Planting Swimming Ponds

Internationaler Schwimmteichkongress

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Vösendorf

P

Programme

Designing the Plant Zones

Species Selection

Designing the Plant Zones

Excerpt from the Quality Standards of the VÖSN

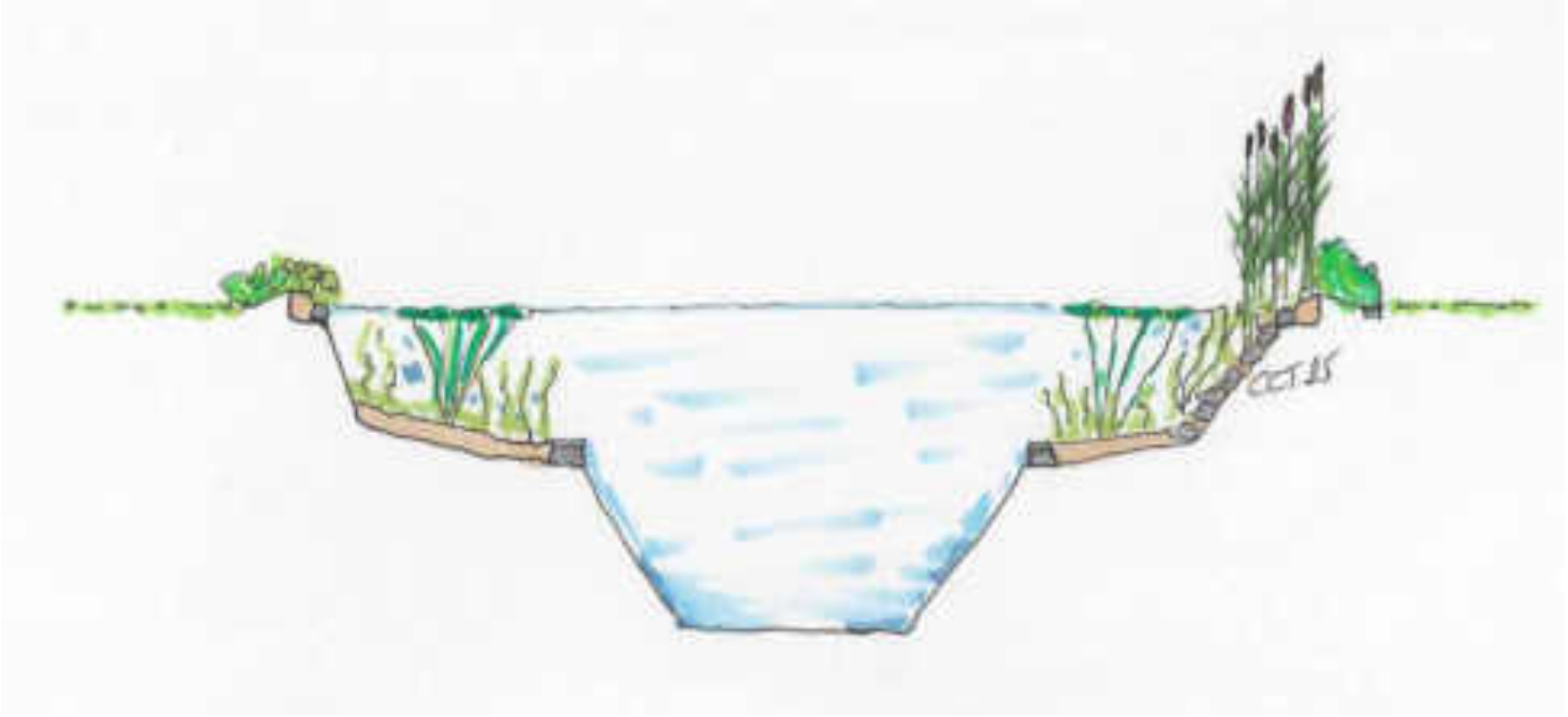
7.8.2 Regeneration area:

- The regeneration area must be at least as large as the bathing area.
- The regeneartion area is to be planted completely.
- The bog zone, above the maximum water level, within the pond edge, does not count to the creditable regeneration area.
- The marginal zone is to be built with at least 0,25m and maximum 0,5m water depth.
- At least 50% of the regeneration area must be underwater plant/ floating leaf plant zone.
- The underwater / floating leaf plant zone is deeper than 0,5m water depth and must be built with an average water depth of at least 0,75m.

