



**SPECIAL
SECRETARIAT
FOR WATER**



**MINISTRY OF
ENVIRONMENT
& ENERGY**



1ST UPDATE OF RIVER BASIN MANAGEMENT PLANS

River Basin District of Western Macedonia (EL09)

SUMMARY



European Union
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HELLENIC REPUBLIC

MINISTRY OF ENVIRONMENT & ENERGY

SPECIAL SECRETARIAT FOR WATER

DEVELOPMENT OF THE 1st UPDATE OF RIVER BASIN MANAGEMENT PLANS FOR THE 14 WATER DISTRICTS OF GREECE, IN ACCORDANCE WITH THE DIRECTIVE 2000/60/EC, THE LAW 3199/2003 AND THE P.D. 51/2007 – STUDY M4: RIVER BASIN DISTRICTS OF WESTERN MACEDONIA (EL09) AND CENTRAL MACEDONIA (EL10)

JOINT VENTURE: Joint Venture for the 1st Update of River Basin management Plans of RBDs of Western and Central Macedonia

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RIVER BASIN DISTRICT OF WESTERN MACEDONIA (EL09)

SUMMARY

Government Gazette approving the 1st Revision of RBMP: [B 4676/29.12.2017](#)

1ST UPDATE OF THE RBMP OF THE RBD OF WESTERN MACEDONIA (EL09)

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ABBREVIATIONS/ACRONYMS

RBD	River Basin District
RB	River Basin
WB	Water Body/Bodies
SWB	Surface Water Body/Bodies
GWB	Groundwater Body/bodies
HMWB	Heavily Modified Water Body/ bodies
AWB	Artificial Water Body/bodies
RBMP	River Basin Management Plan
GOLR	General Organization of Land Reclamation
LOLR	Local Organization of Land Reclamation
MEWSS	Municipal Enterprise for Water Supply and Sewerage
MEE	Ministry of Environment and Energy
WFD	Water Framework Directive
JMD (MD)	Joint Ministerial Decision (Ministerial Decision)
PD	Presidential Degree
EC	European Council
EEC	European Economic Community
EU	European Union

1 INTRODUCTION – DEVELOPMENT OF 1ST UPDATE OF RIVER BASIN MANAGEMENT PLAN

1.1 INTRODUCTION

Since the beginning of 2000, the European Union has had a new policy on water resource management. The basic tool for promoting the new policy is the Water Framework Directive 2000/60/EC.

The harmonization of the Greek legislation with the Water Framework Directive 2000/60/EC was done with the Law 3199/2003 (Government Gazette A' 280) and the PD 51/2007 (Government Gazette A' 54).

Priority and necessary step for the implementation of the Directive in our country was the development of the River Basin Management Plans of the country's 14 Water Districts (WD) as established by the Decision No. 706/2010 of the National Water Committee (Government Gazettes 1383/B'/02-09-2010 and 1572/B'/28-09-2010 that corrects Annex II), and as it applies after the approval of the country's RBMP's.

The River Basin Management Plans (RBMPs) are revised and updated every six years. The first approved RBMPs relate to the 1st Management Cycle (2009-2015) and are valid until their update. The RBMP's to be established by the 1st Update of the RBMPs concern the 2nd Management Cycle (2016-2021).

The 1st RBMP of the River Basin District of Western Macedonia (EL09) was approved by the National Water Committee in 2014 (Government Gazette 181/B/31.1.2014).

In November 2015, the Special Secretariat for Water (SSW) of the Ministry of Environment and Energy was invited to open an international tender for awarding the study **“Development of the 1st Update of River Basin Management Plans for the 14 River Basin Districts of Greece, in accordance with the Directive 2000/60/EC, the Law 3199/2003 and the P.D. 51/2007. – Study M4: RIVER BASIN DISTRICT OF WESTERN MACEDONIA (EL09) AND CENTRAL MACEDONIA (EL10)”**.

As a result of the tender, the contract 09-01-2017 was assigned by the Special Secretariat for Water to prepare the above study in the Joint Venture **“Joint Venture for the 1st Update of River Basin Management Plans of RBDs of Western and Central Macedonia”**.

1.2 DEVELOPMENT OF 1ST UPDATE OF RIVER BASIN MANAGEMENT PLAN

In the framework of the 1st Update of River Basin Management Plan, the following actions are undertaken:

- Update of the identification and characterization of surface (river, lake, transitional and coastal) and groundwater bodies.
- Review and update of the standardized reporting conditions and assessment/classification of the status/potential of surface water bodies (ecological and chemical status), including highly modified and artificial water bodies, and groundwater bodies (quantitative and qualitative status), based on new data available from the operation of the National Water Monitoring Network.

- Re-evaluation of the surface water bodies with significant hydromorphological modifications in order to determine those that are highly modified (HMWB) and artificial (AWB).
- Update of the list of significant pressures, as included in the approved Management Plans, and their impacts.
- Update of the Register of Protected Areas, based on new data that have resulted from the implementation of relevant EU Directives.
- Review of environmental objectives for all surface and groundwater bodies, including highly modified and artificial.
- Assessment of the progress in relation to the achievement of the environmental objectives of the Directive, as set out in the first Management Plan.
- Revision of the Program of Basic and Supplementary Measures for the protection and rehabilitation of the water resources of each RBD, as contained in the approved/first Management Plan, in accordance with article 11 and Annex VI of Directive 2000/60/EC (article 12 and Annex III of PD 51/2007).
- Update of the economic analysis of water uses (including cost estimation with expected new EU guidelines), taking into account the Joint Ministerial Decision 135275/22.05.2017 (Government Gazette 1751 B') and based on the most recent data from relevant water services.
- Recording of the transboundary partnerships so far and promotion of the implementation of joint or compatible Management Plans in transboundary river basins, in line with the SSW guidelines.
- Revision of the Strategic Environmental Impact Assessment (SEIA) to identify, describe and assess the environmental impacts of the implementation of the aforementioned Program of Measures and the Management Plan.
- Informing the public and promoting its active participation, as well as publicizing the Management Plan, six months before their completion, in accordance with article 14 of Directive 2000/60/EC and article 15 of PD 51/2007.
- Covering the country's reporting and other obligations in the EU on the Management Plans, including the WISE (Water Information System for Europe) electronic system, according to the standards established by the European Environmental Agency (EEA).

The impacts of implementing the Management Plan can only be positive, at a time when the country's water resources face increasing pressures. The implementation will provide the basis for supporting a sustainable water management policy that will lead to effective protection and rational use of our valuable water resources.

1.2.1 PUBLIC CONSULTATION

1.2.2 Consultation procedure

The Consultation process of the 1st Update of RBMP lasted from 30/11/2015 to 15/12/2017 and included the following:

- **Phase A:** In November 2015, the planned activities of the 1st Update of RBMP, as well as the detailed timetable of those, were posted on the website of the Ministry of Environment and Energy (www.ypeka.gr) for informing the public.

- **Phase B:** In June 2016, information on the significant water management issues in each RBD, were posted on the website of the Ministry of Environment and Energy, that included the results of the National Water Monitoring Network for the RBD, the main pressures, and the definition and recording of the competent authorities and bodies involved in the consultation. Also, in December 2016, the basic common methodologies for the classification of water bodies status, the assessment of pressures and impacts including hydromorphological pressures, the identification of highly modified water bodies and the definition of the exemptions of article 4 of Directive 2000/60/EC, were posted on the website.
- **Phase C:** In June 2017, the Preliminary Draft of the 1st Update of RBMP, as well as a related questionnaire, were posted on the website of the Special Secretariat for Water (<http://wfdver.ypeka.gr>). This phase included the public consultation of the Strategic Environmental Impact Assessment.

The Public Consultation was completed on 15/12/2017

For Public Consultation purposes, the opportunity to submit comments or complete the consultation questionnaire was given through the website of the Special Secretariat for Water (<http://wfdver.ypeka.gr>),

In addition, during the consultation, it was possible to intervene in the preparation of the 1st Update of RBMP by email, fax or post, with the aim of tabling different views and providing information.

In order to encourage the active involvement of stakeholders as well as the public during the 1st Update process, the following were implemented:

- Working meetings between the Special Secretariat for Water, contractors and stakeholders (Ministries, Decentralized Administration, Prefectures and other local authorities), in order to exchange data and views.
- Special working meetings with the relevant Water Directorates for the preparation of both the preliminary RBMP and the Program of Measures.
- An Open Conference was organized by the Special Secretariat for Water with the assistance of the Decentralized Administration, in Kozani on 20-09-2017 on the topic of “*Consultation of the 1st Update of the River Basin Management Plan of Western Macedonia RBD (EL09) with the aim of informing the public and the bodies of the RBD*”. It is noted that this conference was organized within the framework of the two-day public information for both the River Basin Management Plan and the Flood Risk Management Plan.

Finally, it is noted that the SEIA consultation process was carried out simultaneously with the public consultation for the RBMP, which contributed significantly to the formulation of the final Management Plan.

1.2.3 Consultation results

In total, 145 people attended the conference, during which, they were given the chance of submitting consultation questionnaires and verbal intervening, whereas, by the end of the conference, they were able to submit their comments. After the completion of the conference, the list of attendees was drawn up, including their corresponding contact information. Additionally transcribed and audiovisual material are taken during the conference

The main conclusions are the following:

- Satisfactory participation of Public Administration bodies.
- Poor participation of citizens and Non-Governmental Organizations (NGOs).
- High environmental sensitivity for water resources.
- The consultation process has been successful since it has highlighted all the issues/problems/shortcomings that have emerged in the implementation of the first RBMP, demonstrated the need for revision and eventually contributed to the final formulation of the 1st Update of the RBMP of the RBD of West Macedonia (EL09).

Briefly, the main amendments or additions, that were included in the Management Plan as a result of consultation, pertain to the following:

- Update of the data presented in the Management Plan on the basis of the information provided and/or indications raised during the consultation. These data mainly concern issues related to water abstraction in the RBD, but also data on water uses, water abstraction points, actions implemented within the framework of the approved Management Plans etc.
- The reassessment and eventually the omission of the Papadia reservoir from the Register of Protected Areas, according to the data available for the planning of the water supply projects by the reservoir. Additionally, it was considered that immediate protection of the water abstraction is ensured, taking into account the redevelopment of the program of measures of the update of the Management Plan and more specifically the measure M09B0403 "Protection of surface water supply works"
- Reformulation of the final Program of Measures, which includes:
 - the recasting of specific measures regarding the specification/specialization of restrictions and actions defined therein.
 - the correction of the implementing bodies of the measures.
 - differentiation in the description of certain measures to include actions already planned by implementing bodies and/or available financial instruments.
 - the introduction of targeted supplementary measures to achieve specific and locally important management objectives, enhance existing knowledge and improve environmental and water conditions.

