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Ministry of the Environment, Finland

Government Decree on Water Resources Management

(1040/2006)

Given in Helsinki on 30 November, 2006

In accordance with the Government decision made on a submission by the Ministry of the Environment, the following is enacted on the basis of sections 10, 20 and 26 of the Act on Water Resources Management (1299/2004), issued on 30 December 2004:

Chapter 1 - General provisions

Section 1 - Objective

- (1) This Decree lays down provisions on the accounts to be included in a water resources management plan, on the assessment and monitoring of the status of waters, and on the preparation of a water resources management plan.

Section 2 - Water resources management plan period

- (1) A water resources management plan, as referred to in section 11 of the Act on Water Resources Management (1299/2004), hereinafter the Water Resources Management Act, shall be prepared for a period of six years at a time. The first water resources management plans for water resources management regions shall be prepared so that they can be approved no later than 21 December 2009.

Chapter 2 - Accounts of a water resources management region

Section 3 - Determining the characteristics of surface waters and groundwaters

- (1) Within its territory, each regional environment centre determines the location and boundaries of surface waters and groundwater bodies, on which surface water ecosystems and land ecosystems are directly dependent.
- (2) When determining the characteristics, conducting further analyses and assessing and monitoring the status of waters, similar surface waters and groundwater bodies can be examined as groups.

Section 4 - *Specific regions*

- (1) Each regional environment centre shall compile information on the following regions located within its territory:
 - 1) A region, from where water is being abstracted or from where the intention is to abstract water for household water use in quantities exceeding an average of 10 cubic metres per day, or for the needs of more than fifty people;
 - 2) A region designated as bathing water on the basis of Community legislation; and
 - 3) A region within the Natura 2000 network, in which the maintenance or improvement of water status is important in terms of protecting the living environment or a species.

Section 5 - *Artificial and heavily modified bodies of surface waters*

- (1) Under section 22 of the Water Resources Management Act, a reservoir and a canal constructed on land may be named in a water resources management plan as an artificial body of surface water, and a body of surface water, modified through construction, regulation or any other method, the original hydrological and morphological characteristics of which no longer prevail, may be named as a heavily modified body of surface water.

Section 6 - *Activity influencing surface waters and groundwater bodies*

- (1) Within its territory, a regional environment centre compiles information on human activity with significant effects on the status of surface waters and groundwater bodies, including information on:
 - 1) Point source and diffuse source pressures from habitation, industry, agriculture, forestry and other business activity;
 - 2) The quantity of water extracted for the needs of habitation, industry, agriculture, forestry and for other purposes, and the formation of artificially recharged groundwater;
 - 3) Construction influencing the status of surface water and the regulation of waters; and
 - 4) Other activities influencing the status of waters.

Section 7- *Assessment of impacts and additional accounts*

- (1) On the basis of information as referred to in section 6, and information regarding the status of waters, the regional environment centre determines any surface water and groundwater bodies which potentially do not meet the environmental objectives referred to in section 21 of the Water Management Act. If, according to

the assessment, it is possible that environmental objectives are not met, the regional environment centre shall prepare additional accounts for the purpose of drawing up monitoring programmes and programmes of measures.

- (2) The information will be compiled from the monitoring of waters by various state and municipal authorities and other parties and by parties providing public services, alongside supervision and analyses performed by operators under other legislation.

Section 8 - Economic analysis of water use

- (1) An economic analysis of water use includes an assessment of the economic significance of the purposes of use of the water, long-term prognoses for water sourcing and the need for water, an economic analysis of water services, and the most cost-effective combinations of water use for the purposes of programmes of measures.
- (2) An economic analysis of water services comprises calculations based on observing the principle of recovery of the costs of water services in the supply of water.
- (3) In cooperation with the Ministry of Agriculture and Forestry, the Ministry of the Environment steers regional environment centres and the Finnish Environment Institute in preparing economic analyses of water use.