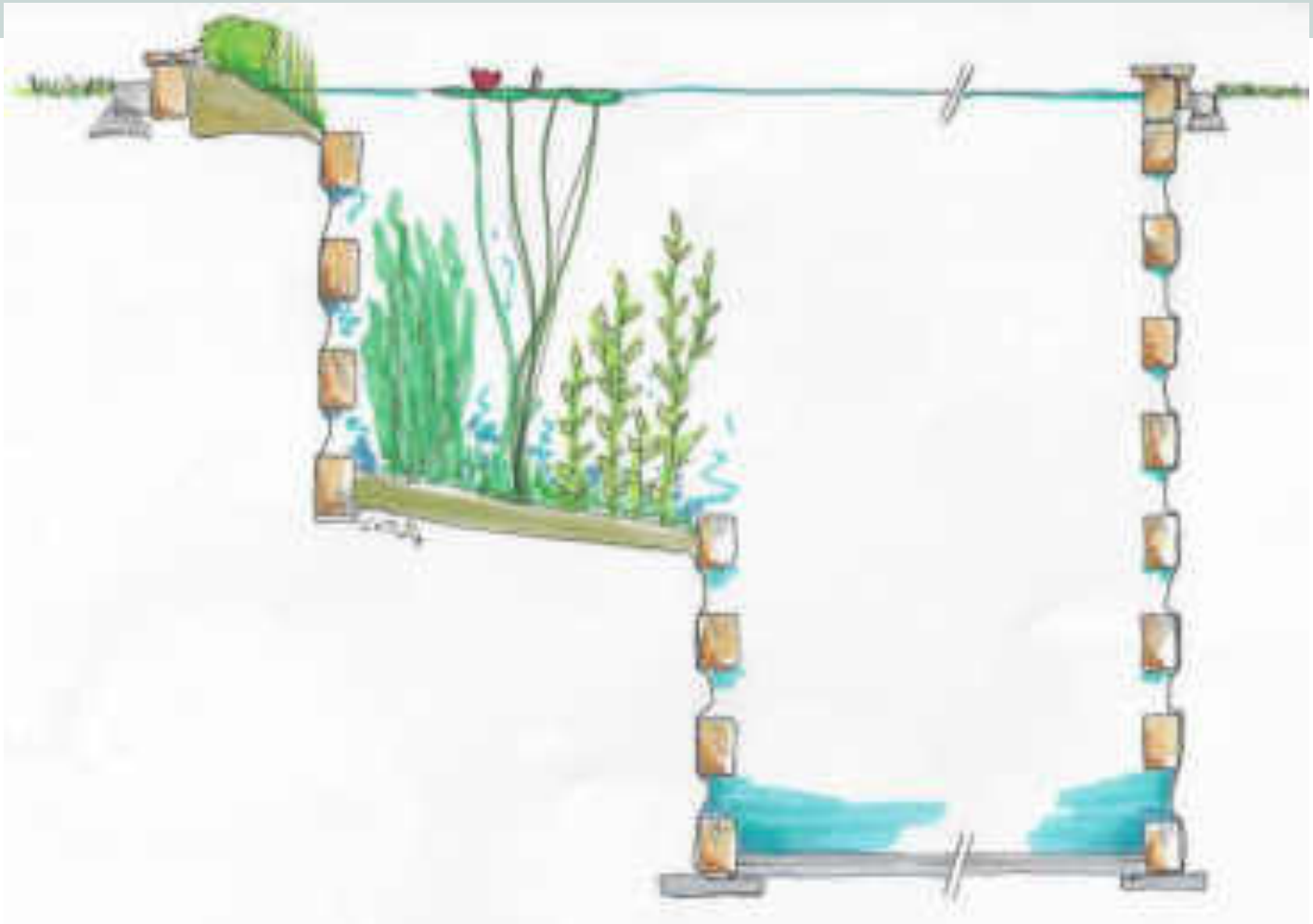
Swimming Ponds need a lot of water

- As much volume as possible in relation to the surface
- As large as possible submerged plant and waterlily zones with 0,75 – 0,9m depth
- The marginal zone is ecologically important, but large areas are not necessary
- The bog zone is important for biodiversity but does not count to the regeneration area