2 DIFFERENCES COMPARED TO THE 1ST RIVER BASIN MANAGEMENT PLAN

The development of the 1st Update of River Basin Management Plans includes significant changes and improvements compared to the 1st Management Plan. In particularly:

- The classification of the ecological and chemical status is based on the available data of the National Water Monitoring Network for 2012-2015 period.
- The results of actions that have been implemented so far in the context of increasing knowledge of water status and the pressures it receives, as well as the actions implemented to fill in the gaps identified in the 1st Management Plan are taken into account.
- The new requirements arising from the EU Directive 2000/60/EC Guidance Documents are taken into account.
- The results of the European Commission's Special Report on the Evaluation of Management Plans which was implemented as part of the European Parliament's briefing on the implementation of the Directive and is available on the EU's website are taken into account.
- The new analytical methodologies for critical aspects of the implementation of Directive 2000/60/EC are taken into account through:
 - Analysis of anthropogenic pressures and their impacts on surface and underground water systems.
 - Determination and criteria for assessment of hydromorphological alterations.
 - Determination of Heavily Modified (HMWB) and Artificial (AWB) Water Bodies.
 - Determination of the "exemptions" to the achievement of the environmental objectives of Directive 2000/60/EC:
 - Identification of the "exemptions" of paragraphs 4 to 6 of Article 4 of Directive 2000/60/EC (4.4 - 4.6).
 - Identification of the "exemptions" of paragraph 7 of Article 4 of Directive 2000/60/EC (4.7) on new modifications.
- Assessment (classification) of Surface Water Bodies status.
- Assessment of the ecological and chemical status of river water bodies.
- Assessment of the ecological and chemical status of lake water systems.
- Assessment of the ecological and chemical status of coastal and transitional water bodies
- The new analytical national assessment methodologies for individual Biological Quality Elements (BQEs), for each surface water body category that has been approved by the EU in the context of the intercalibration exercise at European level are taken into account. These methodologies concern the following:
 - Analytical methodologies for the assessment of biological quality elements in rivers.
 - Analytical methodologies for the assessment of biological quality elements in lakes.
 - Analytical methodologies for the assessment of biological quality elements in coastal and transitional water bodies.
- The 1st Update is being drawn up at the same time as the Flood Risk Management Plans pursuant to Directive 2007/60/EC and synergy of actions and program of measures has been accomplished.
- The 1st Update is also being drawn up at the same time as the programs of measures for the achievement of the good environmental status of the marine waters of the country in

accordance to Directive 2008/56/EC and has achieved synergy of actions and program of measures.

- The 1st Update takes into account the National Strategy for Adaptation to Climate Change and incorporates into the program of measures sub-actions of the National Strategy for Adaptation to Climate Change.
- The 1st Update is being carried out simultaneously for the 14 River Basin Districts of the country and homogeneity has been achieved in the individual methodologies and the proposed programs of measures (basic and supplementary).

The following table summarizes the differences identified in each individual subject, between the 1st RBMP and the 1st Update of RBMP.

Table 2-1: Summary of the differences in the 1st Update of the RBMP in relation to the 1st Management Plan

SUBJECT OF THE UPDATED RBMP/ACTIVITY	DIFFERENCE IN RELATION TO THE 1 ST RBMP	SUMMARY OF THE RESULTS
COMPETENT AUTHORITIES	<p>The competent authorities do not differ from the 1st RBMP.</p> <p>In the Update, the enlisting of the main authorities involved in Water Management, complying with the existing institutional framework, is rationalized and presented in accordance with the requirements set by the new directive concerning the submission of data in EU (GD Reporting 2016).</p>	<p>The authorities and bodies involved in water management, as well as their responsibilities and roles in the design and implementation of Directive 2000/60 / EC, are presented in a schematic and readily comprehensible manner.</p> <p>The results are presented in the Document "DEFINITION OF COMPETENT AUTHORITIES AND DETERMINATION OF THEIR AREA OF RESPONSIBILITIES".</p>
DEFINITION OF SURFACE WATER BODIES – TYPOLOGY	<p>Through the Update, new typologies for Surface Water Bodies are defined.</p> <p>Pursuant to the aforementioned, the number of Water Bodies is reassessed.</p> <p>It is noted that through the update the Water Bodies' code names are redefined. Instead of the country code "GR", "EL" is used, in order to comply to other EU databases.</p>	<p>No difference noted in the number of water systems in the Central Macedonia and the 1st RBMP. The alterations are related to the types of the surface water bodies while practically affect the methodology for classification of their status. The results are presented in the Document "CHARACTERIZATION, TYPOLOGY, REFERENCES CONDITIONS AND EVALUATION / CLASSIFICATION OF THE STATUS OF ALL CATEGORIES OF SURFACE WATER BODIES".</p>
DEFINITION OF GROUNDWATER BODIES	<p>The number of Groundwater Bodies is reassessed pursuant to the latest data provided by the National Monitoring Water Network or/and special studies that have been carried out in the elapse time between the endorsement of the 1st RBMP and this day.</p> <p>It is noted that through the update the Water Bodies' code names are redefined. Instead of the country code "GR", "EL" is used, in order to comply with other EU data bases.</p>	<p>In RBD EL09 the following alterations are made. The GWBs GR09AF011 και GR09AF012 are merged and the GWB Trikalariou –Oros kastorias – Prepes is resulted (EL09AF010). The subsystems Kokkodes Prepon Chalaras Mavrokampoy and Aposkepou Kefalariou are reconsidered as secondary GWBs with codes EL09AF013, EL0900014 και EL0900015 respectively. Finally the GWBs EL0900200 Koiti potamou Sioutsa and EL0900210 Aetia Grevenon are merged and the GWB EL090A351 Mesoelliniki Avlaka is derived</p>

SUBJECT OF THE UPDATED RBMP/ACTIVITY	DIFFERENCE IN RELATION TO THE 1 ST RBMP	SUMMARY OF THE RESULTS
		The results are presented in the Document "CHARACTERIZATION AND EVALUATION / CLASSIFICATION OF GROUNDWATER BODIES STATUS".
HEAVILY MODIFIED (HMWB) AND ARTIFICIAL (AWB) WATER BODIES	Heavily modified Water Bodies defined in the 1 st RBMP are reviewed pursuant to the new methodology established (Chapter 2.2.1) and the National Monitoring Network.	The implementation of the new methodology of the Initial and Definitive establishment of the HMWB and AWB does not result any differences in the number of HMWB and AWB presented in the 1 st RBMP. The results are presented in the Document "DEFINITION OF HEAVILY MODIFIED AND ARTIFICIAL WATER BODIES".
PROTECTED AREAS	The Register of Protected Areas that was formed in the 1 st RBMP is re-examined based on: <ul style="list-style-type: none"> • The new Natura 2000 sites proposed by the MEE on the basis of the provisions of the Birds Directives (2009/147 / EC) and Habitats (92/43 / EEC). • The results of the monitoring of the Bathing Waters and the provisions of the Bathing Water Directive (2006/7 / EC). • Other directives on water protection with stricter objectives such as the Drinking Water Directives (80/778 / EEC, as amended by Directive 98/83 / EC), on shellfish (2006/113 / EC), freshwater fish (2006/44/EC), protection from nitrification (91/676 / EEC) and urban waste water treatment (91/271 / EEC). • Latest data emerging from the confirmation of the 1st RBMP and relevant EU Guidance Documents. 	The surface and groundwater associated with the protected areas are declared. A new bathing water area is included in Lake Prespa and the reservoir Papadia is omitted as a result of the consultation whereas new data for the planning of the water supply projects by the reservoir are made available and a new measure is included in the Programme of measures that ensures the protection of the surface water supply works. The results are presented in the Document "UPDATED REGISTER OF PROTECTED AREAS".
PRESSURES AND IMPACTS	The assessment of pressures and impacts is carried out pursuant to the new methodology developed and the latest data that emerged from the approval of the 1 st RBMP.	In the RBD EL09, the methodological approaches followed the 1 st RBMP are similar to those of the Update. The resulting differentiations are mainly based on the latest available data,

SUBJECT OF THE UPDATED RBMP/ACTIVITY	DIFFERENCE IN RELATION TO THE 1 ST RBMP	SUMMARY OF THE RESULTS
	<p>Significant differentiation is considered the assessment of the pressures on the hydromorphological characteristics of the Water Bodies for which a specific methodological approach has been developed and presented analytically hereof.</p>	<p>concerning the cultivated land, the establishment of new activities, better mapping of the activities in the RBD. The pressures and loads resulting from the recorded pressures are linked to the WBs so as to optimize their relation to the proposed measures.</p> <p>As far as the pressures on the hydromorphologic characteristics of the water systems, they are evaluated more extensively and are used so as to define preliminarily the HMWB of a WB.</p> <p>The results are presented in the Document "ANALYSIS OF HUMAN PRESSURES AND THEIR IMPACT ON SURFACE WATER AND GROUNDWATER BODIES".</p>
<p>CLASSIFICATION OF SURFACE WATER BODIES STATUS</p>	<p>During the update, the classification of the SWBs' status is implemented on the basis of the new methodological approaches developed by the National Scientific Committee of the SSW to determine the methods for classifying the ecological status of all of the SWB categories and was approved by the EU and the data of the Monitoring Network of the Water Status. For the WBs which are not being monitored, the classification of their status is done by grouping based on their typology and the pressures they endure.</p>	<p>The 1st update includes a more comprehensive and reliable evaluation of the SWB status. As a result of the methodological approach applied, a significant reduction of the WBs with unknown status has been achieved.</p> <p>The results are presented in the document "CHARACTERIZATION, TYPOLOGY, REFERENCES CONDITIONS AND EVALUATION / CLASSIFICATION OF THE STATUS OF ALL CATEGORIES OF SURFACE WATER BODIES".</p>
<p>CLASSIFICATION OF GROUNDWATER BODIES STATUS</p>	<p>The methodology used in classifying the GWBs' status is not differentiated in relation to the 1st RBMP. The classification of the GWB is based on the latest data obtained from the monitoring network.</p>	<p>The 1st update includes a more comprehensive and reliable evaluation of the GWBs status based on the latest data obtained from the monitoring network.</p> <p>The results are presented in the document "CHARACTERIZATION AND EVALUATION/CLASSIFICATION OF GROUNDWATER WATER BODIES".</p>
<p>NETWORK FOR WATER STATUS MONITORING</p>	<p>It includes a significant number of samples from the period 2012 – 2015</p>	<p>The data used from the monitoring programme are presented in</p>

SUBJECT OF THE UPDATED RBMP/ACTIVITY	DIFFERENCE IN RELATION TO THE 1 ST RBMP	SUMMARY OF THE RESULTS
	for almost all biological qualitative elements, physico-chemical and chemical qualitative elements, as well as hydromorphological qualitative elements of the SWBs. It also includes measurements of both the qualitative and quantitative status of the GWBs.	the document "CHARACTERIZATION, TYPOLOGY, TYPE-CHARACTERIZATION REFERENCES CONDITIONS AND EVALUATION / CLASSIFICATION OF THE SITUATION OF ALL CATEGORIES OF SURFACE WATER BODIES" and "CHARACTERIZATION AND EVALUATION/CLASSIFICATION OF GROUNDWATER WATER BODIES" for the surface and groundwater Bodies respectively.
ECONOMIC ANALYSIS OF WATER USES	For the economic analysis of water uses the provisions of the new Ministerial Decision (No. 135275/22.05.17) are followed	The results are presented in the document "ECONOMIC ANALYSIS OF WATER USE AND IDENTIFICATION OF THE EXISTING RECOVERY RATE OF WATER SERVICES COSTS (WATER SUPPLY, IRRIGATION AND SEWERAGE) ".
ENVIRONMENTAL OBJECTIVES – EXEMPTIONS	In the 1st update, the definition of environmental objectives and exemptions is based on the new methodological approaches developed in accordance with the EU guidelines (see Chapter 8).	The results are summarised in Chapter 8 of this document and presented in the document "DETERMINATION OF THE ENVIRONMENTAL OBJECTIVES, INCLUDING THE “EXEMPTIONS” OF THE ACHIEVEMENT OF THE OBJECTIVES."
PROGRAM OF MEASURES	<p>The programme of measures as drawn up in this 1st Update of the management plan included briefly the following new approaches in relation to the 1st RBMP:</p> <ul style="list-style-type: none"> • The specialization/reformulation of measures of the 1st RBMP which continue in this management cycle. • The formulation of new measures to address the pressures of the WB and the achievement of the objectives set out. • The correlation of measures with specific significant pressures identified in the RBD. • The correlation of measures with main categories of measures as defined by the EU and specific indicators to monitor their implementation progress. • The correlation of measures with national climate change adaptation actions as set out in the national strategy for adaptation to climate change (MEE 2016). 	The new programme of measures as emerged from the consultation process of the draft RBMP and the Strategic Environmental Impact Assessment Study is summarised in Chapter 9 and is presented in the document "BASIC AND SUPPLEMENTARY MEASURES PROGRAMMES, INCLUDING THE ANALYSIS OF THEIR COSTS.

