



TANKWISE

Methodology

Guidance

How the TankWise website preview turns saved aquarium data and catalog profiles into educational freshwater comparison signals.

DOCUMENT DATE	March 30, 2026
APPLIES TO	TankWise website preview
STATUS	Public guidance

CORE INTERPRETATION

A reasoned screen, not a promise. TankWise does not certify that livestock will be healthy or compatible.



Purpose and interpretation

TankWise organizes several catalog and saved-tank checks into a structured comparison. The reasons shown beside a score matter more than the number alone.

The guidance applies to the TankWise website preview described on the document date. It explains the inputs, calculations, score bands, safety caps, and known limits used when a person compares a proposed fish or reassesses a saved aquarium.

The website preview uses a curated, limited catalog. It should not be read as the complete catalog planned for the TankWise app.

WHAT THE RESULT MEANS

A score is a screening signal. It is not a care sheet, veterinary opinion, welfare certification, or guarantee of compatibility. A favorable result means only that no major conflict was identified by the checks described here.

Candidate verdict bands

SCORE	DISPLAYED VERDICT
80-100	No major catalog conflict flagged
60-79	Fit with caution
40-59	Adjust setup first
0-39	Not suitable now

How candidate scoring works

- A proposed-fish comparison begins at 100 points.
- Every triggered rule subtracts its published penalty.
- A safety cap can lower the highest possible score even when other signals align.
- When several rules trigger, penalties accumulate and the most restrictive cap wins.
- Scores are clamped between 0 and 100; duplicate reasons appear once.

Whole-tank reassessment uses related inputs but has its own penalty and cap logic. Its result labels therefore differ from the proposed-fish verdicts above.



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Signals used by the preview

The calculation favors explicit, reviewable inputs. Each signal describes only one part of aquarium suitability.

01 Adult size and catalog minimum

The mature profile is used rather than juvenile purchase size. A minimum-volume value is a planning reference, not a complete description of footprint or territory.

02 Temperature range and saved pH

The species temperature range is checked for overlap with the biotope or heater target. Saved temperature and pH points are separately checked against species ranges.

03 Projected stocking

Adult length is weighted by size buckets, common-name proxies, and temperament, then related to aquarium volume. This is a planning estimate, not a universal formula.

04 Social and same-species needs

Heuristic group minimums and same-species maximums can produce cautions when the saved or proposed quantity conflicts with a common-name rule.

05 Temperament and predation signals

Temperament and adult-size thresholds infer potential predation or bullying. This is not a compatibility matrix and cannot predict an individual animal.

06 Whole-tank reassessment

When a user chooses to add a proposed fish, the interface passes the updated saved aquarium to a separate whole-tank calculation.

INPUT QUALITY

A result is only as current and accurate as the saved aquarium record and catalog profile used by the preview. KH and GH may be stored in the record, but this edition does not score them.



Proposed-fish scoring rules

The table publishes the penalty and highest possible score for every candidate rule used by the website preview.

TRIGGERED RULE	PENALTY	HIGHEST SCORE
Tank below the catalog minimum	-20	59
No overlap with saved temperature target	-12	79
No saved water baseline	-20	59
Saved temperature outside species range	-12	79
Saved pH outside species range	-10	79
Ammonia or nitrite above 0 ppm	-35	39
Nitrate above 40 ppm	-15	79
Projected load is High	-10	79
Projected load is Overstocked	-25	59
Proposed social group below heuristic minimum	-6	79
Same-species count above heuristic maximum	-12	79
Potential bullying or major size-stress signal	-12	79
Potential predator-prey signal	-70	35

READING A CAP

A cap is not an additional penalty. It is a ceiling applied after penalties. For example, an ammonia or nitrite reading above 0 ppm limits a candidate result to 39 even if the arithmetic score would otherwise be higher.

