

BULLETIN 98-08

Date: September 2, 1998

U.S. Department of Labor Employment and Training Administration Office of Apprenticeship Training, Employer Labor Services (OATELS) Washington, D.C. 20210	<u>Distribution:</u> A-541 A-546 All Field Staff A-547 SAC, Lab.Com	<u>Subject:</u> New Apprenticeable Occupations -- Fish Hatchery, Worker Coating Machine Operator I <u>Code:</u> 200
Symbols: DNIP/FDK	Action: Immediate	

PURPOSE: To inform Office of Apprenticeship Training, Employer Labor Services (OATELS), Bureau of Apprenticeship and Training Bureau (BAT) Staff of two new apprenticeable occupations:

Fish Hatchery Worker
 O*NET Code: 45-2093.00
 RAIS Code: 1024
 Training Term: 2000 Hours
 Type of Training: Time - based

Coating Machine Operator I
 O*NET Code: 51-9121.02
 RAIS Code: 1025
 Training Term: 2000 Hours
 Type of Training: Time - based

BACKGROUND: The occupation Fish Hatchery Worker was submitted by Salvatore D'Amore, ATR, on behalf of Clearwater Fishery in Monroeville, NJ. The Fish Hatchery Worker spawns and raises fish for commercial purposes. A copy of the work process and related instruction outline is attached for your information.

The occupation of Coating Machine Operator I was submitted by Sheila A. Kelly, REA, for Region IV. This occupation does not appear in the Dictionary of Occupational Titles; however, a code has been assigned by an Occupational Analysis Center.

The Coating Machine Operator I operates machines to coat cloth, paper, or other sheet material used in production of artificial leather and other coated fabrics. A copy of the work process and related instruction outline are attached for your information.

If you need any further assistance in this matter, please contact the BAT National Office, DNIP.

Note: State Directors, please share this information with our SAC partners where appropriate.

Attachments

FISH HATCHERY WORKER
O*NET Code: 45-2093.00 RAIS Code: 1024

DESCRIPTION: Spawns and raises fish, for commercial purposes and performs any combination of the following tasks' to trap and spawn game fish, incubate eggs and rear fry in fish hatchery; Diverts fish into holding tanks. Strips eggs from female fish and places eggs in moist pans. Adds milt stripped from male fish to fertilize eggs. Fills hatchery trays with fertilized eggs and places trays in incubation troughs. Turns valves and places baffles in troughs to adjust volume, depth, velocity, and temperature of water. Inspects eggs and picks out dead, infertile, and off-color eggs using suction syringe. Sorts fish according to size, coloring, and species and transfers fingerlings to rearing ponds or tanks. Feeds high protein foods or cereal with vitamins and minerals to fingerlings to induce growth to size desired for commercial use. Scatters food over surface of water by hand or activates blower that automatically scatters food over water to feed fish. Observes appearance and actions of developing fish to detect diseases, and adds medications to food and water as instructed by superior. Records field data and prepares reports of hatchery activities. Assists in design, construction, renovations and minor alterations to new/operating aquaculture systems. Checks systems operation daily or more frequently as needed. Drains and cleans troughs and ponds using brushes, chemicals and water. Makes minor repairs to facility equipment, paints buildings and maintains grounds. Arranges with buyers for sale of fish. Removes fish from pond, using dip net. Counts and weighs fish. Loads fish into tank truck or dresses and packs in ice for shipment. May perform standard tests on water samples to determine oxygen content. May spawn and rear food fish or tropical and exotic fish for commercial use. May mark migrating fish with liquid nitrogen, using hand-operated branding device. May be designated according to kind of fish raised such as Trout Farmer.”

This is the description of Fish Hatchery Worker/Fish Farmer found in the Dictionary of Occupational Titles, U.S. Department of Labor, fourth Edition, Revised 1991.