3 DESCRIPTION OF THE RIVER BASIN DISTRICT – COMPETENT AUTHORITIES

3.1 RIVER BASINS

Western Macedonia River basin District (EL09) with surface¹ 13.615,56 km², is one of the fourteen water districts in which the country was divided by Law 1739/1987 (Government Gazette 201/A/1987).

Western Macedonia River basin District, according to the Law 1739/1987, consists of two (2) River Basins (RB):

- Prespes (EL0901), with surface 1.209,43 km²
- Aliakmon (EL0902), with surface 12.406,13 km²



Figure 1: RBD EL09 – River Basins and Surface Water Bodies

3.1.1 Prespes River Basin (EL0901)

RB Prespes (EL0901) administratively belongs to the region of Western Macedonia and owes its name to two of the most important lakes in Greece, the small and great Prespa. It covers a small section of the EL09 on its NW border. In the north and west the RB is delimited by the borders of Albania and FYROM, respectively, in the south by the Trilari, Varnounta and Verno Mountains and in the east by Mount Voras. The RB is mountainous with the average altitude of approximately 1,025 m. The main massif developed in the RB, result in the distinction of two main hydrological sub-basins:

¹ It concerns the inland area. Coastal WBs with surface 3.295,17 km² are not included.

the closed basin of Prespa Lakes and the Axios Basin – Florina section. The second sub-basin concerns in fact the hydrological basin of the river Lygou or Sakouleva. The common characteristic of the aforementioned two sub-basins is that they are divisions of cross-border basins, the first is a three-nation cross-border RB and is shared between Greece, Albania and FYROM, while the second is shared between Greece and FYROM.

3.1.2 Aliakmon River Basin (EL0902)

RB Aliakmon (EL0902) can be distinguished in four separate hydrological sub-basins: Aliakmon, the closed Ptolemaida basin, the Regional Drainage Channel basin and the Katerini plain. The first, Aliakmon, which is the largest out of all, follows the boundaries of the natural hydrological basin of Aliakmon river (including the hydrological basin of Lake Kastoria). The closed Ptolemaida basin is bounded by the homonymous plateau, which is drained superficially in the natural lakes system of Vegoritida, Petron, Zazaris and Cheimaditis, which are connected by artificial channels. The sub-basin of the Regional Drainage Channel drains the waters of the mountainous massif Vermio and Voras through the main rivers of Almopaio, Edesseos, Arapitsa and Tripotamos in the Drainage Channel T 66 which is the boundary with the RBD of Central Macedonia (EL10). Finally, Katerini Plain is developed on the NE border of the RBD and consists of several relatively small hydrological basins, the main one being the Mavneri stream, which flow into the Thermaikos Gulf.

3.2 NATURAL ATTRIBUTES

The RBD of Western Macedonia (EL09) is located in the northwestern part of the country. It is delimited on the north side by the Greek-FYROM border, while in the east, with direction from north to south, by Mount Paiko, Drainage Channel T66 and the Thermaikos Gulf. In the south, with direction from east to west, by the mountains of Olympos, Kamvounia and Chasia and finally in the west, with direction from south to north, by the mountains Lygos, Voos and the borders of Greece – Albania. As far as its position in relation to the other national RBD is concerned, in the east is located the RBD of Central Macedonia (EL10), in the south the RBD of Thessaly (EL08) and in the west the RBD of Epirus (EL05).

The RBD is mainly mountainous-semimountainous, as only 30% of the area is located on an altitude below 600 m. Its main feature is the existence of nine peaks with an altitude exceeding 2000 m, with the most distinctive the mount of Olympus (Mytikas, 2,917 m). In the western and central part of the RBD, two large mountain massif are evident with direction from north to south. The first one consists of the mountains Verno (2,128 m), Askio (2,111 m) and Vourino (1,688 m), while the second one of the Mountains Voras (2,524 m), Vermio (2,052 m) and Pieria (2,180 m). Among these mountainous massifs, the flat areas of Kastoria, Florina, Ptolemaida and Grevena are distinguished. In the eastern part of the RBD the relief is smooth and the lowland areas of Edessa, Naoussa, Veria and Pieria are dominant.

The coastline of the RBD is almost a straight line, with a mild topography and a total length of 80 km. The main characteristic of the coastline is the existence of the lagoon of Alykes Kitrous and the delta of the estuary of Aliakmon.

The average annual total water supply in the RBD of Western Macedonia is about $3,2 \times 10^9 \text{ m}^3$. From the above quantity the needs of the Western Macedonia RBD (EL09) and a part of Central Macedonia RBD (EL10) are met as the quantity of water is approximately equal to $500 \times 10^6 \text{ m}^3$ and it is

transported through the Canal of Aliakmon-Axios to meet irrigation needs of the valley of Thessaloniki-Langadas and the irrigation network of the municipality of Alexandria as well as a quantity of $50 \times 10^6 \text{ m}^3$ (with a maximum $98 \times 10^6 \text{ m}^3$ depending on the needs) to meet the drinking water supply needs of the wider region of Thessaloniki.

3.3 COMPETENT AUTHORITIES

The competent authorities for the implementation of Directive 2000/60/EC have been designated according to **Law 3199/2003** (Government Gazette 280A'/9.12.2003), as amended, for the Protection and Management of Water. The competent authorities are:

The **National Water Committee**, has been designated as a high-level inter-ministerial body and is responsible for drawing up the policy for the management and protection of the country's water resources.

The **National Water Council**, delivers an opinion to the National Water Committee on National Water Protection and Management Plans and takes note of the Annual Report submitted by the National Water Committee on the status of the country's water environment, the implementation of the legislation on water protection and management, and the compatibility with the European *acquis communautaire*.

The **Special Secretariat for Water**, has the competence to prepare the programs for the protection and management of the country's water resources and the coordination of services and state bodies on all issues related to the protection and management of water. The Secretariat, in cooperation with the Water Directorates of the Decentralized Administrations, prepares the national programs for the protection and management of the country's water resources and monitors and coordinates their implementations.

Table 3-1: Identity of the National Competent Authority

OFFICIAL NAME	SPECIAL SECRETARIAT FOR WATER
Acronym	S.S.W.
Legal Status	Single Administrative Division of the Ministry of Environment and Energy
Provisions for Creating and Defining Competencies	<ul style="list-style-type: none"> - Law 3199/2003 (Government Gazette A' 280) for the protection and management of Water Resources, as amended by the laws 4117/2013 (Government Gazette A' 29) and 4315/2014 (Government Gazette A' 269), modified in the Government Gazette 93/A/29.06.2017 and law 4423/2016 (Government Gazette 182/A/2016). - PD 132/2017 (Government Gazette A' 160) «Organisation of Ministry of Environment and Energy». In combination with the CMD 322/2013 «Organisation of Special Secretariat for Water of the Ministry of Environment, Energy and Climate Change» (GG B' 679), as in force.
Contact Info	
Postal Address	- Amaliados 17
Postal Code	- 11523
City	- Athens
Country	- Greece
Website	http://www.ypeka.gr/ , wfdver.ypeka.gr

OFFICIAL NAME	SPECIAL SECRETARIAT FOR WATER
Contact Points	tel: 210 6475102, 2131515410 e-mail: info.egy@prv.ypeka.gr

In addition, for the implementation of Directive 2000/60/EC, the following Ministries are involved at a National Level: Ministry of Foreign Affairs, Ministry of Rural Development and Food, Ministry of Infrastructure and Transport, Ministry of Finance and Development, Ministry of Health, Ministry of Maritime and Island Policy, Ministry of Interior Affairs.

The **Water Council of Decentralized Management**, for each Decentralized Administration, according to article 6 of Law 3199/03, as amended by article 53 of Law 4423/2016 (Government Gazette A' 182/27.09.2016) which is an instrument of social dialogue and consultation on water protection and management issues.

The **Water Directorates of Decentralized Management**, through which the Decentralized Administration's responsibilities for water protection and management are exercised.

