

Watershed assessment

Watershed assessment means that the watersheds of a specific area are studied and analysed to understand the possible impacts of land-use changes as well as the sensitivity of the area towards changes in stormwater run-off.

Why: A watershed assessment clarifies the quality, quantity and origin of the stormwater in the specific watershed area. Factors affecting these values are analysed to deliver information to be utilised in land-use planning and decision-making. A watershed assessment can be used as a parallel or as background tools for stormwater management guidelines.

How: Typically, a large watershed of, for example, a river or stream is divided into smaller sub-watersheds in order to display the movement and course of the water in the landscape. A division into smaller sub-watersheds also helps to articulate the effect of the possible land-use change on the local hydrology and water cycle.

The following issues are typically analysed:

- main water bodies, the means by which they are located and their condition
- soil types and groundwater areas
- land-use in watershed and possible changes

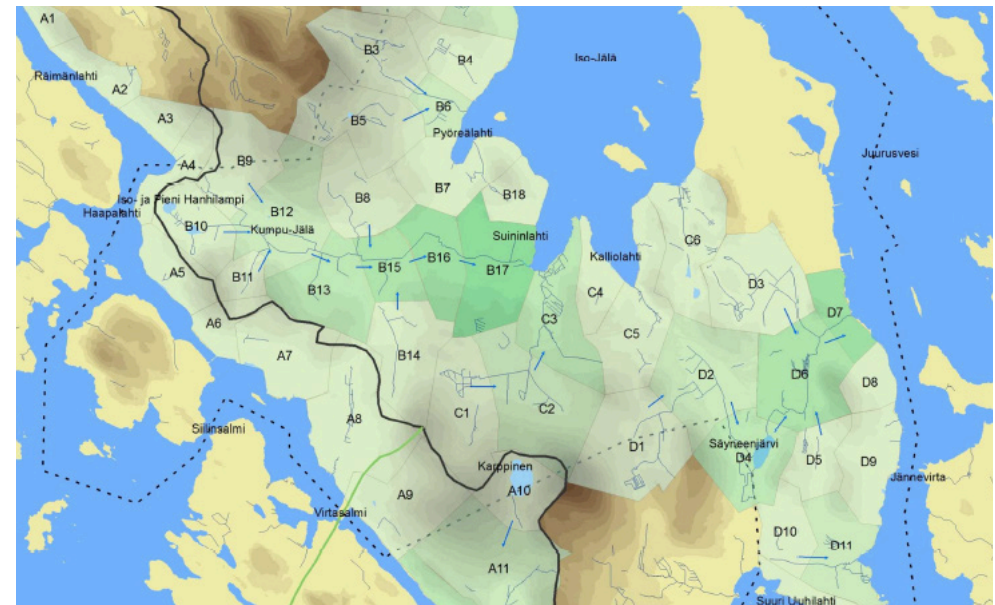
Existing stormwater-related problems (e.g. flooding issues, contaminant loads) and potential future changes are analysed. In the assessment, the main principles and recommendations for stormwater management are presented for each watershed or for each watercourse.

Good to know / Challenges: The recommendations following a watershed assessment might remain at quite a general level if they are not integrated into the principles of land-use and green area planning, or the delivery of ecosystem services is not considered.

POINT 1
URBAN
RESILIENCE

POINT 2
TECHNICAL
OPTIMI-
ZATION

POINT 3
DAY-TO-DAY
VALUES



Example of a watershed assessment map related to the masterplan of Siilinjärvi (picture E. Lähde).

References / More information / Useful links

Free online tool for watershed analysis (VALUE) by the Finnish Environment Institute: <http://paikkatieto.ymparisto.fi/value/>