Chapter 3 - Assessment of the status of surface waters and groundwater bodies

Section 9 - Definitions

- (1) For the purposes of this Chapter, in classifying the ecological status of surface water, the term:
 - 1) *Biological elements* refer to phytoplankton, periphyte, macrophyte, other aquatic flora, benthic invertebrate fauna and fish fauna;
 - 2) *Hydromorphological elements* refer to water flow conditions, residence time, water level, depth variations, structure of the bed and riparian zone, and connection to groundwater body;
 - 3) *Physico-chemical elements* refer to transparency, thermal conditions, oxygenation conditions, salinity, acidification status, nutrient conditions and nationally specified substances harmful to the aquatic environment;
 - 4) *Reference conditions* refer to the values of factors referred to in points 1—3 that correspond fully or almost fully to undisturbed ecological conditions;
 - 5) *Ecological quality ratio* refers to deviation from reference conditions of biological factors indicating ecological status.
- (2) Elements as referred to in points 1—3 in river, lake and coastal waters are listed in more detail in Annex 1.

Section 10 - *Division into surface water types and reference conditions for the types*

- (1) For the purpose of surface water ecological status classification, a regional environment centre divides surface waters of similar natural conditions into river, lake and coastal water types on the basis of the factors laid down in Annex 2.
- (2) Artificial and heavily modified surface water bodies are classified into the surface water type that is their closest equivalent in terms of its characteristics.
- (3) In waterways, surface waters can be examined as a whole, with regard to the lake-like characteristics of rivers and the river-like characteristics of lakes.
- (4) Reference conditions are specified for each surface water type in accordance with the specifications of an excellent status as given in Annex 1.

Section 11 - *Assessment of the status of waters*

- (1) Pursuant to Section 8 of the Water Management Act, the regional environment centre shall classify the surface waters and groundwaters within its territory for the purposes of a water management plan.
- (2) The fishery unit of Employment and Economic Development Centre and the Finnish Game and Fisheries Research Institute submit information on fish fauna, necessary for classification purposes, to the regional environment centre.

Section 12 - *Classification of surface water ecological status*

- (1) The ecological status of surface water shall be classified as excellent, good, satisfactory, passable or poor by comparing water status with reference conditions and using the definitions laid down in Annex 1. Correspondingly, the status of artificial and heavily modified surface water shall be classified as good, satisfactory, passable or poor in relation to the best achievable ecological status.
- (2) The classification shall be performed with the help of biological elements, with regard to the hydromorphological and physico-chemical elements supporting them. Classification from excellent to poor is expressed as an ecological quality ratio on a scale of 1—0.
- (3) Surface water ecological status will be classified as satisfactory at most, if the environmental quality standard for a nationally specified substance harmful to the aquatic environment, as referred to in the Government Decree on Substances Dangerous and Harmful to the Aquatic Environment (1022/2006), has been exceeded.

Section 13 - *Classification of surface water chemical status*

- (1) The chemical status of surface water is classified as good if the environmental quality standard for a substance harmful or dangerous to the aquatic environment, as referred to in the Government Decree on Substances Dangerous and Harmful to the Aquatic Environment, confirmed at Community level, has not been exceeded.

Section 14 - *Classification of groundwater quantitative and chemical status*

- (1) Bodies of groundwater are classified as being of good or poor status, determined in accordance with their ecological and chemical status, whichever is the poorer of the two.
- (2) The quantitative status of groundwater is classified as good if:
 - 1) The annual average rate of water abstraction does not exceed the rate of overall recharge of the body of groundwater; and
 - 2) The groundwater level does not fall permanently as a consequence of human activity.
- (3) Groundwater chemical status is classified as good if it complies with the specifications set forth in Article 17 and Annex V, paragraph 2.3.2. of Directive 2000/60/EC of the European Parliament and of the Council.

Chapter 4 - Monitoring programme of water resources management region

Section 15 - *Monitoring programme*

- (1) A regional environment centre defines the needs for monitoring the surface waters and groundwaters within its territory, with regard to the provisions laid down in sections 16—20. It prepares a monitoring programme for its territory, combining, as applicable, monitoring arranged by authorities and supervision performed by operators under other legislation. The monitoring programme includes the necessary monitoring points and regions, the factors monitored and monitoring frequency.
- (2) As regards the requirement for monitoring fish fauna, the regional environment centre defines these in cooperation with the fishery unit of the Employment and Economic Development Centre.