WORK PROCESS SCHEDULE
FISH HATCHERY WORKER
O*NET Code: 45-2093.00 RAIS Code: 1024

	<u>Approximate Hours</u>
Set Up Pumps and Tanks	100
1. Disinfect tanks refill, de-chlorinate if necessary	
Operation of Pumps/-Identify parts	50
Basic Troubleshooting - Aeration & Fluid	120
Systems Operations Troubleshooting	100
Pump Repair	50
Cleaning of Equipment/Systems as per DOL/FDA	80
1. Pumps, containers, baskets, buckets, nets, graders, hauling tanks, microscopes	
Handling of Nets/Harvesting Equipment	100
1. Conduct harvest of fish clean and repair nets	
Hauling	100
1. Set up fish for haul, load fish.	
2. Treat fish, haul and stock fish	
Knowledge of Computer-Functions	100
Record Keeping/Data Entry	
Storm Water Management	30
Site Selection	100
1. New site expansion	
2. Feasibility study	
3. Facility design & layout	
Mathematical Applications	100
Basic Hydraulics Functions	100
Electrical Functions	50
Collection/Analysis/Interpretation of Water Samples	250
1. Collect daily water samples and conduct appropriate water chemistry tests, take appropriate remedial action to correct poor water quality	

Identification of Diseases/Administer	100
1. Chemical Treatment Dosage as Needed	
2. Utilize printed and computer references	
3. Calculate dosages and know side effects	
Propagation of Fish - Finfish/Shellfish	400
1. Obtaining gametes	
2. Fertilization (triploid, diploidy)	
3. Caring for spawn	
4. Hatching jar/tank operation	
Operation of Microscope	70
1. Diagnose pathogenic organisms	
2. Investigate causes of fish mortality	
3. Analyze water systems health	

**Fish Hatchery Worker
(Fish Farmer)
Related Instruction**

	Approximate Hours
Introduction to Aquaculture	7
1. Historical back-ground of aquaculture	
2. Types of aquaculture environments	
3. Types of aquaculture enterprises	
4. Species of economic importance	
5. Advantages of aquaculture	
6. Sources of information about aquaculture	
The Aquatic Environment	10
1. Important variable affecting the ecological balance of a pond	
2. Links in the aquatic food chain	
3. The oxygen cycle in pond ecology	
4. The positive and negative roles of plankton and benthic organisms in pond ecology	
5. Problems concerning carbon dioxide and water acidity (ph) in pond ecology	
6. Sources of water pollution	
Fundamental Fish Biology	10
1. External parts of a typical fish	
2. Basic external body features that permit fish to live in water	
3. Internal organs of a typical fish	
4. The functions of internal organs and systems of fishes	
5. Life cycles of fish	
6. Fish Species	

	Approximate Hours
Marketing	10
1. Fish market opportunities	
2. Economy of scale	
3. Factors to consider in exploring marketing alternatives	
4. Food processing cuts and forms	
5. Disposal of processing waste	
6. Permits and regulations	
Site Selection	5
1. Basic site requirements	
2. Steps in determining water quality	
3. Pond type and site evaluation	
4. Basic solid types	
5. Soil and topographical considerations in site selection	
6. Laws, regulations, and permits required to develop a site for fish farming	
Facility Design and Layout	5
1. Types of farm water enclosures	
2. Facility requirements for food-fish production	
3. Initial steps in planning an on-site processing facility	
4. Factors to consider when planning pond size	
5. Advantages of small versus large pond	
Water Quality Management	20
1. Compounds and elements and their chemical formulas and symbols	
2. The importance of oxygen in water quality management	
3. Natural sources of water temperature variation and their effects	
4. Facts about temperature management techniques	
5. General guidelines for water chemistry management	
6. Aquatic plant control methods	
Fish Health Management	12
1. Skin and tissue conditions	
2. Common stressors of fish	
3. Common pathogenic viruses and bacteria	
4. General management measures for preventing disease outbreaks	
5. Treatment methods and their administration specifics	
6. Regulations for chemical application in fish production	

	<u>Approximate Hours</u>
Feeds and Feeding	5
1. Feed components	
2. Feed conversion ratio	
3. Feeding rates	
4. Feed types	
Harvesting and Hauling	10
1. Advantages and limitations of total and partial harvest	
2. Correct uses of harvesting and grading equipment	
3. Pond-to-shed transport procedures	
4. Holding, grading, and hauling	
5. Chemical, their correct descriptions and rates	
6. Guidelines for the care of nets	
Commercial Production	10
1. Catfish, Trout, Baitfish, Crayfish,	
2. Ornamentals and other commercial species Salmon, Hybrid Striped Bass	
Mariculture: All Shellfish Species	5
Shrimp, Lobster, Clams, Oysters	
Cage Culture, Tank Culture, Raceway Culture	5
Pond Culture, Net/Pen Culture	
Business Management	15
1. Basic record keeping	
2. Bank loan record requirements	
3. Obtaining venture capital	
Basic Computer Data Entry	10
1. Computer controlled monitoring systems	
2. Application of basic skill	
3. Word processing	
4. Intro to computer operations	
Economics of Aquaculture	5
1. Fixed costs of facilities	
2. Variable costs of production	
3. Value of fish at various stages	
4. Overall economics of aquaculture	
Total Hours	144