Table 3-2: Identities of the Regional Competent Authorities

OFFICIAL NAME	DECENTRALIZED ADMINISTRATION OF EPIRUS- WESTERN MACEDONIA, WATER DIRECTORATE OF WESTERN MACEDONIA
Acronym	W.D.W.M.
Legal Status	Organic Unit of the Decentralized Administration of Epirus – Western Macedonia Falls under the General Directorate for Spatial Planning and Environmental Policy.
Provisions for Creating and Defining Competencies	<ul style="list-style-type: none"> ✓ Law 3199/2003 (Government Gazette A '280), on the Protection and Management of Waters as it is amended by the Laws 4117/2013 (GG 29/A/2013) and 4315/2014 (GG 269/A/2014) and is in force - Law 3852/2010 (Government Gazette A'87) Kallikratis Program as it is amended and is in force - PD. 51/2007 on the determination of measures and procedures for water protection and management in compliance to the Directive 2000/60/EC - PD 141/2010 (Government Gazette A'234), Decentralized Administration of Epirus - Western Macedonia. - Decision 706/2010 (GG B'1383/2-9-2010) of the National Water Committee laying down the River Basis in the Country and the definition of the competent regional authorities for their protection and management @ and the GG B 1572/28-9-2010 for the correction of the Annex II as it is force after the approval of the River Basin Management Plans - Decision of General Secretary of Decentralized Administration no. 59129/1167 / 25.11.2011 (Government Gazette B '2921 / 22.12.2011) - Determination of the responsibilities of the Decentralized Administrations of Epirus - Western Macedonia and Macedonia - Thrace, on the RB of the Western Macedonia (EL09), for the issuing of licenses and the implementation of water exploitation projects.
Contact Info	
Postal Address	ZEP Area

OFFICIAL NAME	DECENTRALIZED ADMINISTRATION OF EPIRUS- WESTERN MACEDONIA, WATER DIRECTORATE OF WESTERN MACEDONIA
Postal Code	50100
City	Kozani
Country	Greece
Website	http://www.apdhp-dm.gov.gr
Contact Points	tel: 2461 350140 Fax: 2461 053280 e-mail: vlatis@apdhp-dm.gov.gr

OFFICIAL NAME	DECENTRALIZED ADMINISTRATION OF MACEDONIA AND TRACE WATER DIRECTORATE OF CENTRAL MACEDONIA
Acronym	WDCM
Legal Status	Organic Unit of the Decentralized Administration of Epirus – Western Macedonia Falls under the General Directorate for Spatial Planning and Environmental Policy.
Provisions for Creating and Defining Competencies	<ul style="list-style-type: none"> - Law 3199/2003 (Government Gazette A '280), on the Protection and Management of Waters as it is amended by the Laws 4117/2013 (GG 29/A/2013) and 4315/2014 (GG 269/A/2014) and is in force - Law 3852/2010 (Government Gazette A'87) Kallikratis Program as it is amended and is in force - PD. 51/2007 on the determination of measures and procedures for water protection and management in compliance to the Directive 2000/60/EC - PD 141/2010 (Government Gazette A'234), Decentralized Administration of Epirus - Western Macedonia. - Decision 706/2010 (GG B'1383/2-9-2010) of the National Water Committee laying down the River Basis in the Country and the definition of the competent regional authorities for their protection and management @ and the GG B 1572/28-9-2010 for the correction of the Annex II as it is force after the approvment of the River Basin Managment Plans
Contact Info	
Postal Address	32, Georgikis Sxolis Av.
Postal Code	55134
City	Thessaloniki
Country	Greece
Website	http://www.damt.gov.gr http://dydaton.damt.gov.gr/
Contact Points	Tel: 2313 309483, 2313 309488 Fax: 2310 424160 e-mail: dy-km@damt.gov.gr

Additionally for the implementation of the Directive 2000/60/EC are involved in Regional Level Local Authorities of A and B grade.

3.3.1 Shared Competence in RB Aliakmon

The National Water Commission with the decision No. 706/16.07.2010 (GG B'1383/02.09.2010 and more specifically in annex II, as corrected by the Government Gazette B'1572/28.09.2010, appointed the regional authorities responsible for each RB in each RBD of the country. Thus, for the RBD EL09 of Western Macedonia is inferred that:

- For the Prespa basin (EL0901) the competent prefecture is that of Western Macedonia, while at the level of decentralized administration the decentralized administration of Epirus-Western Macedonia is the responsible, the responsibilities of which are borne by the Directorate of Water of Western Macedonia.
- For the Aliakmon RB (EL0902) co-competent prefectures are mainly Western Macedonia and Central Macedonia. At the level of decentralized administration co-competent authorities are the Decentralized administration of Epirus-Western Macedonia and the decentralized administration of Macedonia-Thrace, whose responsibilities are exercised respectively by the Directorates of Water of Western and Central Macedonia.

Table 3-3: RB and Responsible decentralized administration

RB Code	RB Name	Regions extending geographically within the boundaries of river basins	Responsible decentralized administration, according to GG B ' 1383, 1572/2010 and Law 3852/2010
EL0901	Prespes	Western Macedonia (98,08%) Central Macedonia (1,92%)	Epirus-Western Macedonia
EL0902	Aliakmon	Western Macedonia (61,77%) Central Macedonia (36,26%) Thessaly (1,51%) Epirus (0,46%)	Epirus-Western Macedonia / Macedonia- Thrace

By a joint decision of the Secretaries of the decentralized administrations of Epirus-Western Macedonia and Macedonia-Thrace [No. 59129/1167/25.11.2011- GG B ' 2921/22-12-2011 "Designation of competences of decentralised administrations of Epirus – Western Macedonia and Macedonia-Thrace, on the River Basins of the RBD of Western Macedonia (EL09) "], the responsibilities of the Directorates of Water of Western and Central Macedonia on the Aliakmo Basin (EL0902) were established, as far as the issuance of water use licenses and implementation of relative exploitation projects. This decision may be reviewed by including other aspects of the competences of the Directorates of Water, taking into account the latest available data.

4 DESIGNATION AND CLASSIFICATION OF WATER BODIES

4.1 SURFACE WATER BODIES (SWB)

For the 1st Update of the RBMP of the Western Macedonia RBD (EL09) the 168 surface water bodies that are identified in the 1st RBMP are not changed. The categories of the SWBs for each RB are presented in the following table.

Table 4-1: Number of surface water bodies of Western Macedonia RBD (EL09) for each RB

Category	RBDs		Total
	Prespes (EL0901)	Aliakmon (EL0902)	
River WBs	22	128	150
River WBs (Reservoirs)	1	6	7
Lake WBs	2	5	7
Transitional WBs	0	2	2
Coastal WBs	0	2	2
Total	25	143	168

4.1.1 River Water Bodies

The river water bodies of the RBD under the new typology as defined by the Mediterranean Intercalibration Group, based on European Decision 2013/480EC are presented in the following table.

Table 4-2: River WBs under new typology, based on the European Decision 2013/480/EK and MED GIG, for each RB of the Western Macedonia RBD (EL09)

No. (Fig 6)	WB Name	WB Code	Category	Length (km)	WBs RB (km ²)	Accumulated River Basin (km ²)	Average Annual Run-off (hm ³)	WB Type
Prespes RB (EL0901)								
1	Paliorema (Ag. Germanos)	EL0901R000001018N	NAT	2,60	1,7	65,5	24,9	R-M1
2	Ag. Germanos	EL0901R000001019N	NAT	5,18	18,2	63,81	24,4	R-M1
3	Kaloneri	EL0901R000001020N	NAT	8,35	25,87	25,87	10,5	R-M1
4	Sirakio	EL0901R000002021N	NAT	6,79	19,74	19,73	8	R-M1
5	Ligkos	EL0901R0F0201001N	NAT	5,01	113,71	862,65	227,7	R-M2
6	Kalinikiotiko	EL0901R0F0202002N	NAT	3,76	13,01	116,9	26,1	R-M2
7	Kalinikiotiko	EL0901R0F0202003N	NAT	10,00	61,19	103,89	23,2	R-M2
8	Kalinikiotiko	EL0901R0F0202004N	NAT	2,50	42,7	42,7	9,5	R-M1
9	Ligkos	EL0901R0F0203005N	NAT	5,47	10,65	632,01	176,3	R-M2
10	Paleo	EL0901R0F0204006N	NAT	11,98	44,94	177,64	49,6	R-M2
11	Paleo	EL0901R0F0204007N	NAT	10,00	56,24	132,72	37,1	R-M2
12	Ligkos	EL0901R0F0205008N	NAT	6,29	198,94	443,72	123,9	R-M2
13	Florina	EL0901R0F0206011N	NAT	1,03	1,14	141,67	24,8	R-M2
14	Tropeouxos	EL0901R0F0206012N	NAT	6,65	35,39	87,73	24,5	R-M1
15	Tropeouxos	EL0901R0F0206013N	NAT	5,00	52,35	52,35	14,6	R-M1
16	Florina	EL0901R0F0206109N	NAT	3,65	3,75	52,8	14,7	R-M1
17	Florina	EL0901R0F0206110H	HMWB	2,12	5,26	47,54	13,25	R-M1
18	Florina	EL0901R0F0206111N	NAT	5,00	43,79	43,79	12,2	R-M1
19	Melpo	EL0901R0F0207014N	NAT	7,15	47,76	103,1	28,8	R-M2
20	Melpo	EL0901R0F0207015N	NAT	2,50	2,62	55,34	15,5	R-M1
21	Asprorema	EL0901R0F0208016N	NAT	3,20	11,06	11,06	3,1	R-M1
22	Drosopigiotiko	EL0901R0F0209017N	NAT	7,28	41,67	41,67	11,6	R-M1
Aliakmon RB (EL0902)								
23	Koilada (Soulou)	EL0902R0000010122N	NAT	24,76	851,13	1394,16	128,6	R-M4

No. (Fig 6)	WB Name	WB Code	Category	Length (km)	WBs RB (km ²)	Accumulated River Basin (km ²)	Average Annual Run-off (hm ³)	WB Type
24	Soulou (Mines)	EL0902R0000010123H	HMWB	14,26	169,44	543,02	39,5	R-M2
25	Soulou (Sari Gkioli)	EL0902R0000010124A	AWB	8	373,59	373,59	24	R-M2
26	Dioriga Vegoritida-Petron	EL0902R0000010125A	AWB	2,64	1,61	0	0	R-M1
27	Amintas	EL0902R0000010126N	NAT	7,25	54,13	252,43	42,8	R-M4
28	Dioriga Chimaditida	EL0902R0000010127H	HMWB	7,62	66,82	198,29	36,8	R-M2
29	Dioriga Zazari-Chimaditida	EL0902R0000010128A	AWB	2,24	1,38	0	0	R-M1
30	Sklithro	EL0902R0000010129H	HMWB	6,92	94,97	94,97	19,7	R-M1
31	Rema Korinos (Morphologically altered)	EL0902R0001000114H	HMWB	3,97	4,85	60,13	9,7	R-M5
32	Stream Katerini	EL0902R0001000115N	NAT	23,84	55,25	55,25	9	R-M1
33	Aliakmonass (Krasopouli-Delta)	EL0902R0002010003H	HMWB	20,28	27,15	8686,36	2517,7	R-M3
34	Krioneri (Morphologically altered)	EL0902R0002020001H	HMWB	7,96	10,92	77,5	12,5	R-M5
35	Kerasies	EL0902R0002020002N	NAT	18	66,59	66,59	10,7	R-M5
36	Aliakmonas (T66-Krasopouli)	EL0902R0002030007H	HMWB	8,63	14,41	8525,21	2478	R-L2
37	Aliakmonas (T66-Krasopouli)	EL0902R0002030008H	HMWB	7,5	84,58	8510,8	2474,4	R-M3
38	Krasopouli (Morphologically altered)	EL0902R0002040004H	HMWB	6,26	30,1	134	33	R-M2
39	Krasopouli (Morphologically altered)	EL0902R0002040005H	HMWB	5	15,2	103,9	25,6	R-M2
40	Krasopouli	EL0902R0002040006N	NAT	16,73	88,7	88,7	21,9	R-M1
41	Aliakmonas (to T66)	EL0902R0002050009H	HMWB	5,98	12,31	6105,82	1681,9	R-M3
42	Aliakmonas (to T66)	EL0902R0002050010H	HMWB	5,63	42,17	6093,51	1678,9	R-M3
43	T66	EL0902R0002060079A	AWB	8,59	44,85	2320,4	771,7	R-M3
44	T66	EL0902R0002060081A	AWB	7,12	40,69	2063,51	694,8	R-M3
45	T66	EL0902R0002060083A	AWB	5,85	1,54	1888,54	650,3	R-M3
46	T66	EL0902R0002060086A	AWB	9,52	30,48	1591,1	547,7	R-M3
47	T66	EL0902R0002060088A	AWB	1,47	0,23	1505,64	529,7	R-M3
48	T66	EL0902R0002060095A	AWB	1,68	0,34	1201,02	450,9	R-M3
49	T66	EL0902R0002060100A	AWB	9,06	151,2	151,27	37,2	R-M2