Section 16 - *Provisions for monitoring*

- (1) Regular monitoring shall be arranged as regards the status of surface waters and groundwaters of a water resources management region for the purpose of assessing the impacts of activities referred to in section 6, the design of monitoring programmes and the assessment of natural conditions and the long-term impacts of widespread human activity (*surveillance monitoring*).

- (2) If there is a risk of failing to meet environmental objectives, the monitoring of surface waters and groundwaters shall be arranged so as to establish the status of waters and the impacts of measures entailed in programmes of measures (*operational monitoring*).
- (3) Where the reason for failing to meet environmental objectives is unknown or due to a sudden cause, the degree of deterioration in surface water status shall be examined alongside impacts for the purpose of drawing up a programme of measures (*investigative monitoring*).

Section 17 - *Surface water monitoring points and regions*

- (1) The monitoring programme must include a sufficient number of monitoring points or regions in order to provide an assessment of the overall status of surface waters and facilitate their classification.
- (2) On the basis of an assessment by the regional environment centre, monitoring points or regions for surveillance monitoring shall be located in the surface waters referred to in Appendix 3(A).
- (3) Monitoring points or regions for operational monitoring shall be located in the surface waters referred to in Appendix 3(B).

Section 18 - *Selection of elements to be monitored in surface water*

- (1) Surveillance monitoring of surface water is targeted at parameters indicative of biological, hydromorphological and physico-chemical quality elements. Operational monitoring of surface water is targeted at parameters indicative of biological, hydromorphological or physico-chemical quality elements that indicate the polluting or modifying impact.

Section 19 - *Surface water monitoring frequency*

- (1) The frequency and timing of monitoring shall be chosen so as to achieve an acceptable level of confidence and precision.
- (2) Surveillance monitoring is arranged for a minimum period of one year during each period of a water resources management plan. For parameters indicative of biological and hydromorphological quality elements, monitoring shall be carried out at least once. Parameters indicative of physico-chemical quality elements shall be monitored in compliance with Appendix 4, unless otherwise proven on the basis of technical knowledge and expert judgement.
- (3) Surveillance monitoring frequency can be reduced so that it is arranged during every third period of a water resources management plan, if:
 - 1) Previous monitoring has indicated that the status of surface water is good at a minimum, and it can be predicted that it will remain unchanged or improve; and

- 2) No fundamental changes have occurred in terms of the impact of activities referred to above in section 6 on the status of surface water.
- (4) As a guideline, operational monitoring shall be arranged for biological, hydromorphological or physico-chemical quality elements as stipulated in Annex 4. Monitoring can be altered during the period of a water resources management plan if an activity polluting surface water or altering it in a detrimental way ceases, or the activity's polluting or detrimental impact on the status of water can otherwise no longer be considered significant.

Section 20 - Groundwater monitoring points and monitoring frequency

- (1) The monitoring programme shall comprise a sufficient number of monitoring points in order to provide a reliable assessment of the quality of groundwater, groundwater levels and their fluctuation, whether natural or caused by human activity.
- (2) If there is a risk of failing to achieve good groundwater status, the monitoring points and monitoring frequency shall be selected so as to assess the impacts of water abstraction, other human activity or discharges of groundwater on the status of groundwater.

Section 21 - Quality requirements of monitoring

- (1) In monitoring surface waters and groundwaters, methods conforming with SFS, EN, and ISO standards, or corresponding methods in terms of precision and reliability, shall be employed.