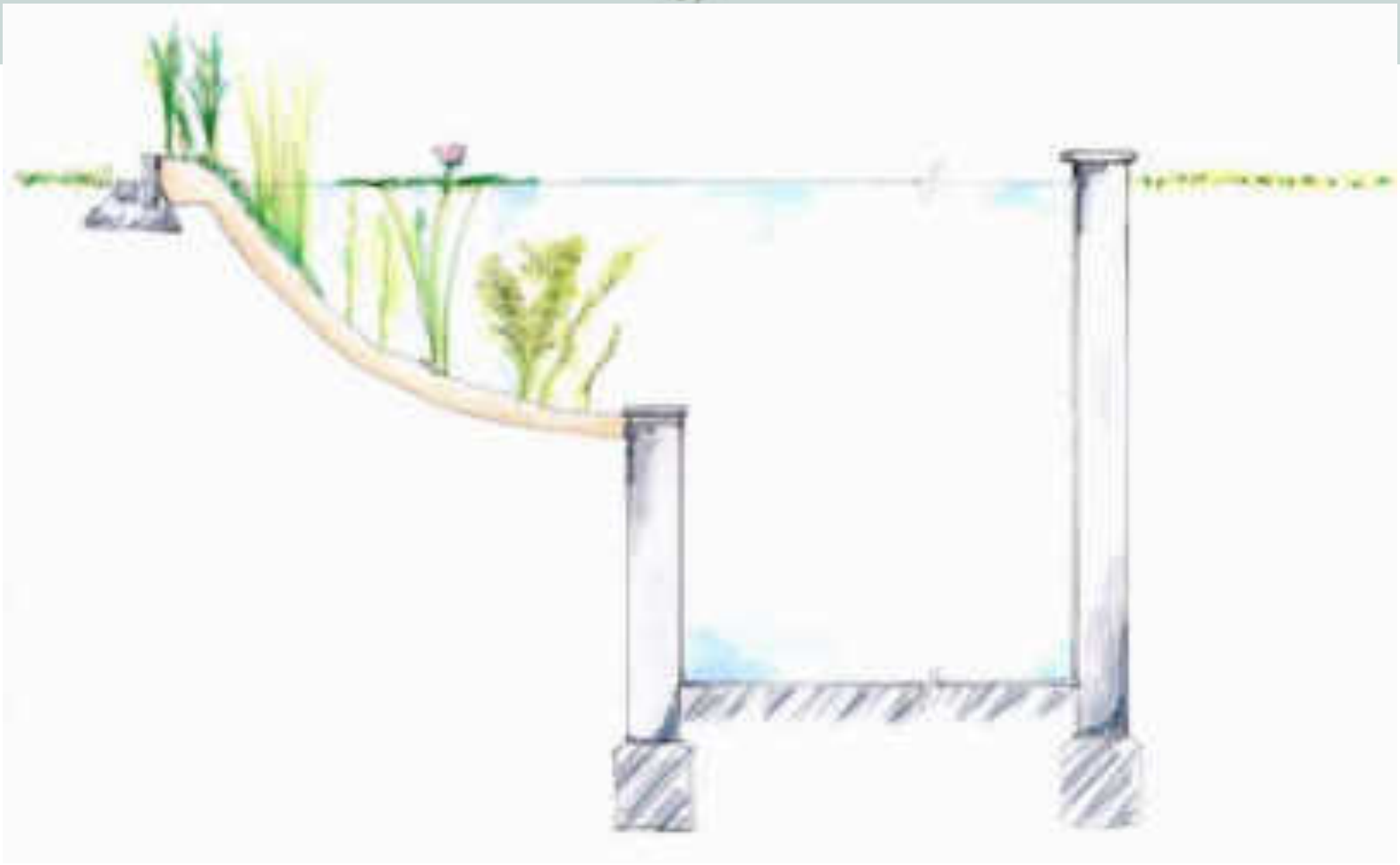
Swimming Pond with an excavated pond profile, cross section



