

## MANAGEMENT OF BACTERIAL KIDNEY DISEASE WITH THE "NEW" KIRKEGAARD AND PERRY ANTIBODIES

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- ◆ and
- ◆ Keith Johnson

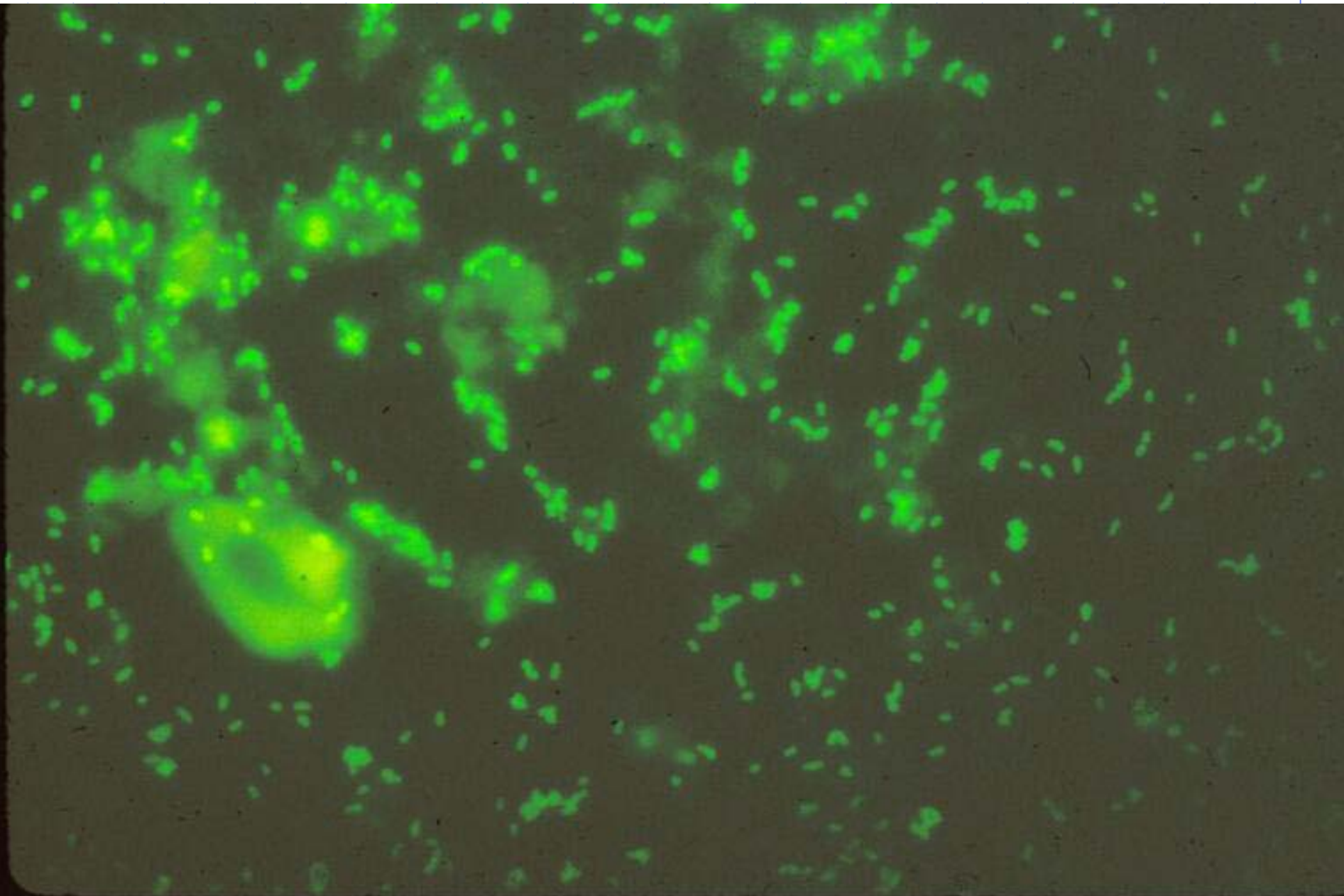
# BKD LESION



## **PRIOR TO 1994**

- ◆ IDFG TOOK A 60 FISH SAMPLE DURING CHINOOK SPAWNING USING DFAT
- ◆ DID NOT UTILIZE CULLING OR SEGREGATION TO MINIMIZE VERTICAL TRANSMISSION OF BKD
- ◆ EPIZOOTICS OF BKD IN JUVENILE CHINOOK SALMON

# BKD Fluorescent Antibody Test



## **SINCE 1994**

- ◆ IDFG HAS PROVIDED AN INTEGRATED MANAGEMENT PROGRAM TO LIMIT LOSSES TO BKD.
- ◆ ELISA-BASED CULLING AND SEGREGATION
- ◆ ALSO INTRAPERITONEAL INJECTIONS OF ADULTS WITH ERYTHROMYCIN