Chapter 5 - Drawing up a water resources management plan

Section 22 - Preparation of a water resources management plan

- (1) Within its territory, each regional environment centre ensures that the required accounts and programmes of measures referred to in section 12 of the Water Resources Management Act are drawn up for the purposes of the water resources management plan. Such preparation shall take account of the timetable and work programme for drafting the management plan as referred to in section 13 of the Water Resources Management Act, and the proposals and comments of the cooperation group as referred to in section 14 of the Water Resources Management Act.
- (2) The coordinating regional environment centre shall compile a proposal for a water resources management plan on the basis of accounts prepared within the water resources management region, the summary of programmes of measures and within monitoring programmes, and submit it for consideration by the steering group as referred to in section 14 of the Water Resources Management Act.

Section 23 - *Information to be presented in the water resources management plan*

- (1) In addition to the provisions laid down in section 11 of the Water Resources Management Act, the water resources management plan shall present the aspects listed in Annex 5.
- (2) Moreover, the water resources management plan shall indicate the impacts of co-operation group proposals as referred to in section 4, paragraph 1 of the Government Decree on Water Resources Management Regions (1303/2004) and comments as referred to in paragraph 3 on the content of the water resources management plan.

Section 24 - *Information on basic water resources management measures to be presented in programme of measures*

- (1) Basic water resources management measures as referred to in section 12 of the Water Resources Management Act include:
 - 1) Measures controlling discharges and emissions and water protection measures;
 - 2) Advance control of groundwater and surface water abstraction, formation of artificially recharged groundwater and damming of surface water;
 - 3) An account of the participation of water users in the recovery of costs of use of water;
 - 4) Advance control of water flow regulation and construction influencing the target status of ecological water status and land use planning; and
 - 5) Measures regarding the management of substances dangerous and harmful to the aquatic environment.
- (2) Legislation pertaining to basic water resources management measures is included in Appendix 6 (a).

Section 25 - *Information on supplementary water resources management measures to be presented in programme of measures*

- (1) Measures to supplement water resources management, as referred to in section 12 of the Water Resources Management Act, are included in Appendix 6 (b).

Chapter 6 - Further provisions

Section 26 - *Review of accounts*

- (1) The accounts to be drawn up in a water resources management region, and assessments regarding the status and monitoring of surface waters and groundwater referred to herein, shall be reviewed insofar as necessary prior to the following period of water resources management.

Section 27 - *Information*

- (1) Preparation documents as referred to in section 13 of the Water Resources Management Act shall be made available for viewing in the municipalities involved and the possibility shall be provided to give opinions on such documents for a period of six months as of the date of making the documents available for viewing.

Section 28 - *Entry into force*

- (1) This Decree will enter into force on 1 December 2006.
- (2) Prior to the entry into force of the Decree, measures required for the enforcement of the Decree can be undertaken.
- (3) The first monitoring programmes referred to herein in section 15 must be prepared no later than on 22 December 2006.

Definitions used in the classification of surface water ecological status

1. Biological elements

	Excellent status (1)	Good status (1)	Satisfactory status (1)
Biological element	Definition	Definition	Definition
Phytoplankton (lake and coastal water)	Taxon composition and abundance correspond fully or almost fully with undisturbed conditions. Average biomass of phytoplankton corresponds fully with type-specific physico-chemical conditions and does not significantly alter transparency characteristic of the type. The frequency and density of plankton flora are equivalent to the physico-chemical conditions characteristic of the type.	Minor changes in phytoplankton taxa and their abundance in comparison with communities characteristic of the type. Minor changes occur in biomass in comparison to conditions characteristic of the type. These changes do not indicate increased growth of algae that would result in undesirable changes in the lake in terms of aquatic biota or the physico-chemical quality of water or sediment, in aquatic biota in coastal waters or in water quality. The frequency and density of flora may indicate a minor increase over a situation characteristic of the type.	Plankton taxa and their abundance differ moderately from communities characteristic of the type. In a lake, biomass has changed moderately and can lead to significant undesirable changes in other biological elements and the physico-chemical quality of the water or sediment. In coastal waters, the algae biomass clearly exceeds the limits characteristic of the type and can influence other biological elements. Moderate increases can occur in the frequency and density of plankton flora. Long-term flora can appear during the summer months.
Macrophytes and periphyton (river and lake)	Taxon composition fully or almost completely equivalent to that under undisturbed conditions. No discernible changes in average abundance of macrophytes and periphyton.	Minor changes in macrophyte and periphyton taxa and their abundance in comparison with communities characteristic of the type. These changes are not evidence of the kind of increased growth in periphyton or higher forms of plant life that would result in undesirable changes in aquatic biota or the physico-chemical quality of water or sediment. Among the periphyton, there are no detrimental amounts of bacterial flora due to human activity.	The taxon composition of macrophytes and periphyton differ moderately from type-specific communities and is disturbed markedly more than in conditions equivalent to good status. Moderately clear changes in the average abundance of macrophytes and periphyton. Bacterial flora caused by human activity disturbs periphyton or has replaced it in places.
Benthic invertebrate fauna (river and lake)	Taxon composition and abundance and the ratio of taxa, of those sensitive to change to insensitive types, fully or	Taxon composition and abundance, the ratio of taxa, of those sensitive to change to insensitive types, and diversity	Taxon composition and abundance differ moderately from type-specific communities. Key type-specific