No. (Fig 6)	WB Name	WB Code	Category	Length (km)	WBs RB (km ²)	Accumulated River Basin (km ²)	Average Annual Run-off (hm ³)	WB Type
50	Tripotamos	EL0902R0002061080N	NAT	16,07	212,05	212,05	65,8	R-M2
51	Konticha	EL0902R0002062082N	NAT	22,94	134,28	134,28	34,2	R-M2
52	Arapitsa	EL0902R0002063084N	NAT	19,34	185,63	295,89	102,2	R-M2
53	Arapitsa	EL0902R0002063085N	NAT	10	110,26	110,26	38,1	R-M4
54	Lianorema	EL0902R0002064087N	NAT	16,85	54,98	54,98	11,7	R-M1
55	Edeseos (Skidras part)	EL0902R0002065089H	HMWB	4,98	12,44	304,39	78,7	R-M2
56	Edeseos	EL0902R0002065090N	NAT	5,66	121,31	291,95	75,5	R-M4
57	Edeseos (hydroelectric station part)	EL0902R0002065091H	HMWB	4,47	43,41	170,64	44,2	R-M2
58	Edeseos (groundwater diversion)	EL0902R0002065092H	HMWB	2,19	0,66	0	0	R-M1
59	Edeseos (diversion towards hydroelectric station)	EL0902R0002065093H	HMWB	1,53	43,77	127,22	32,8	R-M1
60	Edeseos (Agra part)	EL0902R0002065094H	HMWB	7,08	83,45	83,45	21,4	R-M1
61	Mavropotamos	EL0902R0002066096N	NAT	2,5	10,99	1049,4	413,6	R-M3
62	Mavropotamos	EL0902R0002066097N	NAT	23,67	225,77	1038,41	410,9	R-M3
63	Megalo - Karavidia	EL0902R0002066098N	NAT	127,01	777,16	812,65	327,5	R-M2
64	Aspropotamos	EL0902R0002066099N	NAT	7,02	35,6	35,54	14,3	R-M1
65	Aliakmonas (Polifitos-Sfikia)	EL0902R0002070011H	HMWB	4,46	22,62	5812,18	1609,6	R-M3
66	Skoularitikos Lakos	EL0902R0002080012N	NAT	3,61	3,96	33,04	7	R-M1
67	Skoularitikos Lakos	EL0902R0002080013N	NAT	2,5	29,08	29,08	6,2	R-M1
68	Aliakmonas	EL0902R0002090024N	NAT	9,59	66,95	4274,7	1265,4	R-M3
69	Ftelias	EL0902R0002100014N	NAT	15	81,91	114,24	24,4	R-M5
70	Ftelias	EL0902R0002100015N	NAT	6,01	32,33	32,33	6,9	R-M1
71	Aliakmonas	EL0902R0002110036N	NAT	3,14	6,53	3351,48	1250,6	R-M3
72	Ag. Markos	EL0902R0002120016N	NAT	4,7	39,87	39,87	8,5	R-M5
73	Aikaterinis Lakos	EL0902R0002120017N	NAT	8,92	46,4	46,22	9,9	R-M1
74	Aliakmonas	EL0902R0002130038N	NAT	6,22	35,42	3272,58	917,4	R-M3

No. (Fig 6)	WB Name	WB Code	Category	Length (km)	WBs RB (km ²)	Accumulated River Basin (km ²)	Average Annual Run-off (hm3)	WB Type
75	Aliakmonas	EL0902R0002150040N	NAT	10,31	25,99	3057,25	865,4	R-M3
76	Smiksi	EL0902R0002160018N	NAT	5,55	114,77	114,98	25,5	R-M2
77	Aliakmonas	EL0902R0002170044N	NAT	3,42	7,01	2951,78	859,6	R-M3
78	Vintza	EL0902R0002180019N	NAT	7,14	35,24	35,24	7,8	R-M1
79	Aliakmonas	EL0902R0002190047N	NAT	10,59	58,87	2858,17	821,2	R-M3
80	Aliakmonas	EL0902R0002190048N	NAT	10,49	84,36	2799,3	808,1	R-M3
81	Akoniou Lakos	EL0902R0002200020N	NAT	5,68	44,42	44,42	9,8	R-M1
82	Aliakmonas	EL0902R0002210054N	NAT	8,86	100,99	2297,97	656,5	R-M4
83	Karavida	EL0902R0002220021N	NAT	7,29	35,26	35,26	7,8	R-M1
84	Aliakmonas	EL0902R0002230056N	NAT	8,28	61,54	2068,51	598,7	R-M3
85	Aliakmonas	EL0902R0002230057N	NAT	11,34	127,24	2006,97	583,2	R-M3
86	Potamia	EL0902R0002240022N	NAT	6,25	50,78	50,78	11,3	R-M1
87	Sioutsa	EL0902R0002240023N	NAT	8,55	105,77	105,75	23,5	R-M2
88	Aliakmonas	EL0902R0002250059N	NAT	13,53	35,47	1788,53	528,1	R-M4
89	Aliakmonas	EL0902R0002270063N	NAT	1,39	0,95	1441,4	445,2	R-M3
90	Venetikos	EL0902R0002280025N	NAT	22,4	107,98	856,26	315,8	R-M2
91	Venetikos	EL0902R0002280029N	NAT	12,56	61	547,11	222,7	R-M2
92	Venetikos	EL0902R0002280034N	NAT	14,13	63,48	200,4	83,7	R-M2
93	Venetikos	EL0902R0002280035N	NAT	20,68	136,93	136,93	57,2	R-M2
94	Koutsafira	EL0902R0002281026N	NAT	5,28	8,4	201,17	62,5	R-M2
95	Sravopotamos	EL0902R0002281027N	NAT	12,62	114,59	114,59	35,5	R-M2
96	Koutsafira	EL0902R0002281028N	NAT	12,6	78,13	78,18	24,4	R-M1
97	Venetikos	EL0902R0002282030N	NAT	8,41	29,4	285,71	119,5	R-M2
98	Venetikos	EL0902R0002282031N	NAT	1,69	4,32	256,3	107,2	R-M2
99	Venetikos	EL0902R0002282032N	NAT	27,99	150,11	150,14	62,8	R-M2
100	Aspropotamos	EL0902R0002282033N	NAT	22,78	101,83	101,84	42,6	R-M2

No. (Fig 6)	WB Name	WB Code	Category	Length (km)	WBs RB (km ²)	Accumulated River Basin (km ²)	Average Annual Run-off (hm ³)	WB Type
101	Aliakmonas	EL0902R0002290067N	NAT	8,94	57,31	1229,09	391,7	R-M3
102	Potamia	EL0902R0002300037N	NAT	14,6	72,36	72,36	16	R-M1
103	Aliakmonas	EL0902R0002310070N	NAT	6,01	22,6	1021,47	322,8	R-M3
104	Greveniotikos	EL0902R0002320039N	NAT	27,02	179,91	179,91	44,1	R-M2
105	Aliakmonas	EL0902R0002330074N	NAT	7,14	18,42	626,73	181,3	R-M2
106	Ntroumpeta	EL0902R0002340041N	NAT	3,34	10,67	79,49	17,6	R-M1
107	Lisasmenis r.	EL0902R0002340042N	NAT	6,21	31,74	31,74	7	R-M1
108	Potamia	EL0902R0002341043N	NAT	4,76	37,08	37,08	8,2	R-M1
109	Aliakmonas	EL0902R0002350077N	NAT	3,04	17,17	411,17	104,2	R-M2
110	Aliakmonas	EL0902R0002350078N	NAT	43,52	394	394	98	R-M2
111	Milopotamos	EL0902R0002360045N	NAT	6,14	78,39	86,6	19,2	R-M1
112	Milopotamos	EL0902R0002360046N	NAT	2,5	8,22	8,22	1,8	R-M1
113	Pramoritsa	EL0902R0002380049N	NAT	22,11	120,31	416,97	132,3	R-M2
114	Pramoritsa	EL0902R0002380050N	NAT	20,52	94,32	296,66	94,3	R-M2
115	Koutsomilia	EL0902R0002380051N	NAT	12,46	31,71	96,11	30,6	R-M1
116	Koutsomilia	EL0902R0002380052N	NAT	5,59	59,26	59,26	18,9	R-M1
117	Paliochori	EL0902R0002381053N	NAT	11,79	106,23	106,23	33,9	R-M2
118	Mirichos	EL0902R0002400055N	NAT	11,25	128,47	128,47	32,4	R-M2
119	Poros	EL0902R0002420058N	NAT	9,56	91,21	91,21	23	R-M1
120	Gkiole	EL0902R0002440060N	NAT	4,53	15,52	311,66	74	R-M4
121	Gkiole	EL0902R0002440061N	NAT	5	29,05	296,14	70,7	R-M2
122	Ksiropotamos	EL0902R0002440062N	NAT	11,67	100,46	100,46	24,2	R-M5
123	Velas	EL0902R0002460064N	NAT	13,38	45,19	211,37	53,3	R-M2
124	Velas	EL0902R0002460065N	NAT	19,59	124,07	166,18	41,9	R-M4
125	Velas	EL0902R0002460066N	NAT	7,5	42,11	42,11	10,6	R-M4
126	Sravopotamos	EL0902R0002480068N	NAT	15,73	55,37	150,31	53,9	R-M2