Swimming Pond with wooden pool shell, cross section



Swimming Pond with masoned pool shell, cross section



Designing the Plant zones

what plants want

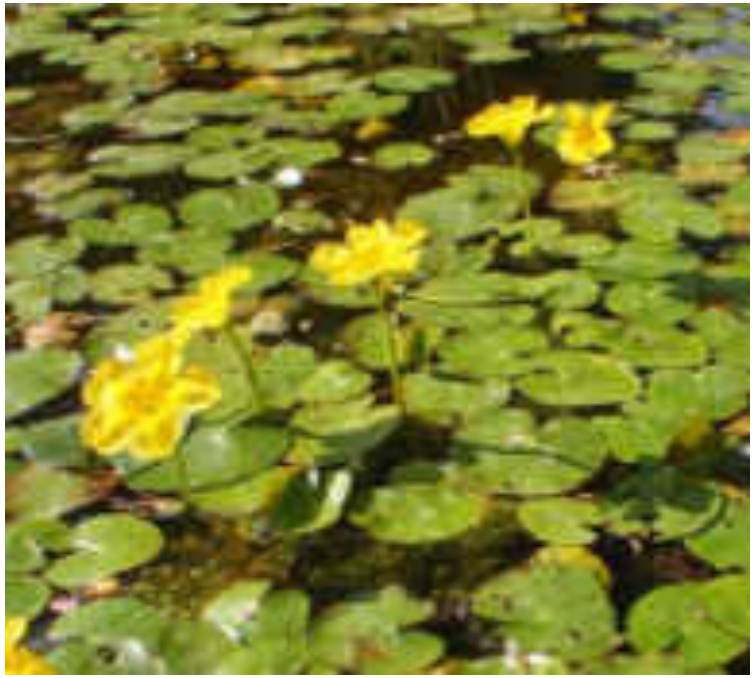
- shallow water heats up quickly -
  plants don't like warm water!
- strategy of the plants so that the water doesn't get too warm:

  shading
- design possibility of the pond builder: create a deeper plant zone
- but plant zones deeper than 1m are maintenance-wise more laborious
- plant zones between 10cm and 50cm deep – are always marginal zones!
- plant zones for floating leaf and underwater plants must be deeper!

Shading

- By tall reeds/marginals
    - club-rushes
    - rushes
    - sedges
    - bulrushes
    - galingale
- Additionally by tall trees or shrubs at the pond edge