	almost completely equivalent to undisturbed type-specific conditions. Diversity of benthic invertebrate fauna does not show any changes in comparison with undisturbed conditions.	indicate minor changes in comparison with undisturbed type-specific conditions.	taxonomic groups are missing. The ratio of taxons, of those sensitive to change to insensitive types, and the diversity level are markedly below the type-specific level and markedly lower than in conditions equivalent to good status.
Benthic invertebrate fauna (coastal waters)	Diversity and abundance of benthic invertebrate fauna vary within limits normally associated with undisturbed conditions. All taxons sensitive to change, typical of undisturbed conditions, are present.	Diversity and abundance of benthic invertebrate fauna slightly altered over a type-specific situation. Most type-specific taxons sensitive to change are present.	Diversity and abundance of benthic invertebrate fauna moderately altered over type-specific situation. Taxons indicative of pollution are present. Many type-specific taxons sensitive to change are missing.
Fish fauna (river and lake)	Species composition and abundance correspond fully or almost fully to undisturbed conditions. All type-specific species sensitive to change are present. Age structure of fish fauna reflects few changes due to human activity and does not show signs of disturbances in the reproduction or ontogeny of any species.	Minor changes in species composition and abundance in comparison with type-specific communities, due to the impacts of human activity on physico-chemical and hydromorphological elements. Age structure of fish fauna shows signs of changes due to the impacts of human activity on physico-chemical and hydromorphological elements and, in certain cases, signs of disturbed reproduction or ontogeny of individual species to the extent that certain age groups can be completely missing.	Composition and abundance of fish fauna differ moderately from type-specific communities as a consequence of the impacts of human activity on physico-chemical and hydromorphological elements. The age structure of fish fauna shows fairly major changes due to human activity as a consequence of the impacts of human activity on physico-chemical and hydromorphological elements. A moderately large portion of type-specific species is missing or present in very low numbers.
Macroalgae and angiosperms (coastal waters)	All type-specific taxons of macroalgae and angiosperms sensitive to change are present. Macroalgae coverage and abundance of angiosperms correspond fully or almost fully to undisturbed conditions.	Most type-specific taxons of macroalgae and angiosperms sensitive to change are present. Minor changes in macroalgae coverage and abundance of angiosperms.	Fairly many type-specific taxons of macroalgae and angiosperms sensitive to change are missing. Moderate changes in macroalgae coverage and abundance of angiosperms. This can cause undesirable changes in aquatic biota.
Biological elements (artificial or heavily modified surface water)	The values of the biological elements in question correspond as fully as possible to the values of the nearest	Minor changes in values of biological elements in question in comparison with the values in compliance with the best	Moderate changes in values of biological elements in question in comparison with the values in compliance with

	equivalent surface water type, considering the physical conditions of the water resulting from its artificial or heavily modified characteristics.	achievable ecological status.	the best achievable ecological status. The values in question have changed significantly more than values detected in good ecological conditions.
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2. Hydromorphological elements