No. (Fig 6)	WB Name	WB Code	Category	Length (km)	WBs RB (km ²)	Accumulated River Basin (km ²)	Average Annual Run-off (hm3)	WB Type
127	Sravopotamos	EL0902R0002480069N	NAT	7,5	94,95	94,95	34	R-M4
128	Aliakmonas	EL0902R0002500071N	NAT	11,85	23,51	372,14	133,4	R-M2
129	Aliakmonas	EL0902R0002500072N	NAT	34,32	237,01	348,63	125	R-M4
130	Aliakmonas	EL0902R0002500073N	NAT	10,68	111,62	111,62	40	R-M2
131	Vrochopotamos	EL0902R0002520075N	NAT	10	66,26	197,14	70,7	R-M2
132	Vrochopotamos	EL0902R0002520076N	NAT	14,58	130,7	130,88	46,9	R-M2
133	Chelopotamos	EL0902R0003000116H	HMWB	6,8	18,34	65,06	82,5	R-M2
134	Ksirolaki	EL0902R0003000117N	NAT	20,32	239,29	239,35	75,4	R-M2
135	Mavroneri (morphologically altered)	EL0902R0004010102H	HMWB	4,44	14,84	590,27	179,8	R-M2
136	Mavroneri	EL0902R0004010103N	NAT	6,32	31,64	575,35	176	R-M2
137	Pelekas	EL0902R0004020104N	NAT	6,55	19,31	227,88	57,4	R-M2
138	Pelekas	EL0902R0004020105N	NAT	23,78	135,76	135,76	34,2	R-M2
139	Patsiaris	EL0902R0004021106N	NAT	17,05	72,81	72,81	18,3	R-M1
140	Mavroneri	EL0902R0004030107N	NAT	14,44	46,4	315,83	110,6	R-M2
141	Pisteries	EL0902R0004040108N	NAT	12,18	42,34	64,79	23,6	R-M1
142	Pisteries	EL0902R0004040109N	NAT	7,5	22,45	22,45	8,2	R-M1
143	Mavroneri	EL0902R0004050110N	NAT	3,5	25,44	204,64	74,9	R-M2
144	Petriotiko	EL0902R0004060111N	NAT	14,12	65,1	65,04	23,8	R-M1
145	Mavroneri	EL0902R0004070112N	NAT	12,76	31,08	114,17	41,8	R-M2
146	Mavroneri	EL0902R0004070113N	NAT	7,5	83,16	83,08	30,4	R-M1
147	Rema Mana (morphologically altered)	EL0902R0005000118H	HMWB	1,34	51,36	105,79	41	R-M2
148	Mavrologos	EL0902R0005000119N	NAT	6,87	7,68	54,34	21	R-M1
149	Mavrologos	EL0902R0005000120N	NAT	7,18	11,16	46,66	18,1	R-M4
150	Mavrologos	EL0902R0005000121N	NAT	5	35,46	35,5	13,8	R-M4
NAT: Natural WB, HMWB: Heavily Modified WB, AWB: Artificial WB								

4.1.2 Lake Water bodies

In the following table are presented the Lake WBs and their typology for the RBD.

Table 4-3: Lake WBs and reservoirs (river HMWB) of Western Macedonia RBD (EL09)

No	WB Name	WB Code	Category	Area (km ²)	Type of WB
Prespes RB (EL0901)					
1	Megali Prespa	EL0901LFA0000014N	NAT	281,68 (38,64 Ελλάς)	GR-DNL
2	Mikri Prespa	EL0901LOA0000013N	NAT	47,38 (42,9 Ελλάς)	GR-SNL
3	Techniti Limni Papadia	EL0901L000000001H	HMWB	0,58	L-M 5/7
Aliakmon RB (EL0902)					
4	Vegoritida	EL0902L000000005N	NAT	53,96	GR-DNL
5	Zazari	EL0902L000000002N	NAT	1,7	GR-SNL
6	Kastoria	EL0902L000000012H	HMWB	28,84	GR-SNL
7	Chimaditida	EL0902L000000003N	NAT	9,57	GR-VSNL
8	Petron	EL0902L000000004N	NAT	12,36	GR-VSNL
9	Ilarionas	EL0902L000000010H	HMWB	24,92	L-M 5/7
10	Polifitos	EL0902L000000009H	HMWB	74,70	L-M 5/7
11	Sfikia	EL0902L000000008H	HMWB	4,41	L-M 5/7
12	Asomata	EL0902L000000007H	HMWB	2,62	L-M 5/7
13	Varvara	EL0902L000000006H	HMWB	1,34	L-M 5/7
14	Pramoritsa	EL0902L000000011H	HMWB	0,30	L-M 5/7
NAT: Natural WB, HMWB: Heavily Modified WB, AWB: Artificial WB					

4.1.3 Transitional Water Bodies

In the Western Macedonia RBD (EL09) are identified the transitional WBs that are presented in the following table and in the map (**Error! Reference source not found.**).

Table 4-4: Transitional WBs of Western Macedonia RBD (EL09)

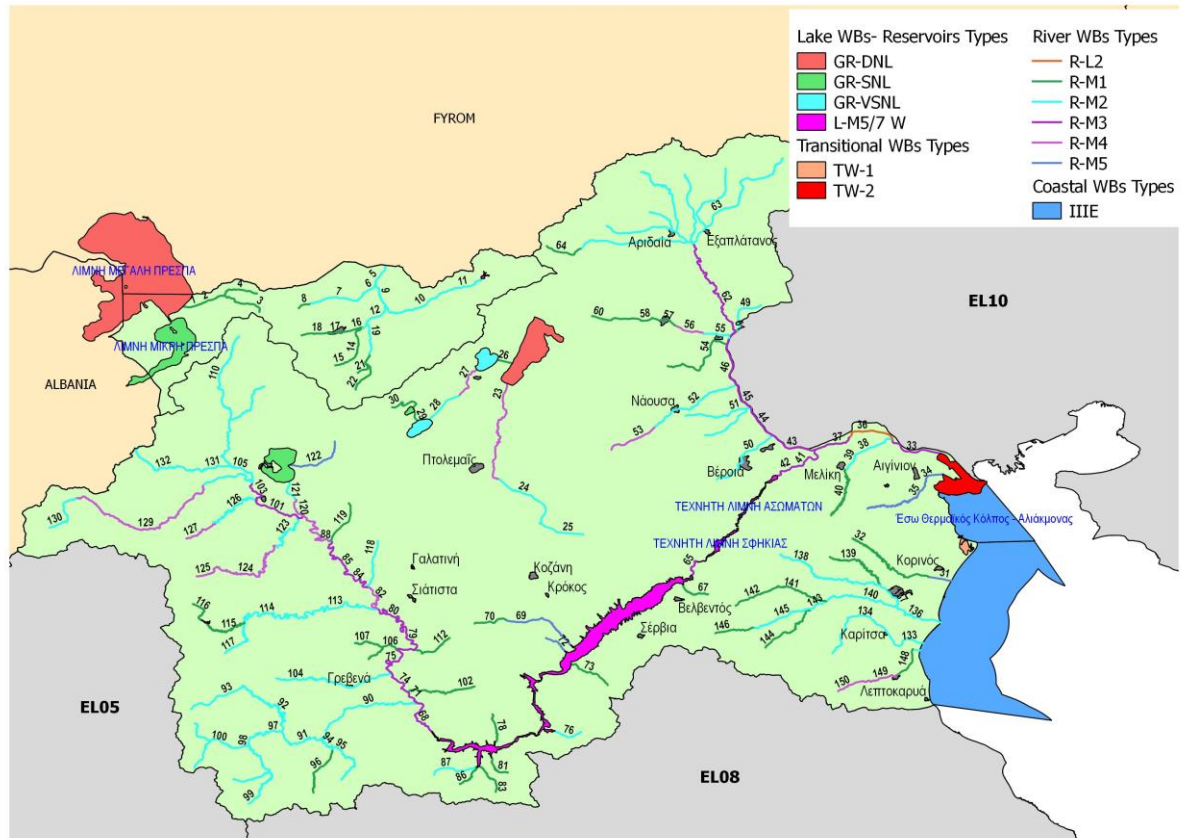
No	WB Name	WB Code	Category	Area (km ²)	Type of WB
Aliakmon RB (EL0902)					
1	EL0902T000000001N	Ekvoliko Sistima Loudias-Aliakmonas	NAT	33,23	TW-2
2	EL0902T000000002N	Limnothalassa Kitrous	NAT	4,5	TW-1
NAT: Natural WB, HMWB: Heavily Modified WB, AWB: Artificial WB					

4.1.4 Coastal Water Bodies

In the Western Macedonia RBD (EL09), Prespes RB does not include any coastal water bodies. However, in Aliakmon RB two CWB are identified, Outer Thermaikos Gulf – Katerini Shore and Inner Thermaikos Gulf – Aliakmon River, which are presented in the following table.

Table 4-5: Coastal WBs of Western Macedonia RBD (EL09)

No	WB Name	WB Code	Category	Area (km ²)	Type of WB
Aliakmon RB (EL0902)					
1	Ekso Thermaikos Kolpos-Paralia Katerinis	EL0902C0001N	NAT	1.014,22	IIIE
2	Eso Thermaikos Kolpos-Aliakmonas	EL0902C0002N	NAT	112,92	IIIE
NAT: Natural WB, HMWB: Heavily Modified WB, AWB: Artificial WB					



Note: River numbering is compatible with the numbering of the Table 4.4

Figure 2: Surface Water Bodies and Typology of RBD EL09

4.2 GROUNDWATER BODIES

The main differences in the identification of the GWBs, compared to the 1st RBMP are due to the spatial gaps existed which are filled in order to cover or the area of the RBD.

Thus resulted the following :

- The GR09AF011 and GR09AF012 karstic subsystems were integrated resulting in a single karstic GWB, with the name of Tristario Mountain of Kastoria-Prespa under the code EL09AF010.
- Granular Prespa's Subsystems, Halaras Mavrokambos and Aposkepu Kefalari were revised to secondary GWB under the codes EL09AF013, EL0900014 and EL0900015, respectively.

- Secondary Sioutsa riverbed (GR0900200) and Aetia of Grevena (GR0900210) were incorporated in the GWB EL090A351, Mesoelliniki aulaka.

In the following table are presented the 52 GWB of the RBD of Western Macedonia (EL09).

Table 4-6: GWBs in Western Macedonia RBD (EL09)

No.	GOB Name	GWB Code	Area(km ²)
1	Triklariou Orous	EL09AF010	257,29
	Kastorias	EL0900020	
2	Kastorias	EL0900021	71,11
3	Mesopotamias-Hiliodendrou	EL0900022	55,67
	Lekanis Grevenwn	EL0900030	
4	Grevenon	EL0900031	57,81
5	Kaloneriou-Kozanis	EL0900032	92,80
6	Puloriou-Kozanis	EL0900033	5,62
7	Agiou Georgiou	EL0900034	2,73
8	Koitis Venetikou	EL0900035	2,82
9	Florinas	EL090F040	214,46
10	Amuntaiou Florinas	EL0900050	105,44
	Ptolemaidas	EL0900060	
11	Ptolemaidas	EL0900061	176,88
12	Notiou Pediou or Sarigkiol	EL0900062	60,84
13	Karioxoriou-Kleitous-Tetralofou	EL0900063	188,97
	ND Vermiou Orous	EL0900070	
14	ND Vermiou Orous-Askiou Orous	EL0900071	952,19
15	Vaterou	EL0900072	9,39
16	Xirolimnis	EL0900073	9,93
17	Krokou	EL0900074	4,34
18	Lefkopigis	EL0900075	9,05
19	Argilou-Protoxoriou	EL0900076	6,27
20	Polifitou	EL0900077	426,64
	BD Vermiou Orous	EL0900080	
21	BD Vermiou Orous (river Edessaïos)	EL0900081	572,42
22	Arnissas Pellas	EL0900082	39,23
23	BA Vermiou Orous	EL090F090	191,71
24	Kentrikou-Anatolikou Vermiou Orous	EL0900100	247,43
25	NA Vermiou (Veroia)	EL0900110	174,51
26	Almopaiou	EL0900120	254,33