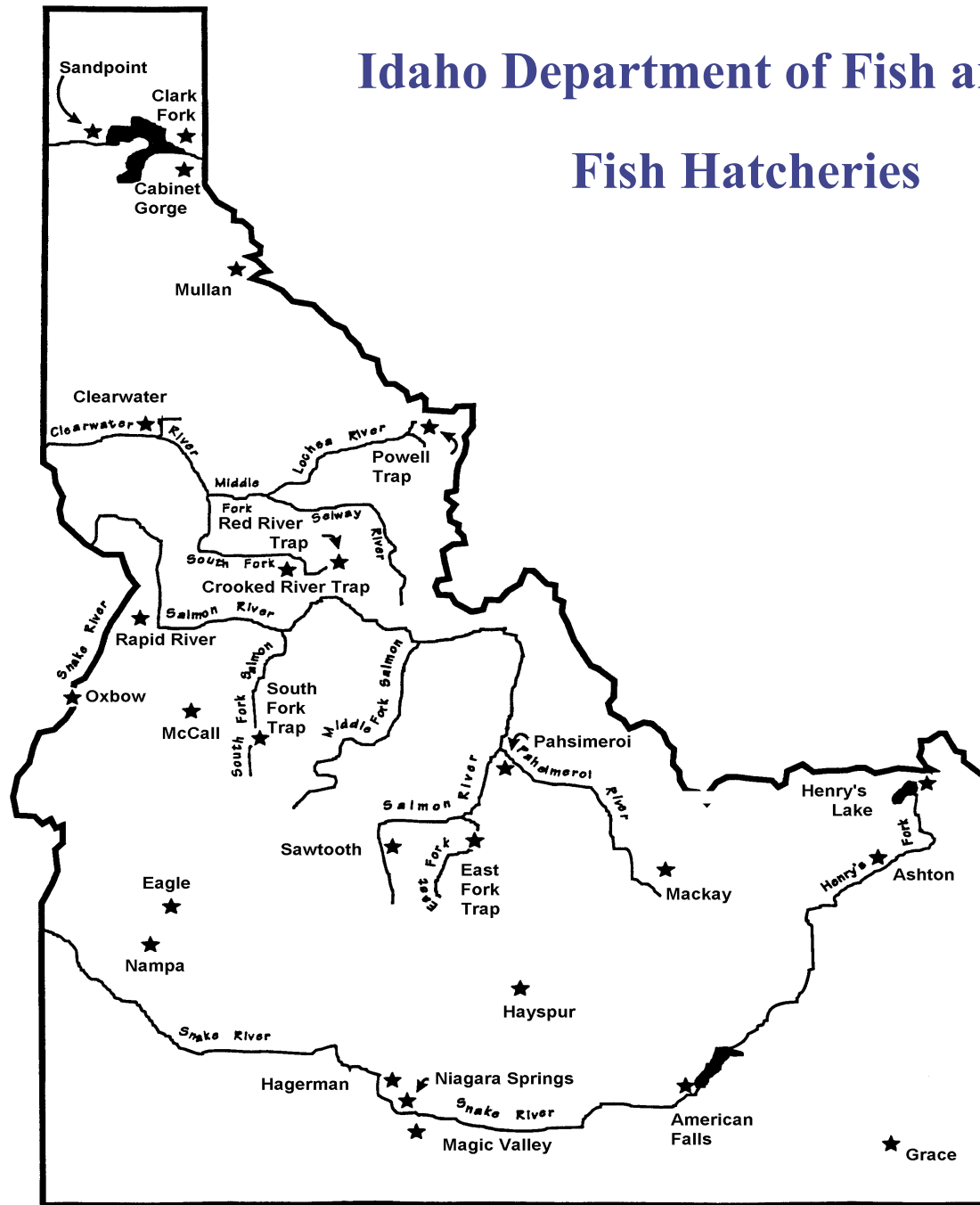
## **SINCE 1994**

- ◆ IODOPHOR DISINFECTION OF EGGS
- ◆ PROPHYLACTIC ERYTHROMYCIN MEDICATED FEED TREATMENTS.
- ◆ HAS LIMITED BKD EPIZOOTICS TO HIGH BKD SEGREGATION GROUPS.