	Excellent status (1)	Good status (1)	Satisfactory status (1)
Hydromorphological element	Definition	Definition	Definition
Hydrological regime (river and lake)	Quantity and dynamic of flow. In a lake the level of surface and residence time and the resulting connection to groundwater also correspond fully or almost fully to undisturbed conditions.	Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.	Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.
Continuity (river)	Human activity has not altered river continuity, which allows free movement of aquatic biota and sediment load.	Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.	Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.
Morphological elements (river, lake and coastal waters)	The river channel pattern, width and depth variations, flow velocities, substrate conditions and riparian structure and conditions correspond fully or nearly fully with undisturbed conditions. Lake depth variations, quantity of lake bed sediment and lake bed structure and conditions correspond fully or nearly fully with undisturbed conditions. Coastal water depth variation and structure and substrate of the coastal bed correspond fully or nearly fully with undisturbed conditions.	Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.	Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.
Hydromorphological element (artificial or heavily modified surface waters)	In hydromorphological conditions, the only impacts that can be observed are those on the surface water body caused by the artificially or heavily modified characteristics of water, after all feasible	Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.	Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.

	alleviating measures have been implemented in order to ensure coming as close as possible to the best feasible ecological continuum, particularly in regard of the migration of fauna and suitable reproduction areas.		
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3. Physico-chemical elements

	Excellent status (1)	Good status (1)	Satisfactory status (1)
Physico-chemical element	Definition	Definition	Definition
General conditions of water (river, lake, coastal waters and artificial or heavily modified water and surface water)	<p>Nutrient concentrations vary within limits normally associated with undisturbed conditions. In rivers, lakes and coastal waters the physico-chemical elements correspond fully or nearly fully with undisturbed conditions. In rivers and lakes the temperature, oxygen conditions, pH, alkalinity and salinity, transparency in lakes, and the temperature, oxygen conditions and transparency in coastal waters, do not reflect changes due to human activity and vary within the limits normally associated with undisturbed conditions. In artificial and heavily modified surface waters, physico-chemical elements correspond fully or nearly fully with undisturbed conditions associated with the surface water type which is the closest equivalent to the water body in question. In artificial or heavily modified surface water, the temperature, oxygen conditions and pH do not deviate from values characteristic of undisturbed conditions in the closest equivalent surface water type.</p>	<p>Nutrient concentrations do not exceed the levels specified to ensure the functioning of a type-specific ecosystem, and the achievement of levels in compliance with specifications given above in point 1 for biological elements. In rivers and lakes, the temperature, oxygen conditions, pH, alkalinity and salinity, transparency in lakes, the temperature, oxygen conditions and transparency in coastal waters, and the temperature and pH in artificial or heavily modified surface water, do not exceed the limits specified to ensure the functioning of a type-specific ecosystem, and the achievement of levels in compliance with the specifications given above in point 1 for biological elements.</p>	<p>Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.</p>
Identified synthetic	Concentrations are close	Concentrations do not	Prevailing conditions do

pollutants in water (rivers, lakes, coastal waters and artificial or heavily modified surface water)	to zero and at least below the level that can be detected using the most advanced generally used analysis techniques.	exceed the environmental quality standards set for nationally specified substances harmful to the aquatic environment.	not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.
Identified non-synthetic pollutants in water (rivers, lakes, coastal waters and artificial or heavily modified surface water)	Concentrations remain within limits normally associated with undisturbed conditions. In artificial or heavily modified surface water, concentrations remain within limits normally associated with undisturbed conditions in the closest equivalent surface water type.	Concentrations do not exceed the environmental quality standards set for nationally specified substances harmful to the aquatic environment.	Prevailing conditions do not impede the achievement of values in accordance with the definitions of biological elements presented above in point 1.

Waters showing evidence of fairly major alterations to the values of biological elements and in which the relevant biological communities deviate substantially from those normally associated with undisturbed conditions in the surface water type in question, shall be classified as poor.

Waters showing evidence of severe alterations to the values of biological elements and in which large portions of the relevant biological communities normally associated with undisturbed conditions in the surface water type in question are absent, shall be classified as bad.