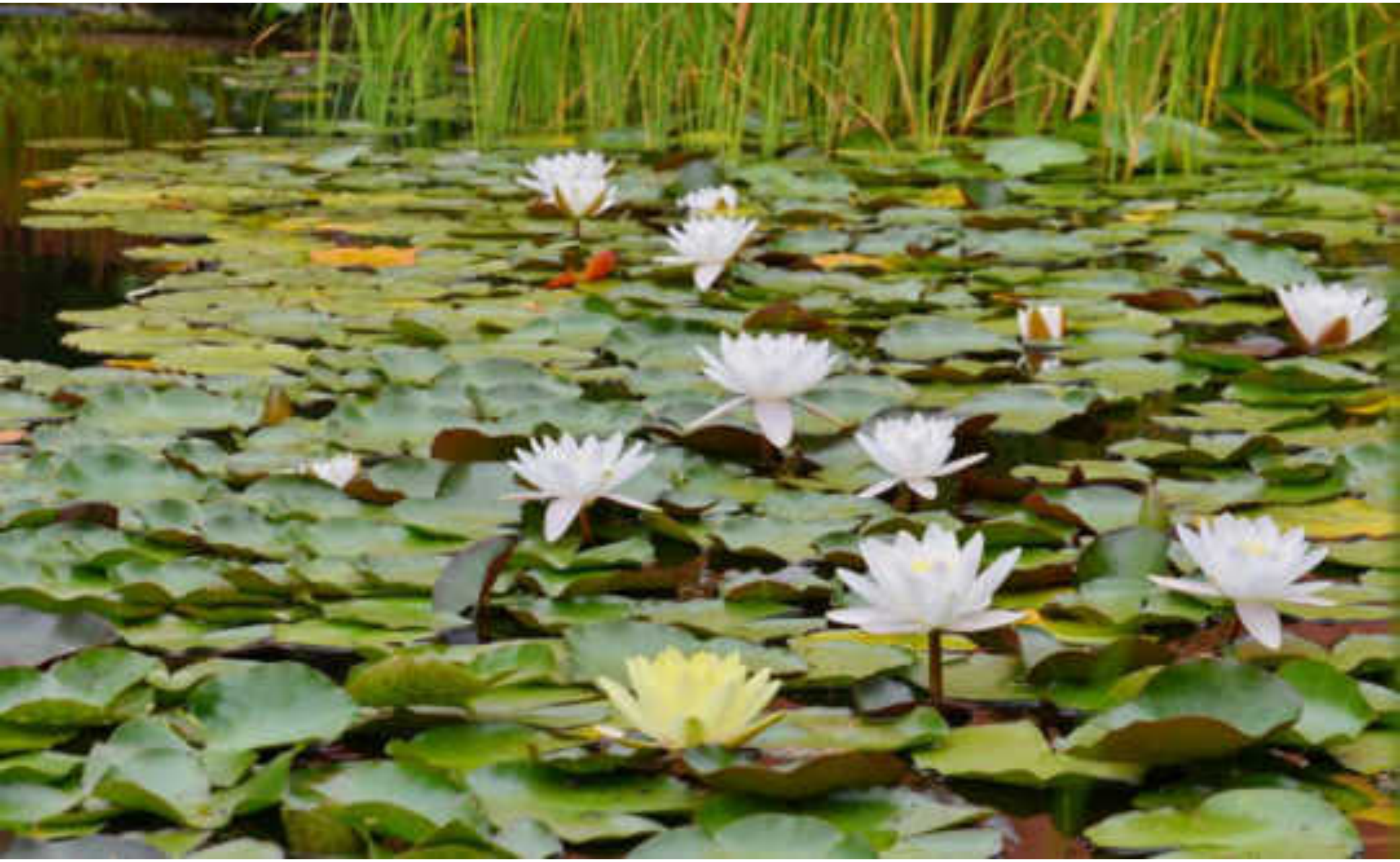
Shading



- By floating leaves

e.g. from:

  - waterlily
  - pond-lily
  - floating heart
  - water hawthorn
  - broadleaved pondweed



This means:

- Marginals rise above the water to provide enough shade!
- Marginals are to be planted so densely that the water is shaded in the summer!
- Marginal zones (water depth up to 50cm) must be planted with marginals!
- Floating leaf and underwater plant zones are:

at least 50cm deep,

ideally 75-90 cm deep

No dense plant growth develops when:

- wrong substrate
- nutrient deficiency
- phosphate surplus
- Water too shallow and too warm
- pests
- lack of maintenance

Surface Slope

- inclined surfaces are difficult
- but a slight inclination is an advantage
- either construct terraces
- Or secure the substrate from sliding off

Designing the Plant Zones

Excerpt from the Quality Standards of the VÖSN

7.9.4 Number of Species 7.9.4.1 Swimming Pond

The planting of the regeneration area is an initial planting, therefore plants can change their position and extent. Some species might disappear completely.

- **Underwater / floating leaf plant zone**,

  to be planted with at least 3 species out of 3 genuses, min. 6 pc./m^2.

- **Marginal zone**

  To be planted with at least 10 species, min. 6 pc./m^2.