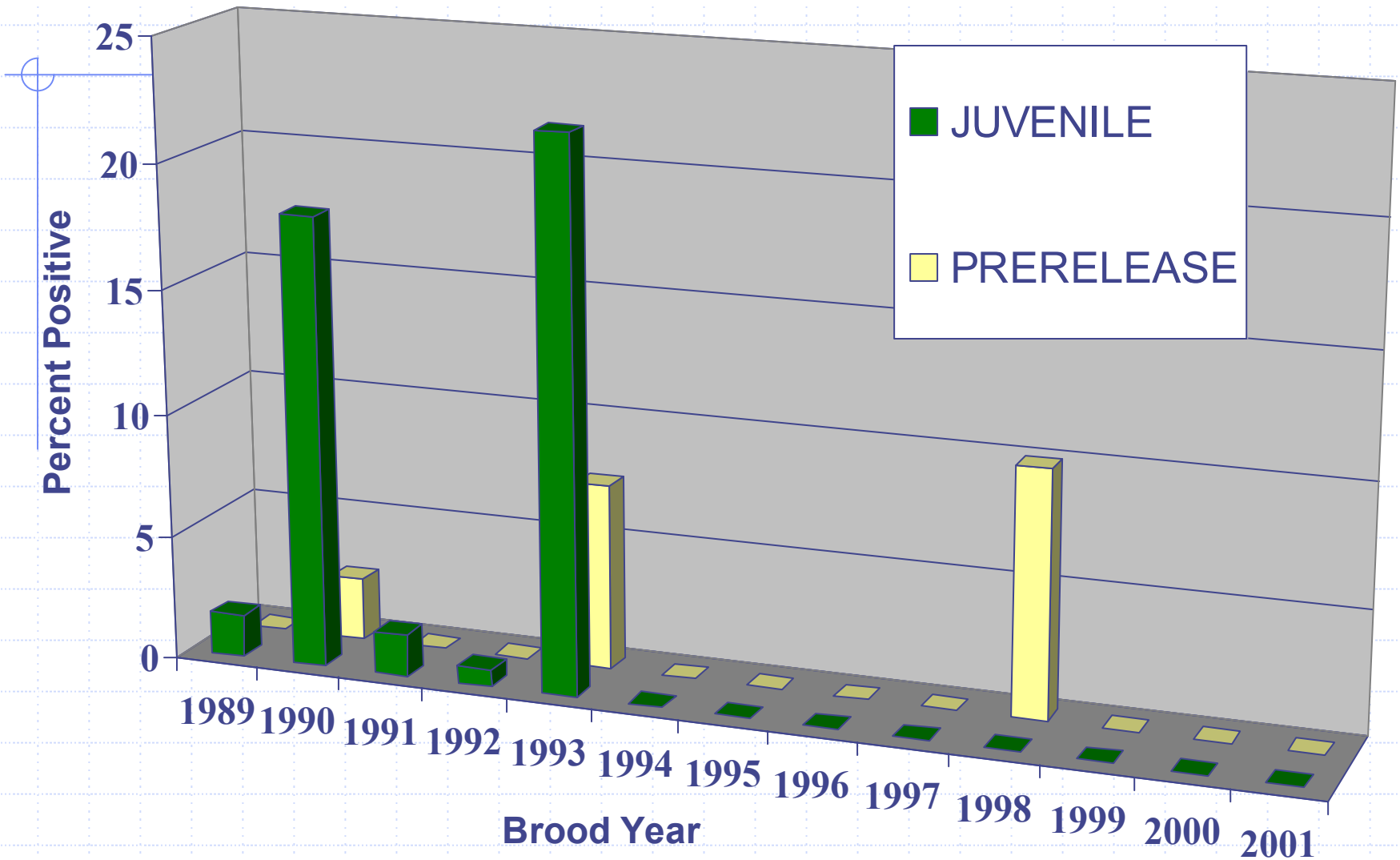


# Idaho Department of Fish and Game

## Fish Hatcheries

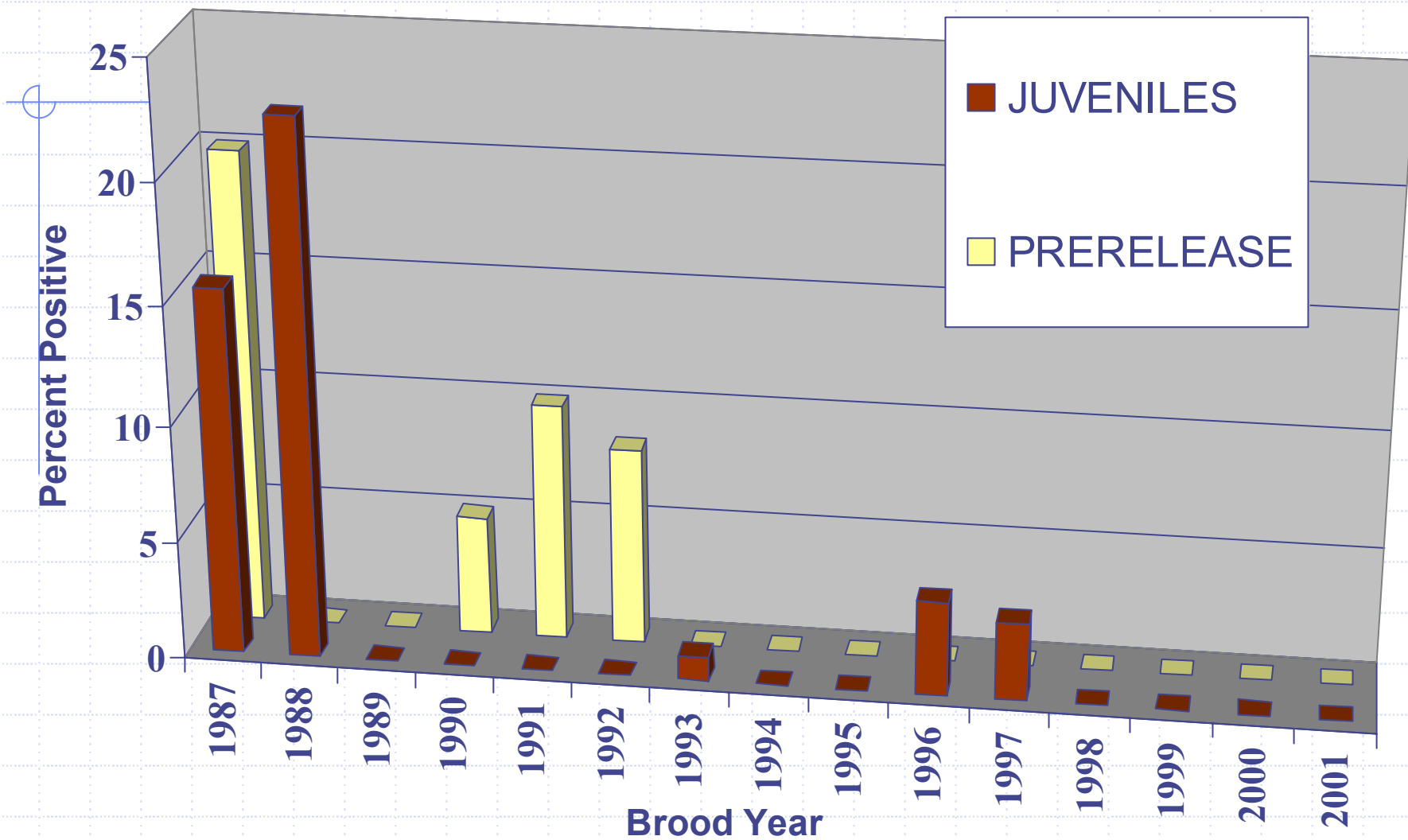


# Sawtooth Hatchery FATs

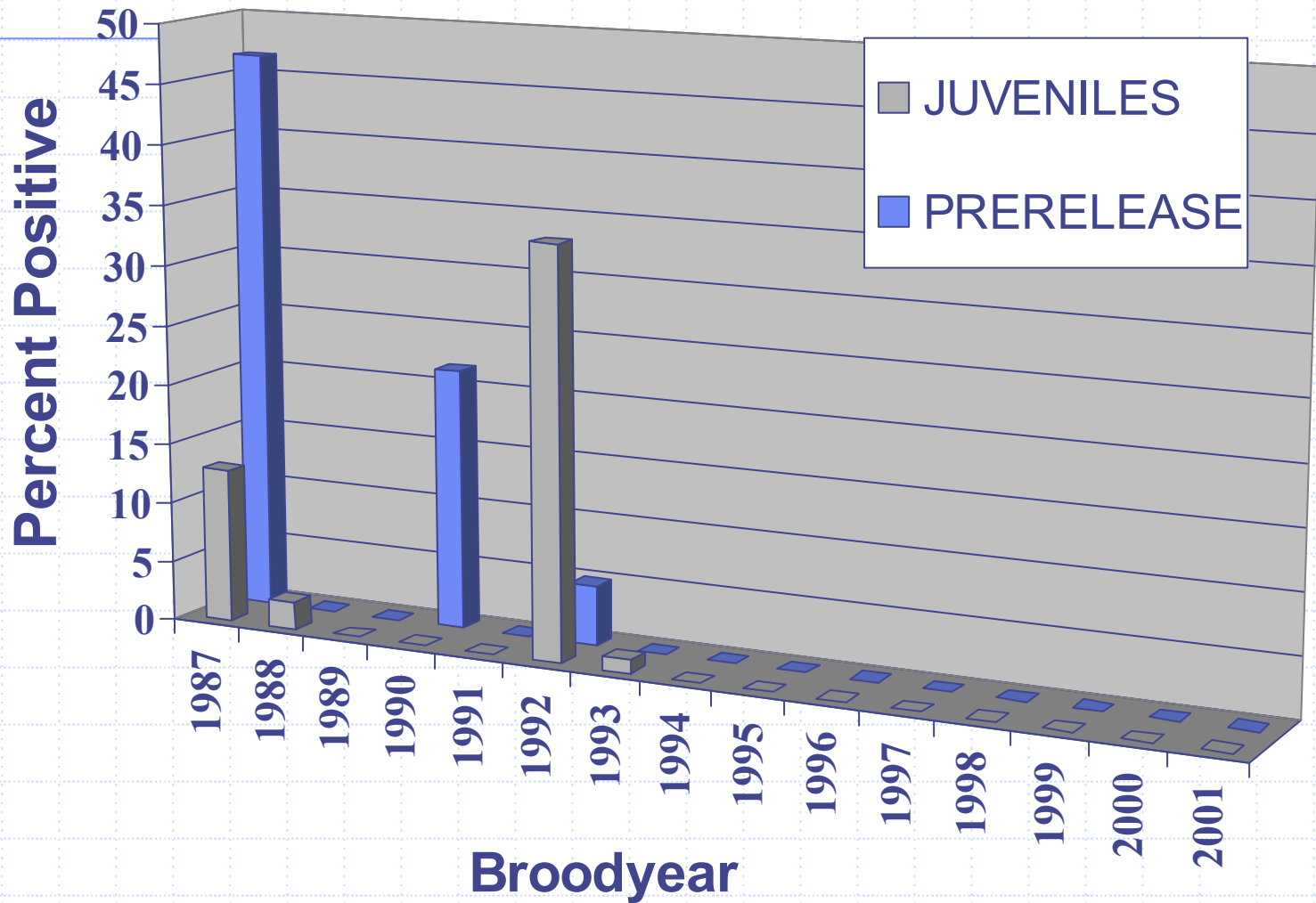