(1) Correspondingly, as regards artificial and heavily modified water bodies, the best achievable ecological status, a good achievable ecological status and a satisfactory achievable ecological status shall be specified.

Factors used in the identification of surface water types

Surface water type	Identifying factor
River	<ol style="list-style-type: none"> 1. Size 2. Soil and bedrock: organic, siliceous, eutrophic, calcareous 3. Altitude above sea level 4. Share of water area of catchment area 5. Geographical location
Lake	<ol style="list-style-type: none"> 1. Size 2. Soil and bedrock: Organic, siliceous, eutrophic, calcareous 3. Altitude above sea level 4. Average depth of water 5. Residence time 6. Geographical location
Coastal water	<ol style="list-style-type: none"> 1. Salinity 2. Wave exposure 3. Geographical location 4. Time under ice cover

Monitoring points and regions in surface waters

A) Surface water monitoring points or regions for overall assessment of surface water status:

1. Points on large rivers where the catchment area is greater than 2,500km² and the rate of water flow is significant within the water resources management region as a whole.
2. Large lakes and reservoirs where the volume of water is significant within the water resources management region.
3. Significant bodies of water across state boundaries.
4. Sites identified under the Information Exchange Decision 77/795/EEC.
5. Sites required to estimate the pollutant load which is transferred across state boundaries and which is transferred into the marine environment.

B) Surface water monitoring points if there is a risk of failing to meet environmental objectives:

1. A sufficient number of monitoring points or regions shall be placed in surface waters incurring a significant impact from point source pressures in order to facilitate the assessment of the magnitude and impacts of the point source. Where surface water is subject to a number of point source pressures, monitoring points are selected to assess the magnitude and impact of these pressures as a whole.
2. A sufficient number of monitoring points or regions shall be placed in surface waters incurring a significant impact from diffuse source pressures in order to facilitate the assessment of the magnitude and impacts of diffuse source pressures. These points shall be selected so that they are representative of the relative share of diffuse source pressures, and of the relative risks of the failure to achieve good surface water status.
3. A sufficient number of monitoring points or regions shall be placed in surface waters, at which significant measures altering surface water can be targeted, in order to facilitate the assessment of the magnitude and impacts of such changes.
The points or regions shall be selected so that they indicate the overall impact of hydromorphological changes on surface water.

Surface water monitoring frequency

Element	Rivers	Lakes	Coastal waters
Biological			
Phytoplankton	2 times per year	2 times per year	2 times per year
Other aquatic flora	3 years	3 years	3 years
Benthic invertebrate fauna	3 years	3 years	3 years
Fish fauna	3 years	3 years	
Hydromorphological			
Continuity	6 years		
Hydrology	Continuous	1 month	
Morphology	6 years	6 years	6 years
Physico-chemical			
Thermal conditions	4 times per year	4 times per year	4 times per year
Oxygenation conditions	4 times per year	4 times per year	4 times per year
Salinity	4 times per year	4 times per year	4 times per year
Nutrient conditions	4 times/year	4 times per year	4 times per year
Acidification status	4 times per year	4 times per year	
Nationally specified substance harmful to aquatic environment	4 times per year	4 times per year	4 times per year
Substance dangerous and harmful to aquatic environment, specified on Community level	12 times per year	12 times per year	12 times per year

Information to be presented in the water resources management plan:

