

EVALUATING BIOSECURITY

Check the practice. Strengthen the program.

PRACTICAL GUIDANCE • FISH HEALTH • BIOSECURITY

ASSESS PERFORMANCE BEFORE A PROBLEM OCCURS

A written biosecurity plan is only effective when its controls are appropriate and consistently applied. Review the program before an outbreak exposes a gap. An absence of reported disease is useful information, but it does not prove that pathogens are absent or that every barrier is working.

REVIEW THE PLAN AND THE WORK ON SITE

Evaluate two connected questions: does the program address the facility's main disease risks, and are staff implementing its procedures correctly? Combine document review, observation, staff discussion and appropriate testing. No single audit score or laboratory result provides a complete assessment.

01 CONFIRM THE RISKS AND SCOPE

Review species, life stages, production units, stock sources and health status. Check whether changes in water supply, equipment, contractors, wildlife exposure or neighboring activities have introduced new pathways. Confirm that the site map and movement controls still reflect actual operations.

02 USE ROUTINE OPERATIONAL CHECKS

Assign checks at a frequency matched to the risk and activity. Inspect access points, hygiene zones, dedicated equipment, cleaning stations and mortality handling. Observe work during normal operations, including busy periods and shift changes. Record failures and correct urgent gaps promptly.

03 SCHEDULE INTERNAL REVIEWS

Have the site manager, fish health team or another competent reviewer examine the whole program at planned intervals. Compare procedures with observed practice, interview staff and check records. Where practical, use a reviewer who is not responsible for the activity being assessed. Include different production stages and relevant support services.

04 ADD AN INDEPENDENT PERSPECTIVE

Use an independent veterinarian, aquatic animal health professional or biosecurity specialist where this adds value or is required. Agree the scope and evidence needed in advance. External reviews can reveal gaps and inconsistent practices; management remains responsible for implementing and verifying corrective actions.

VERIFY AND IMPROVE

Use evidence. Follow through on findings.

PRACTICAL GUIDANCE • FISH HEALTH • BIOSECURITY

05 VERIFY CLEANING AND DISINFECTION

Check that surfaces are cleaned before disinfection and that the product is suitable for the target agent and application. Verify preparation, concentration, coverage and contact time against the current label. Check solution renewal, storage, compatibility, required rinsing and effluent handling. A completed checklist alone does not demonstrate effective treatment.

06 DESIGN TESTING TO ANSWER A QUESTION

Use sampling when it will inform a defined decision. Agree the target, locations, timing, method and interpretation with an aquatic animal health professional and the laboratory. Focus on relevant reservoirs or transfer points, such as shared equipment, drains or difficult-to-clean surfaces, rather than collecting samples without a plan.

For before-and-after comparisons, standardize the sampled area, collection method and process stage. Sample after the required contact time at the point specified in the verification protocol. Arrange suitable neutralization of residual disinfectant and appropriate laboratory controls; disinfectant carried into a sample can suppress growth and distort results.

A negative result does not establish freedom from pathogens. Interpretation depends on sample coverage, test sensitivity and the agent being investigated. General microbial counts or hygiene indicators do not by themselves establish that a specific pathogen has been eliminated. Use comparable trend data and predefined action criteria where appropriate.

07 TURN FINDINGS INTO CORRECTIVE ACTION

Record the observation, supporting evidence and associated risk. Address immediate exposure first, then investigate the cause. Assign an owner and completion date for each action. Causes may include unclear instructions, inadequate training, unavailable supplies or a procedure that cannot be performed reliably under site conditions.

08 CONFIRM THAT THE FIX WORKS

Recheck the control after the action is completed. Use observation, record review or suitable repeat testing to confirm the gap has been resolved. Keep unresolved findings visible to management and escalate overdue high-risk actions. Update procedures and training when changes are needed.

09 TRACK RESULTS AND REVIEW THE PLAN

Track a small set of useful measures, such as failed control checks, repeated findings, overdue actions and training completion. Review them alongside mortality, health investigations and water quality trends. Reassess after incidents, major operational changes or new disease threats, as well as on a planned schedule.

An effective review ends with documented changes, named responsibilities and evidence of follow-through. Encourage staff to report weak points and practical improvements so that evaluation supports everyday prevention.

IMPORTANT: General educational guidance only. Set site-specific audit and sampling protocols with an aquatic animal health professional and laboratory. Follow applicable regulations and current product labels and safety data sheets.

REFERENCES: WOAHA Aquatic Animal Health Code, biosecurity and disinfection chapters; CDC, Environmental Sampling and Neutralization of Germicides (general sampling principles). Updated October 2026.