No.	GOB Name	GWB Code	Area(km ²)
27	Kato rou Aliakmona	EL0900130	749,44
	Litoxorou	EL0900140	
28	kokkodes Litoxorou	EL0900141	153,23
29	karstiko Litoxorou	EL0900142	327,45
30	Katerinis	EL0900150	211,02
31	Kolindrou	EL0900160	601,12
32	Dasoxoriou Grevenon	EL0900170	31,59
33	Trikokkias Grevenon	EL0900180	11,14
34	Paliourias Grevenon	EL0900190	2,73
35	Korissou Kastorias	EL0900221	59,27
36	Galateias-Emporiou Kozanis	EL0900231	38,83
37	Pierion	EL0900241	856,95
38	Naoussas	EL0900251	279,00
39	Almopias	EL0900261	273,12
40	Aridaia	EL090F271	415,63
41	Vourinou	EL0900281	198,68
42	Vora	EL090F291	192,46
43	Varnounta Vernou	EL090F301	580,26
44	Voreias Pindou	EL0900311	274,43
45	Vevis-Flampourou	EL090F321	163,30
46	Nimfaïou-Vlastis	EL0900331	656,02
47	Perdikka-Filotta	EL0900341	107,29
48	Mesoellinikhs aulakas	EL090A351	2815,01
49	Elatis-Livaderou	EL0900361	147,08
50	Prespon	EL09AF013	24,83
51	Xalaras Maurokampou	EL0900014	6,38
52	Aposkepou-Kefalariou	EL0900015	5,10

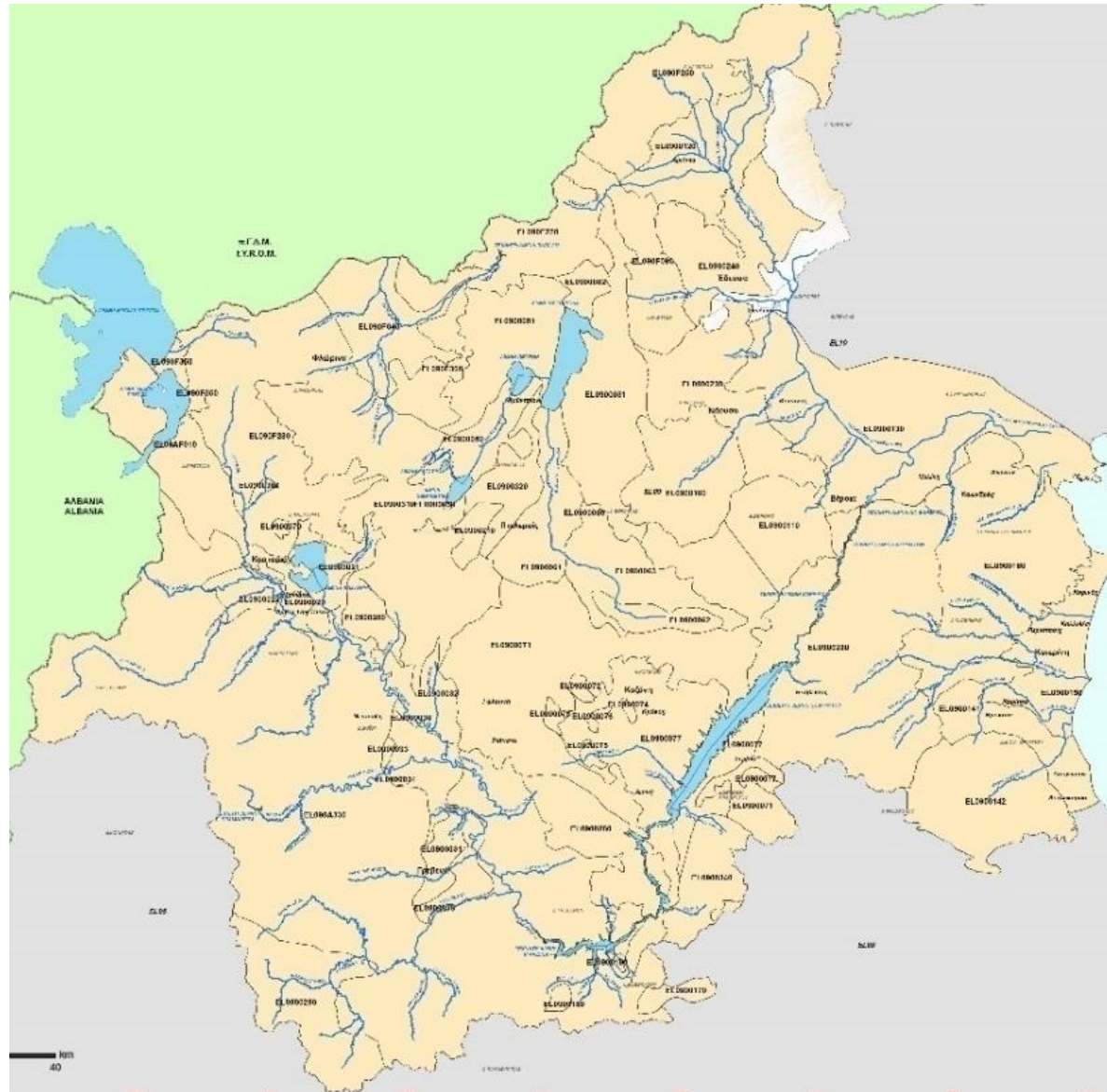
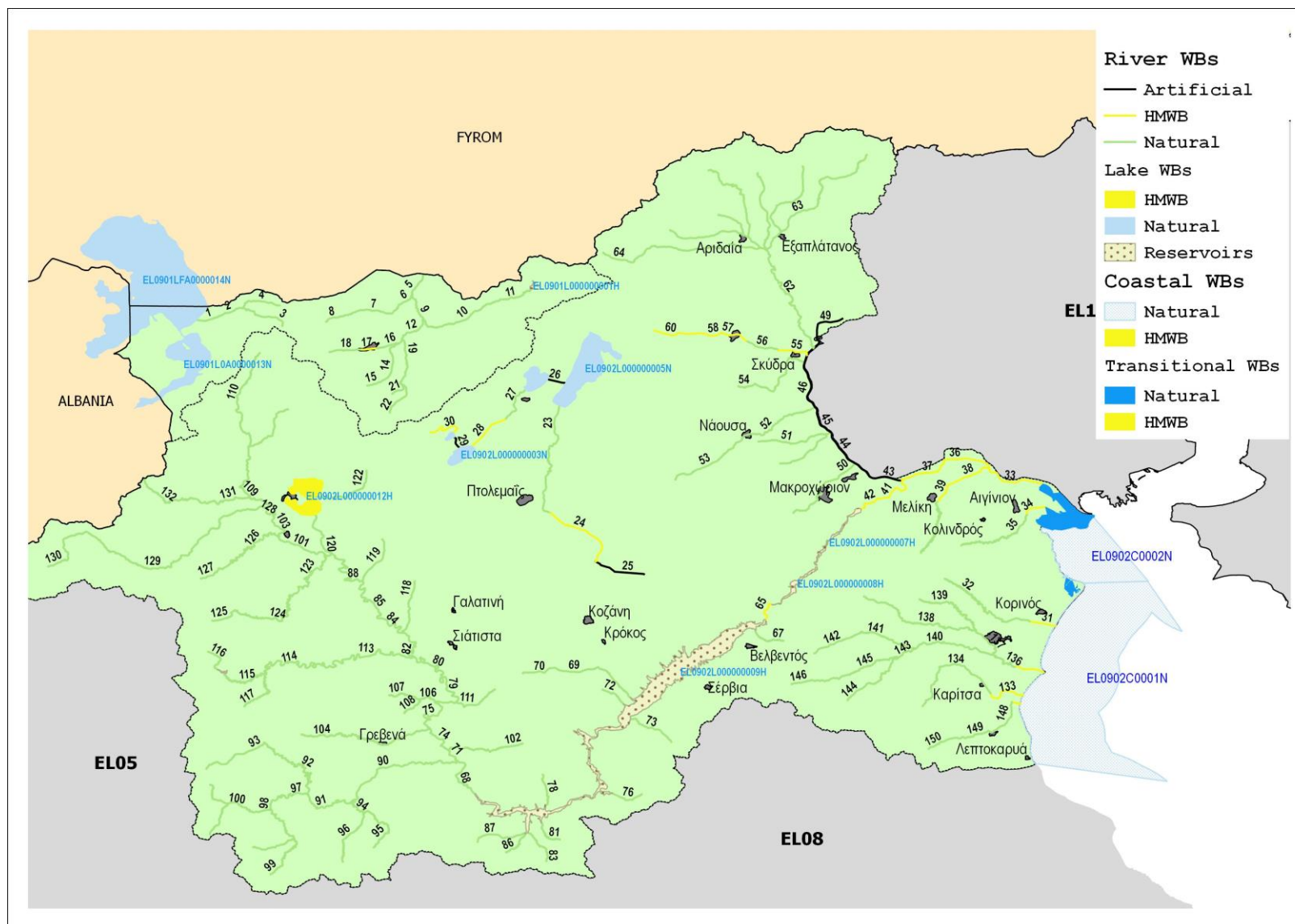


Figure 3: GWBs in Western Macedonia

4.3 HEAVILY MODIFIED WATER BODIES (HMWB) AND ARTIFICIAL WATER BODIES (AWB)

In the following table are presented the number of HMWBs and AWBs per category and their main attributes (area or length).



Note: River numbering is compatible with the numbering of the Table 4.4

Figure 4: HMWBs and AWBs in the Central Macedonia RBD (EL10)

Table 4-7: Overview of the HMWBs and AWBs in the Western Macedonia RBD (EL09)

	HMWB		AWB	
	Number	Area - Length (%)	Number	Area - Length (%)
Lake WBs	1	15,34%	-	-
River WBs	22	8,11%	10	3,65%
River WBs (reservoirs)	7	100%	-	-
Transitional WBs	0	0%	0	0%
Coastal WBS	0	0%	0	0%

4.3.1 River WBs

In the following tables are presented the river HMWBs and river AWBs in the RBD and the uses/objectives they serve.