1. Summary of reports on the characteristics of surface waters and groundwaters in the water resources management area, definition of reference conditions and justification for omitting a biological element in the assessment of the ecological status of a surface water type.
2. Summary of activity causing significant pollution loads and affecting the status of surface waters and groundwaters and other impacts of human activity and the impacts of exceptional conditions.
3. A map of the specific regions as referred to in section 4 and an account of the legislation under which these regions have been specified.
4. Monitoring points and regions in the form of a map. Monitoring results on the status of surface water, groundwater and protected areas, in the form of a map. An assessment of the level of confidence and precision of the monitoring provided.
5. A list of the environmental objectives set for surface waters, groundwaters and protection areas, the reasons for the eventual application of Sections 22-25 of the Water Resources Management Act, and other information related to objective setting.
6. Summary of economic analysis of the use of water and water services.
7. Summary of programme or programmes of measures, including the methods for achieving the objectives set, a summary of measures in case of exceptional situations and an account of alternative measures and their selection.
8. A list of more precise water resources management area programmes and management programmes applicable to a certain part of a river basin, certain industries, certain aspects or the surface water type, and a summary of the content thereof.
9. Summary of measures used for informing citizens and consulting them and an account of the statements presented during preparation and inter-state negotiations and their impacts on the content of the plan and the selection of alternatives.
10. A list of competent authorities, including the following information:
 - i) Name and address of the competent authority,
 - ii) Geographical area of the water resources management region,
 - iii) The legal status of the competent authority,
 - iv) An account of the legal and administrative responsibilities and duties of each competent authority within each water resources management region,
 - v) If a competent authority is acting as a body coordinating other competent authorities, a list of the relevant authorities and an account of the relationships between institutions established in order to ensure cooperation and
 - vi) If a water resources management region is located within the area of more than one member state or it comprises areas within non-member states, an account of the relations between institutions established in order to ensure cooperation.
11. Information on where and how the background documents, and the information of the public notice involved, were published when drawing up the water resources management plan, the monitoring data of permits in accordance with the Environmental Protection Act (86/2000) and the Water Act (264/1961) and details of monitoring data collected in accordance with monitoring programmes, are all available.
12. Information corresponding to an environmental report in compliance with the Act on the Assessment of the Authorities' Plans and Programmes on the Environment (200/2005).

Moreover, a water resources management plan reviewed in compliance with section 19 of the Water Resources Management Act, must include the following information:

13. Summary of all changes or updates made after the publication of the previous water resources management plan, including a summary of investigations performed in compliance with sections 22-25 of the Water Resources Management Act.
14. An assessment of progress made in achieving environmental objectives, including a presentation, in the form of a map, of the monitoring results of the period covered by the previous plan, and an account of the environmental objectives not achieved.
15. Summary of measures implemented.
16. Summary of provisional additional measures implemented after the publication of the previous water resources management region management plan.

17. A summary and account of measures, included in the previous water resources management plan, that remain unimplemented.

a) Basic water resources management measures

The basic water resources management measures are included in the following statutes:

- i) Decision of the Ministry of Social Affairs and Health relating to the quality and monitoring of water on public beaches (SosTmP 292/1996)
- ii) Nature Conservation Act (1096/1996)
- iii) Forest Act (1093/1996)
- iv) Decree of the Ministry of Social Affairs and Health Relating to the Quality and Monitoring of Water Intended for Human Consumption (461/2000)
- v) Act on Safety in Handling Dangerous Chemicals and Explosives (390/2005)
- vi) Decree on Industrial Processing and Storage of Dangerous Chemicals (59/1999)
- vii) Act on Environmental Impact Assessment Procedure (468/1994)
- viii) Council of State Decision on the use of sewage sludge in agriculture (282/1994)
- ix) Government Decree on Urban Waste Water Treatment (888/2006) x) Pesticides Act (327/1969)
- xi) Government Decree on the restriction of discharge of nitrates from agriculture into waters (931/2000)
- xii) Environmental Protection Act (86/2000)
- xiii) Government Decree on Substances Dangerous and Harmful to the Aquatic Environment (1022/2006)
- xiv) Water Act (264/1961)
- xv) Act on Water Services (119/2001)
- xvi) Land Use and Building Act (132/1999)
- xvii) Health Protection Act (763/1994)
- xviii) Act on Protection of the Sea (1415/1994).

b) Supplementary measures in water resources management

Supplementary Measures in Water Resources Management can include:

- i) Legislative instruments
- ii) Administrative instruments
- iii) Economic or fiscal instruments
- iv) Environmental agreements
- v) Codes of Good Practice
- vi) Recreation and restoration of wetland areas
- vii) Construction projects
- viii) Rehabilitation projects
- ix) Educational projects
- x) Research, development and demonstration projects and
- xi) Other relevant measures.