# Rapid River Hatchery FATS



# McCall Hatchery FATs

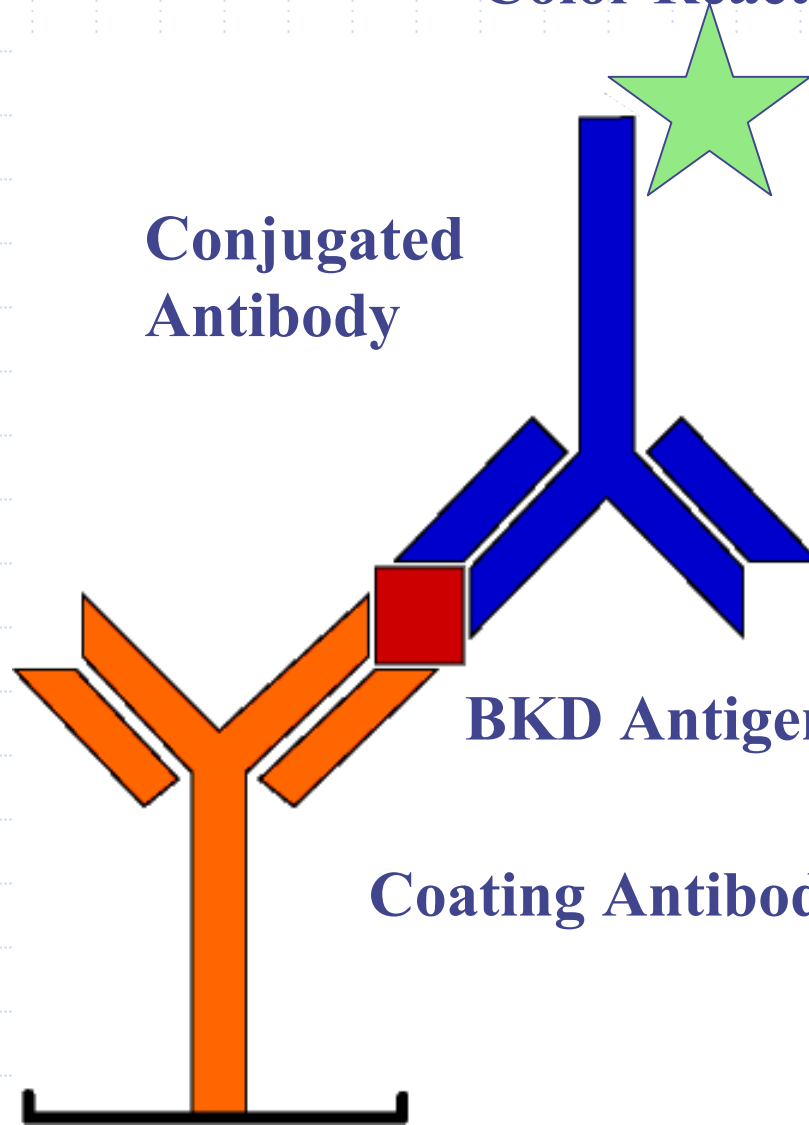


**Color Reaction**

**Conjugated  
Antibody**

**BKD Antigen**

**Coating Antibody**



# IN 1996

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- ◆ THE SUPPLIES OF BATCH 1 ANTIBODIES PRODUCED BY KPL WERE DEPLETED
- ◆ KPL PRODUCED THE BATCH 2 ANTIBODIES.
- ◆ THIS SECOND GROUP OF REAGENTS PRODUCED ELISA OPTICAL DENSITIES THAT WERE INCONSISTENT WITH BATCH 1 ANTIBODIES.