Coating-Machine Operator I
O*NET Code: 51-9121.02 RAIS Code: 1025

DESCRIPTION: Operates machine to coat cloth, paper, other sheet material used in production of artificial leather and other coated fabrics: Installs uncoated sheeting roll on machine brackets, using hoist, or threads sheeting from calendar machine through coating machine rollers onto take up roll. Operates sewing machine to join uncoated roll to end of processed roll, and cuts material at seam after seam passes through coating and drying units. Adjusts doctor blade on roller clearance to produce coating of specified thickness. Starts machine when dryer temperature reaches specified setting. Turns valves to control flow of coating solution onto sheeting, or applies solution to fabric surface, using dipper and bucket. Observes process to prevent slippage of sheeting from width guides and turns guides and moves machine controls to correct such defects as streaks, wrinkles, and turned edges in sheeting. Removes coated rolls from machine.

WORK PROCESSES

	<u>Approximate Hours</u>
Communications	100
1. Read work-related information/instructions via e-mail	
2. Use entry-to-end intercom system	
3. Signal team member via bell and light system	
4. Read and interpret emergency evacuation procedures	
5. Report (in writing) problem and/or solutions	
6. Prepare shop order requests	
7. Read and interpret Job Safety Analysis (JSA)	
8. Communicate with team	
Operate Entry End	250
1. Read and interpret work orders	
2. Acquire and prepare materials	
3. Load rolls into machine	
4. Sew Material onto threaded material	
5. Thread through mangle; fill mangle with chemical	
6. Monitor equipment for out-of spec operation	
7. Package untreated waste	
8. Monitor and record daily product	
Troubleshoot Entry End	150
1. Tears/inconsistencies in fabric	
2. Contamination of chemicals during operation	
3. Troubleshoot guiders	

Operate Exit End	300
1. Visually inspect material	
2. Cut sample for each doffed roll	
3. Replace slitter knife assembly	
4. Monitor equipment for out-of spec operation	
5. Clean selvage and out-trim pipes	
6. Package treated waste	
Troubleshoot Exit End	150
1. Selvage rips; rolls inconsistent	
Material	125
1. Wrap finished slits	
2. Operate lift truck	
3. Clean out trim room	
Mix Chemicals	200
1. Read and interpret mix (specifications) sheet	
2. Weigh out liquid and chemicals per mix sheet	
3. Activate signal lights, identify proper tank for pads	
Mechanical Duties	325
1. Reset Gas	
2. Troubleshoot Bad Clips	
3. Check bearings (entry and exit)	
4. Check oil on chain	
5. Repair and troubleshoot Steam Cans	
6. Troubleshoot and repair Rotary Joints	
7. Change belt (fans)	
8. Troubleshoot and repair line leaks	
9. Minor repair air leaks/line (pneumatics)	
10. Assist in tear down	
11. Calibrate Stretch Monitor	
Housekeeping	100
1. Keeping area, walkways, and machines clean to enhance safety and product quality	
2. Entry End	
3. Exit End	
4. Utility	
5. Shipping	
Reroll	250
1. Large Reroll	
2. Small Reroll	
3. Troubleshoot Reroll	

Other	50
1. Research and Development (assistance)	
2. Team Meeting	

Total Hours **2000**

**COATING-MACHINE OPERATOR I
Related Instruction**

	Approximate Hours
Basic Math	25
1. (Fraction, Decimals, Division, Multiplication, Percents, Ratio and Proportion)	
2. Standard Measurement/Temperature	
3. Advanced Math (Basic Algebra, Basic Geometry)	
Communications	20
1. Writing/Reading	
2. Comprehension Skills	
3. Oral Communication Skills	
4. Computer Skills	
Basic Chemistry	15
1. Preparing Chemical Solution	
2. Terminology	
3. Understanding Reactions	
4. Safety Hazards	
Troubleshooting	40
Mechanics	45
1. Basic Machine Principles,	
2. Principles of Mechanics, Lubrication,	
3. Hydraulics, Pneumatic	
Safety, OSHA Regulations Instruction	15
Total Hours	160