The candidate comparison also records the current and projected stocking labels and explains each triggered reason in plain language. Candidate behavior checks only evaluate pairs involving the proposed species; existing-existing conflicts belong to whole-tank reassessment.



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Load estimate and reassessment

Stocking is represented as a repeatable heuristic so users can see how adult size and selected load traits influence the screen.

Projected-load formula

FORMULA

Sum of (quantity x adult length x size factor x species factor x temperament factor), divided by (aquarium gallons x 3).

LOAD RATIO	LABEL
Below 0.45	Light
At least 0.45 and below 0.75	Moderate
At least 0.75 and below 1.00	High
At least 1.00	Overstocked

Weighting factors

- Size factors rise from 0.75 for fish up to 3 cm to 2.4 for fish above 25 cm.
- Name-based species factors range from 0.25 for shrimp to 2.2 for goldfish.
- Aggressive and semi-aggressive profiles use multipliers of 1.25 and 1.1; peaceful profiles use 1.0.

These weights are planning heuristics. They do not model filtration, oxygen, territory, activity level, or biological carrying capacity.



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Whole-tank reassessment

This is a separate calculation beginning at 100. It evaluates all saved livestock and recorded setup data rather than only the proposed species.

The complete-tank score separately checks missing or conflicting water, undersized aquariums, species-range mismatches, social-group rules, projected load, selected plant setup gaps, and predator-prey signals.

TRIGGERED WHOLE-TANK RULE	PENALTY
No saved water baseline	-20
Saved temperature outside biotope or heater target	-6
Saved pH outside biotope target	-6
Nitrate above 40 ppm	-15
Combined water cautions above	Maximum -27
Ammonia or nitrite above 0 ppm	-35 once
Each species below catalog minimum volume	-15; maximum -30
Each species temperature or pH mismatch	-6; maximum -24
Each social minimum or maximum issue	-6; maximum -18
Current load is High / Overstocked	-10 / -25
Any predator-prey reason	-70 once
Bullying or size-stress reasons	-12 each; maximum -24
Plant danger / watch entries	-6 / -3; maxima -12 / -8

Whole-tank safety caps

CONDITION, EVALUATED IN PRIORITY ORDER	SCORE CEILING
Predator-prey signal	35
Ammonia or nitrite above 0 ppm	45
No livestock recorded	79
Undersized aquarium or Overstocked load	55
High load or any remaining caution	79
No triggered cap	100

Whole-tank verdicts are: no livestock recorded (special label); 80-100, no major saved-data conflict flagged; 60-79, current setup has compatibility cautions; 0-59, current setup has significant conflicts. Recorded plant conflicts can reduce this score; the absence of plants does not.



Behavior, limits, and corrections

Compatibility is contextual. The preview deliberately exposes variables it cannot observe so users know when to seek species-specific advice.

Behavior screen

Predator-prey and bullying checks infer risk from catalog adult size, temperament, and name-based diet and mouth-size factors. They cannot observe body shape, usable territory, feeding history, or an individual animal. Treat every behavioral result as a prompt for expert and species-specific research.

What software cannot see

- Aquarium length, footprint, hardscape, sight lines, and usable territory.
- Filtration performance, maintenance, feeding, oxygenation, and husbandry.
- Individual health, age, sex, breeding state, and behavior.
- Source variation and uncertainty in species reference values.
- Changes that occurred after the aquarium record was saved.

REQUIRED NEXT STEP

Use the result to identify what deserves review, then confirm the proposed setup with reliable species-specific references and an experienced aquatic professional.

Corrections and transparency

If a catalog value deserves review, send the common and scientific name, the field in question, and the reliable source being compared. Corrections are reviewed before a catalog change.

Catalog concerns: support@simplysubmergedaquatics.com

Methodology page: simplysubmergedaquatics.com/methodology



SIMPLY SUBMERGED AQUATICS

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This public guidance describes the TankWise website preview on the stated document date. The application and catalog may evolve; consult the methodology webpage for the current published document.