# KPL ANTIBODY TIMELINE



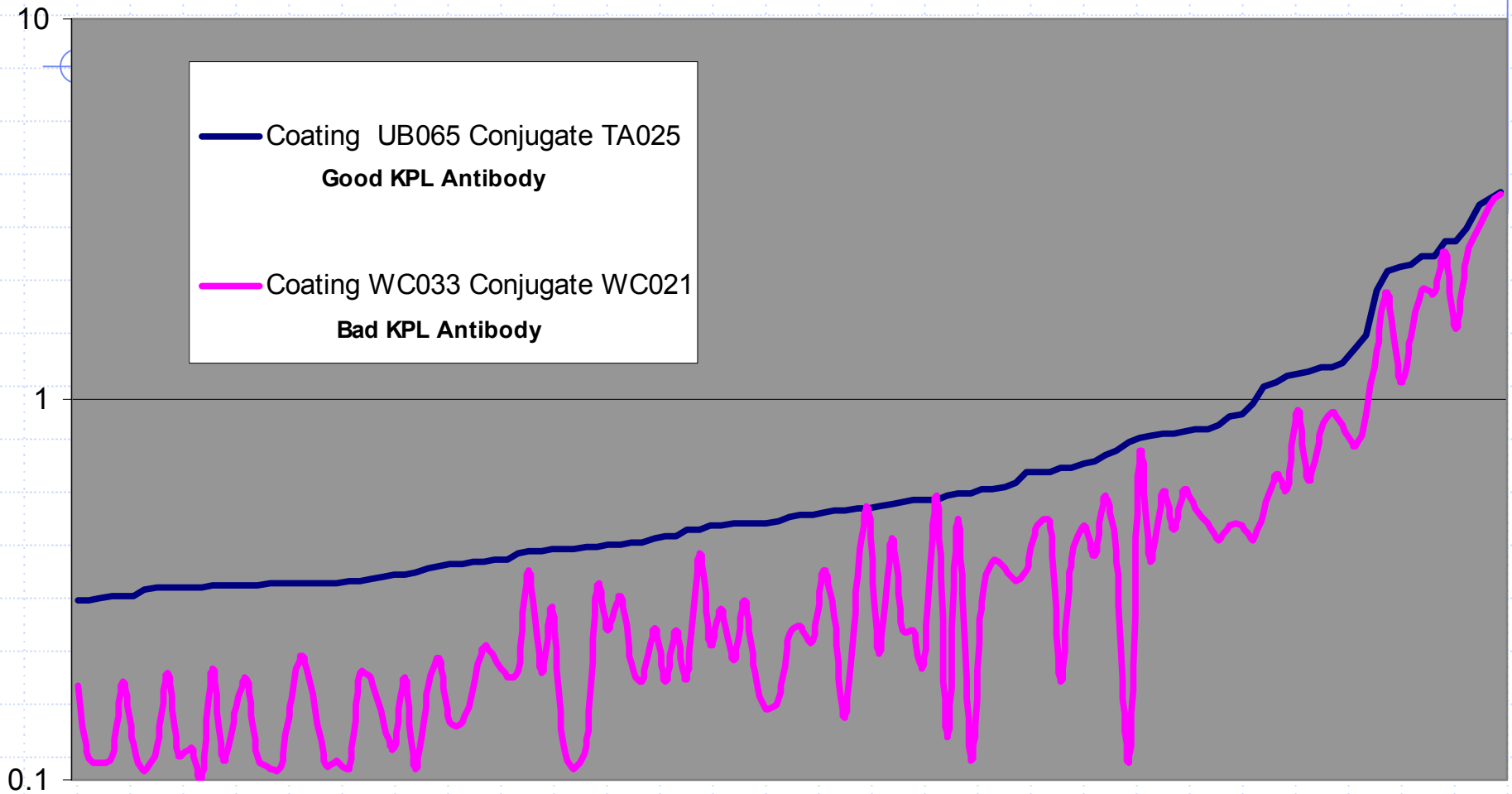
A vertical blue line on the left side of the slide, starting from a small circle at the top and extending downwards. A horizontal blue line extends from the circle to the right, underlining the title.