- **Density of Planting**

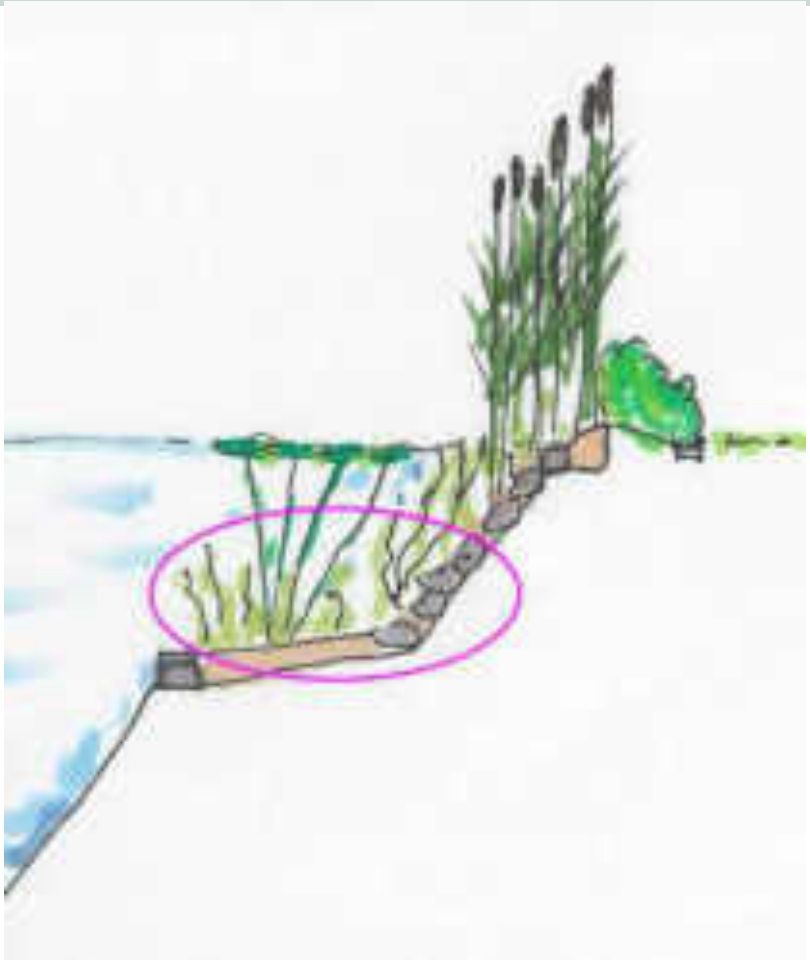
  For swimming ponds the plant density at planting must be at least 6 plants per m^2 plant zone. Except for waterlilies/pondlilies.

  Proof must be provided by the plant list itemized in zones

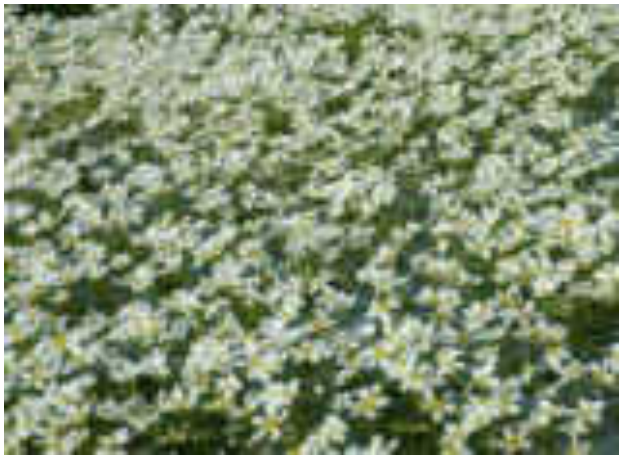
Suitable plant bales

Selection of species

Underwater and Floating Leaf Plant Zone



Rooted with submerged leaves



- Pond weed – *Potamogeton*
- Milfoil – *Myriophyllum*
- Water-crowfoot – *Ranunculus*
- Tapegrass – *Valisneria*
- Mare's tail – *Hippuris*
- Needle spike-rush – *Eleocharis*
- bur-reed - *Sparganium*

Floating leaf plants

- *Potamogeton natans*
- *Nymphoides peltata*
- *Persicaria amphibia*
- *Aponogeton distachyos*
- *Nuphar lutea*
- *Nymphaea* sp.
- *Ranunculus* sp.

Potamogeton natans – Broad-leaved pondweed