates (minus head, tail, yolk sac if present) 
  - B = whole visceral homogenates 
  - C = kidney/spleen 
  - D = ovarian fluids 
  - E = kidney/spleen/heart 
  - F = kidney/spleen/liver 
  - G = kidney/spleen/heart/liver/pyloric caeca/gill 
  - H = kidney/spleen/swim bladder 
  - I = kidney/spleen/heart/liver 
  - J = brain/eye 
  - K = kidney/spleen/pyloric caeca/gill 
  - L = kidney/spleen/heart/swim bladder 
  - M = kidney/spleen/liver/swim bladder 
  - N = kidney/spleen/heart/liver/swim bladder 
  - O = kidney/spleen/heart/pyloric caeca/gill 
  - P = kidney/spleen/heart/liver/gill 

PARASITIC PATHOGENS 
- Encoded as follows: 
  - A = digestion method 
  - B = plankton centrifuge method 
  - C = examination of stained smear 
  - D = gross examination 
  - E = PCR 
  - F = microscopic examination 

Numbers = continuous cell lines used 
1 = GF-1 (grunt fin) 
2 = CHSE-214 (chinook salmon embryo) 
3 = FHM (fathead minnow) 
4 = EPC (epithelioma papillosum cyprini) 
5 = BF-2 (bluegill fry) 
6 = CCO (channel catfish ovary) 
7 = ASK (atlantic salmon kidney) 
8 = SSN-1 (striped snake head) 
9 = KF-1 (koi fin)

Last letter = Pooling of samples 
- A = individual fish 
- B = five fish pools 
- C = other___________________
**Fish Health Inspection Report**

Company: Blackwater Creek Koi Farms  
Facility: Eustis Facility  
Location: 30540 State Road 44 Eustis, FL 32736 USA  
Site Manager: Joe Pawlak  
Phone: (352) 357-4563  
Current Inspection: 31-Jan-12  
Prior Inspections: M12020105

**Type of Fish Examined:** Hatchery  

<table>
<thead>
<tr>
<th>Species</th>
<th>Lot ID</th>
<th>Age</th>
<th>Number in Lot</th>
<th>Eggs (E) or Fish (F) Origin</th>
<th>Sample Date(s)</th>
<th><em>Pathogens - Methods and Results</em></th>
</tr>
</thead>
</table>
| Cyprinus carpio koi | M12-049  | ~12 mo| 102,000       | (E) Blackwater Creek Koi Farms (FL) | 31-Jan-12      | IPNV: P42B  
|                    |          |       |               |                                   |                | KHV: neg  
|                    |          |       |               |                                   |                | SVCV: neg  
|                    |          |       |               |                                   |                | VHSV: neg  
|                    |          |       |               |                                   |                | VNNV: neg  
|                    |          |       |               |                                   |                | BF: neg  
|                    |          |       |               |                                   |                | BRM: neg  
|                    |          |       |               |                                   |                | HSP: neg  
|                    |          |       |               |                                   |                | B. ach.: neg  
| Carassius auratus goldfish  | M12-050  | ~12 mo| 5,000         | (E) Blackwater Creek Koi Farms (FL) | 31-Jan-12      | IPNV: P42B  
|                    |          |       |               |                                   |                | KHV: neg  
|                    |          |       |               |                                   |                | SVCV: neg  
|                    |          |       |               |                                   |                | VHSV: neg  
|                    |          |       |               |                                   |                | VNNV: neg  
|                    |          |       |               |                                   |                | BF: neg  
|                    |          |       |               |                                   |                | BRM: neg  
|                    |          |       |               |                                   |                | HSP: neg  
|                    |          |       |               |                                   |                | B. ach.: neg  

Notes: * See other side of sheet for explanations of Pathogens - Methods and Results coding

All lots were tested according to World Organization for Animal Health (OIE) "Manual of Diagnostic Tests for Aquatic Animals" (2009) protocols. At the time of collection, all fish were visually examined by Kathleen Hartman, DVM (USDA/APHIS/VS) for the presence of gross clinical signs consistent with Epizootic Ulcerative Syndrome (EUS). None of the fish examined from lot M12-049 or M12-050 had clinical signs of EUS.

Samples Collected By: Kathleen Hartman, DVM  
Affiliation: USDA, APHIS, VS  
Telephone: (813) 671-5230  
Client Reference #:  
Inspecting Biologist: William R. Keleher, Jr., Fish Health Official
### Pathogen Abbreviations

**Bacterial Pathogens:**

- A = Live, healthy fish
- B = Moribund fish
- C = Mortalities

**Viral Pathogens:**

- A = Infectious Pancreatic Necrosis virus
- B = Infectious Hematopoietic Necrosis virus
- VHSV = Viral Hemorrhagic Septicemia virus
- VEN = Viral Erythrogenic Septicemia virus
- HPV = Herpesvirus salmonis
- SIV = Spring Viremia Carp virus
- YTV = Yamei Tumor virus
- EEV = Epizootic Epitheliomatous virus
- ISAV = Infectious Salmon Anemia virus
- EHNV = Epizootic Haematopoietic Necrosis virus
- BF = Aeromonas salmonicida
- BRM = Yersinia ruckeri
- BBD = Renibacterium salmoninum
- WDD = Myxobolus cerebralis
- CS = Ceratomyxa shasta
- PKD = Proliferative Kidney Disease
- HSP = Heterosporis spp.
- B. ach. = Bothriochilus acheilognathi (Asian Tapeworm)

**Protozoan/Parasitic Pathogens:**

- A = Digestion method
- B = Plankton centrifuge method
- C = Examination of stained smear
- D = Gross Examination
- E = PCR (Polymerase Chain Reaction)
- F = Microscopic Examination

### Footnotes:

- First letter = Health of fish sampled
- Last letter = Technique used for:
- Numbers = Continuous cell lines used
- First letter = Pooling of samples
- Last letter = Sampling method
- Numbers = Material sampled

### Results Are Reported As (-) If Negative And As # +/# Sampled If Positive.

### For BKD, Approximate Levels of Infection Are Also Reported (e.g., 10/50 fields)

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