◆ 1980'S TO 1996: KPL BATCH 1

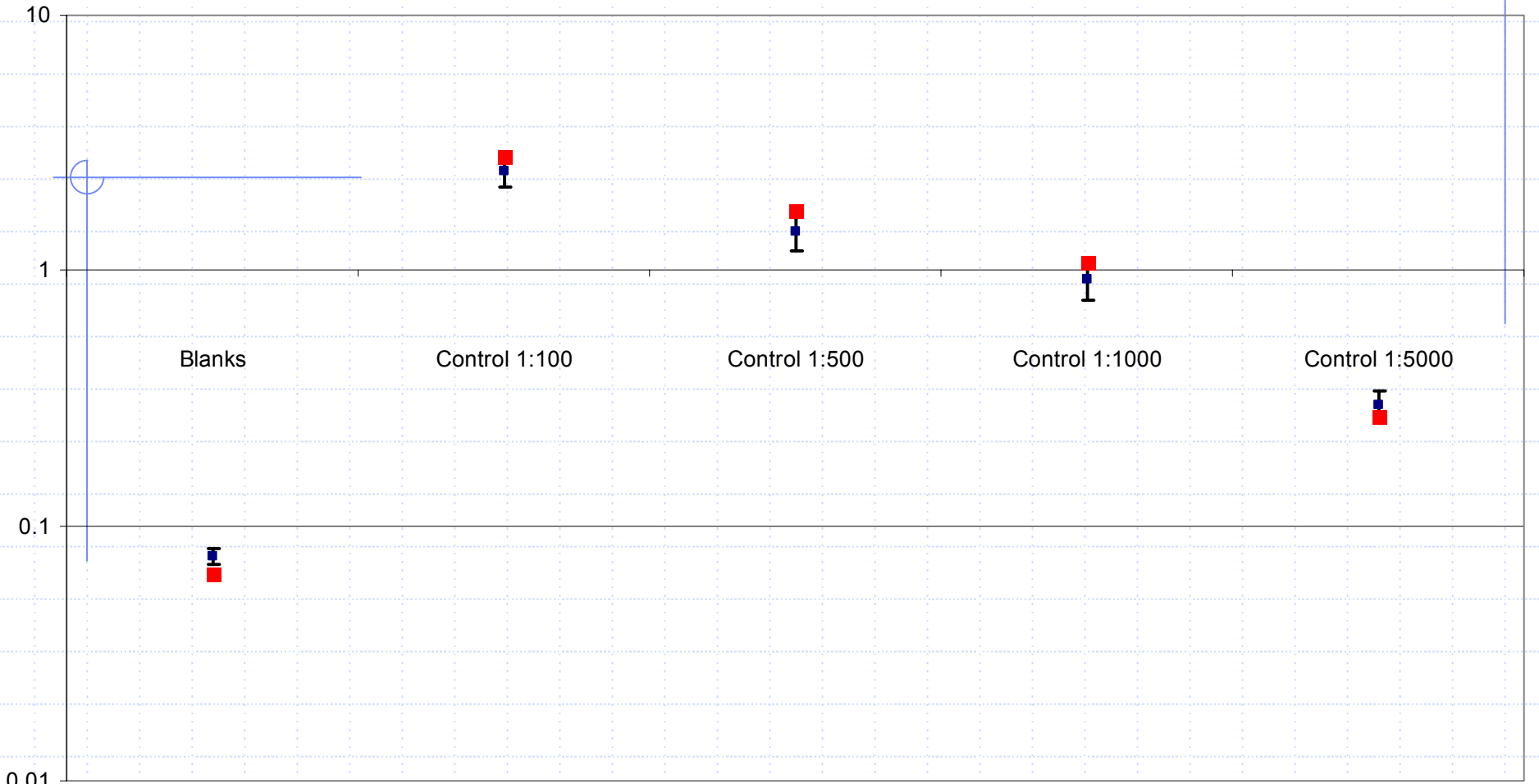
◆ 1996 TO 2003: KPL BATCH 2

◆ 2003: NEW KPL

# KPL Antibodies: Good Vs. Bad



# KPL ANTIBODIES: COMPARISON WITH CONTROLS

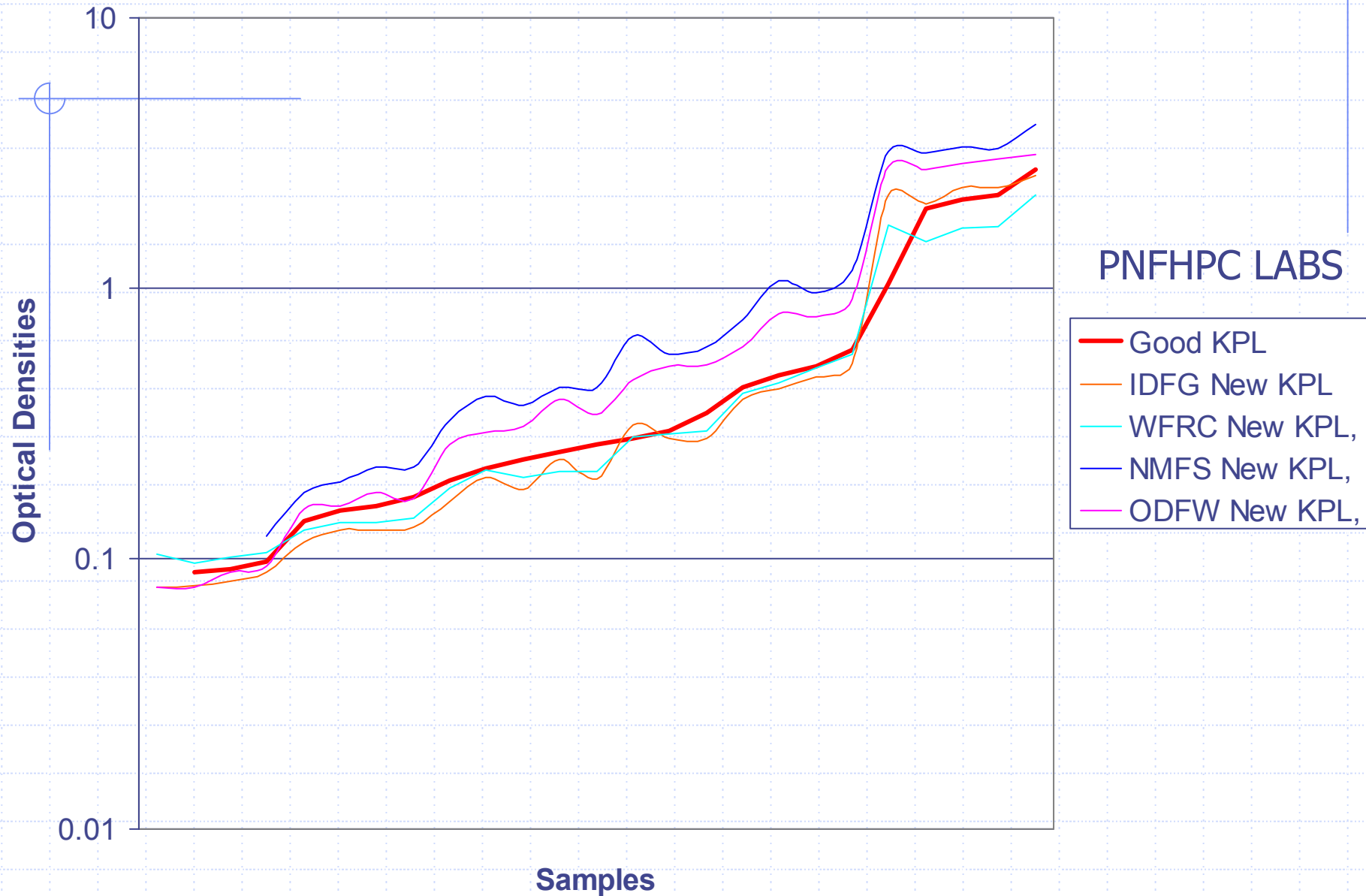


**Good KPL Antibodies Mean (with Standard Deviation)** ■

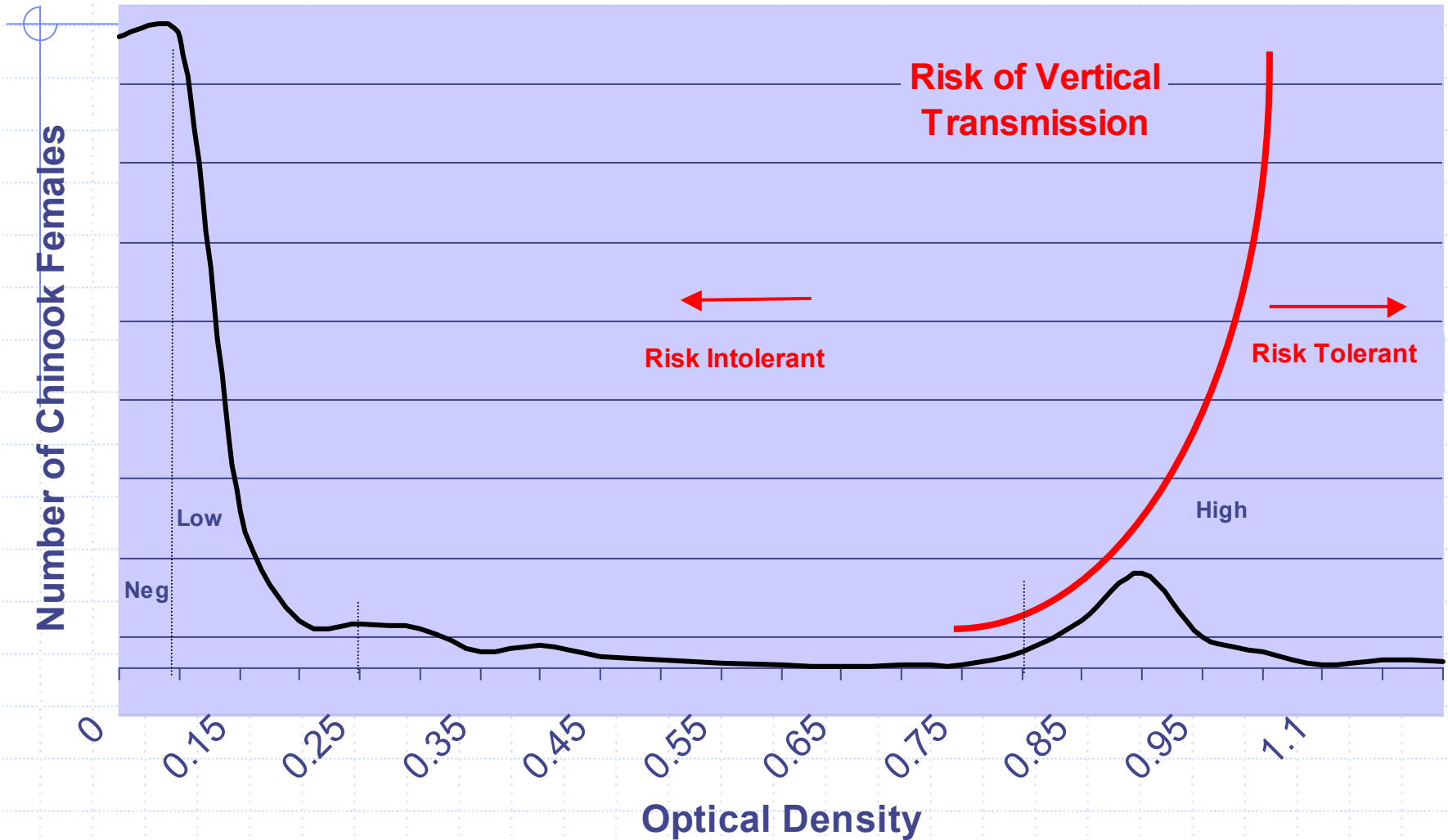
**New KPL Antibodies Mean** ■



# Comparison of Kidney Samples with New KPL Antibodies



## Selecting Culling/Segregation Cut-Off OD Values A Concept (Good KPL Antibody)



# **IDFG EXPECTS A CULLING RATE OF 10% STATEWIDE 2003**

◆ SOUTH FORK TRAP:

5.92%

◆ POWELL TRAP:

12.07%

◆ CLEARWATER:

19.84%

◆ SAWTOOTH:

3.00%

◆ DWORSHAK NFH:

7.60%

◆ RAPID RIVER:

13.40%

◆ PAHSIMEROI:

0.90%

◆ STATEWIDE MEAN:

10.60%

# CONCLUSIONS:

- ◆ **NEW (2003) KPL COATING AND CONJUGATED ANTIBODIES ARE EQUIVALENT TO THE FIRST REAGENTS.**
- ◆ **IDFG HAS UTILIZED THESE REAGENTS DURING 2003 CHINOOK SPAWNING.**

# **Thanks and Appreciation to:**

**Ron Pascho, WFRC**

**Dorothy Chase, WFRC**

**Eagle Laboratory Staff**

**Kimberly True, USFWS**

**Mark Peterson, NMFS**

**Mark Strom, NMFS**

**Leslie Lindsay, ODFW**