Table 4-8: HMWBs in Western Macedonia RBD (EL09)

WB Code	WB Name	Type	Length (Km)	Basin area (km ²)	Uses/Objectives served
Prepses RB (EL0901)					
EL0901R0F0206110H	Florina	R-M1	2,12	5,26	Flood protection
Aliakmonas RB (EL0902)					
EL0902R0002070011H	Aliakmonas (Polifitos-Sfikia)	R-M3	4,46	22,62	Large dams
EL0902R0002050009H	Aliakmonas downstream Varvares to Delta	R-M3	5,98	12,31	Flood protection Effect of large dams
EL0902R0002050010H		R-M3	5,63	42,17	
EL0902R0002030008H		R-M3	7,50	84,58	
EL0902R0002030007H		R-L2	8,63	14,41	
EL0902R0002010003H		R-M3	20,28	27,15	
EL0902R0002065094H	Edeseos (Agra part).	R-M1	7,08	83,45	Flood protection
EL0902R0002065093H	Edeseos (diversion towards hydroelectric station)	R-M1	1,53	43,77	Diversion
EL0902R0002065092H	Edeseos (underground diversion)	R-M1	2,19	0,66	Flood protection
EL0902R0002065091H	Εδεσσαίος Edeseos (hydroelectric station part)	R-M2	4,47	43,41	Diversion - Flood protection
EL0902R0002065089H	Edeseos (Skidras part)	R-M2	4,98	12,44	Diversion - Flood protection
EL0902R0000010123H	P Soulou (Mines)	R-M2	14,26	169,44	Diversion - Flood protection
EL0902R0000010127H	Dioriga Chimaditida	R-M2	7,62	66,82	Diversion
EL0902R0000010129H	Sklithro	R-M1	6,92	94,97	Drainage of Cheimaditis Marsh

WB Code	WB Name	Type	Length (Km)	Basin area (km ²)	Uses/Objectives served
EL0902R0002040005H	Krasopouli (Morphologically altered)	R-M2	5,00	15,2	Flood protection
EL0902R0002040004H		R-M2	6,26	30,1	
EL0902R0002020001H	Krioneri (Morphologically altered)	R-M5	7,96	10,92	Flood protection
EL0902R0004010102H	Mavroneri (morphologically altered)	R-M2	4,44	14,84	Flood protection
EL0902R0001000114H	Rema Korinos (Morphologically altered)	R-M5	3,97	4,85	Flood protection
EL0902R0005000118H	Rema Mana (morphologically altered)	R-M2	1,34	51,36	Flood protection
EL0902R0003000116H	helopotamos	R-M2	6,80	18,34	Flood protection

Table 4-9: AWBs in Western Macedonia RBD (EL09)

WB Code	WB Name	Type	Length (Km)	Basin area (km ²)	Uses/objectives served
RB Aliakmon (EL0902)					
EL0902R0000010125A	Dioriga Vegoritida-Petron	R-M1	2,64	1,61	Hydraulic Connection– Lake Status Improvement
EL0902R0000010128A	Dioriga Zazari-Chimaditida	R-M1	2,24	1,38	Hydraulic Connection– Lake Status Improvement
EL0902R0000010124A	Soulou (Sari Gkioli)	R-M2	8,00	373,59	Drainage of Sarigiol Marsh
EL0902R0002060079A	T66	R-M3	8,59	44,85	Drainage of Giannitsa Lake
EL0902R0002060081A		R-M3	7,12	40,69	
EL0902R0002060083A		R-M3	5,85	1,54	
EL0902R0002060086A		R-M3	9,52	30,48	
EL0902R0002060088A		R-M3	1,47	0,23	
EL0902R0002060095A		R-M3	1,68	0,34	
EL0902R0002060100A		R-M2	9,06	151,2	

Table 4-10: AWBs - Reservoirs in Western Macedonia RBD (EL09)

WB Code	WB Name	Type	Basin area (km ²)	Uses/objectives served
RB Prespes (EL0901)				
EL0901L000000001H	Papapdia	L-M 5/7	0,58	Multipurpose reservoir
RB Aliakmon (EL0902)				
EL0902L000000010H	Ilarionas	L-M 5/7	21,9	Multipurpose reservoir
EL0902L000000009H	Polifytos	L-M 5/7	74,0	
EL0902L000000008H	Sfikias	L-M 5/7	4,3	
EL0902L000000007H	Asomaton	L-M 5/7	2,6	

WB Code	WB Name	Type	Basin area (km ²)	Uses/objectives served
EL0902L000000006H	Ag. Varvara	L-M 5/7	1,4	
EL0902L000000011H	Pramorista	L-M 5/7	0,3	

4.3.2 Lake Wbs

In RB Aliakmon, Lake of Kastoria has been identified as a Heavily Modified WB, which refers to a natural lake, where anthropogenic interventions have been made for residential development purposes, as well as interventions for flood protection (Table 4.18).

In the following table the lake HMWBs and lake AWBs in the RBD are presented and the uses/objectives they serve.

Table 4-11: HMWBs and AWBs in Western Macedonia RBD (EL09)

No	WB Code	WB Name	Type	Area (Km ²)	Intervention
Aliakmon RB (EL0902)					
1	EL0902L000000012H	Kastoria Lake	GR-SNL	28,8	Urban Development/Flood protection

4.4 PROTECTED AREAS

Pursuant to Article 6 of Directive 2000/60 / EC, Member States ensure the establishment of a register of all areas located in each RB area, which are considered in need of special protection under the specific provisions of Community legislation on the protection of surface and groundwater or the conservation of habitats and species dependent on water.

The Register of Protected Areas includes, in accordance with Annex V of Presidential Decree 51/2007, all of the following types of areas:

- Areas intended for the abstraction of water for human consumption, in accordance with Article 7 of PD 51/2007 (Article 7 of Directive 2000/60 / EC),
- Areas intended for the protection of aquatic species of economic importance,
- Water bodies designated as recreational waters, including areas designated as bathing waters,
- Areas susceptible to the presence of nutrients, including areas designated as vulnerable zones, and areas characterized as sensitive,
- Areas intended for the protection of habitats or species where the conservation or improvement of the status of waters is important for their protection, including the sites of NATURA 2000.

Protected Areas Category		Number of WB related to Protected Areas					
		Rivers	Reservoirs	Lakes	Transitional	Coastal	GWB
Water pumping for human consumption		8	2				9
Recreation Water				2		2	
Sensitive to the presence of nutrients	Vulnerable zones	33	3	1			20
	Sensitive areas	22					
Habitat or species protection		35	3	6	2		

Protected Areas Category	Number of WB related to Protected Areas					
	Rivers	Reservoirs	Lakes	Transitional	Coastal	GWB
Protection of aquatic species with economic significance	3			3	1	

5 PRESSURES AND IMPACTS

The anthropogenic pressures in water bodies are the total of anthropogenic activities in water bodies that affect or can affect the water bodies or the area in which they are developed. These pressures have an important role because they could be the cause of the environmental objectives failure according to GD 03.

In the following paragraphs are presented the results of the analysis of the pressures and impacts carried out for the 1st update of the RBMP.

5.1 POINT SOURCES OF POLLUTION

It includes all point sources of pollution that produce criteria pollutants (BOD, N, P). The list of categories of these pressures includes:

- Wastewater Treatment Plants (WWTP).
- Extrusion of sewage networks into a natural recipient.
- Large hotels.
- Industrial units.
- Livestock facilities (farms).
- Aquaculture – fish farming.
- Leakage from landfill.
- Mining activities

The significant point sources identified in the RBD EL09 are presented in the following tables where there are also presented the loads of conventional pollutants which can be quantified and the chemical substances related to these activities.

Table 5-1: Estimated Loads from point sources in RB Prespes (EL0901)

Activity	BOD ₅ tn/yr	N tn/yr	P tn/yr	Related chemical substances
Wastewater treatment plant	41,1	24,7	4,1	-
Industrial units	20,39	0,34	0,1	TSS, Fats, Oils
Steam-electrical plant	1 Unit (Melitis SEP)			Cr, Zn, As, Cu, HC, PCBs, Cd, Pb, Hg, Ni
Livestock facilities	67,83	23,69	1,25	-
Mining	-			Heavy metals, asbestos fibres mainly from activities in lignite mines and Nickel and asbestos mines

Table 5-2: Estimated Loads from point sources in RB Aliakmon (EL0902)

Activity	BOD ₅ tn/yr	N tn/yr	P tn/yr	Relates chemical substances
Wastewater treatment plant	892,9	558	115,8	-
Industrial units	2.301,7	425,1	68,7	TSS, Fats, Oils, SO ₄ , Sulphide, Cr, Phenol
Steam-electrical plant	5 Units			Cr, Zn, As, Cu, HC, PCBs, Cd, Pb, Hg, Ni
Livestock facilities	1.514,0	671,0	35,7	-
Mining	-			Heavy metals, asbestos fibres mainly from activities in lignite mines and Nickel and asbestos mines

5.2 DIFFUSE SOURCES OF POLLUTION

It includes all diffuse sources of pollution that produce conventional pollutants (BOD, N, P). The list of categories of these pressures includes:

- Agriculture.
- Urban waste water that doesn't end up in WWTP.
- Livestock farming.
- Other diffuse sources (i.e. forests, pastures etc).

The total annual loads of BOD, N and P, from the above diffuse sources are presented in the following figure and table.

Table 5-3: Estimated loads (tn/yr) from diffuse sources in RB Prespes (EL0901)

Activity	BOD ₅	N	P
Agriculture	-	160,9	83,8
Urban waste water that doesn't end up in WWTP	298,0	85,1	17,7
Livestock farming	339,2	114,5	13,3

Table 5-4: Estimated loads (tn/yr) from diffuse sources in RB Aliakmon (EL0902)

Activity	BOD ₅	N	P
Agriculture		1.878,3	983,7
Urban waste water that doesn't end up in WWTP	3.338,1	953,8	198,7
Livestock farming	2.807,0	1.200,8	146,5

5.3 HYDROMORPHOLOGICAL PRESSURES

The hydromorphological pressures of SWBs in RBD are presented aggregated in the following table.

Table 5-5: Evaluation of the hydromorphological pressures in the WBs of Western Macedonia RBD

	RB Prespes						RB Aliakmonas					
	Negligible	Tolerable	Moderate	High	Significant	AWB	Negligible	Tolerable	Moderate	High	Significant	AWB
River WB (reservoirs not included)												
Number	10	9	-	2	1	-	58	30	10	18	2	10
Length (km)	49,7	62,1	-	5,3	3,8	--	605	353,3	286,9	112,6	5,4	56,1
% Number	7%	6%	-	1%	1%	-	39%	20%	7%	12%	1%	7%
% Length	3,2%	4,0%		0,3%	0,2%	-	39,3%	22,9%	18,6%	7,3%	0,4%	3,6%
Lakes *												
Number	1	1	-	-	-	-	-	4	-	1	-	-
Area (km ²)	42,9	38,64	-	-	-	-	-	77,59	-	28,84	-	-
% Number	14%	14%	-	-	-	-	-	57%	-	14%	-	-
% Area	23%	21%	-	-	-	-	-	41%	-	15%	-	-
Transitional WB												
Number	-	-	-	-	-	-	1	1	-	-	-	-
Area (km ²)	-	-	-	-	-	-	4,5	34,9	-	-	-	-
% Number	-	-	-	-	-	-	50%	50%	-	-	-	-
% Area	-	-	-	-	-	-	11%	89%	-	-	-	-
Coastal WB												
Number	-	-	-	-	-	-	2		-	-	-	-
Area (km ²)	-	-	-	-	-	-	1127,14		-	-	-	-
% Number	-	-	-	-	-	-	100%		-	-	-	-
% Area	-	-	-	-	-	-	100%		-	-	-	-

**It refers only to natural lakes.*

5.4 WATER ABSTRACTION

In this section are presented the total annual water abstractions from all the activities and uses

The activities and uses that are taken into account according the common methodology developed for this purpose are the following

- Drinking Water
- Irrigation
- Livestock Water
- Industrial Water
- Other uses

The aggregated results for the abstractions in the RBD are given in the following table.

Table 5-6: Total abstractions in the RBD for each category of significant pressure

Use / Activity	Categorization pursuant the Guidance provided by EU	RB/RBD	Total Demand/ Abstractions	% Abstractions from SWB	% Abstractions from GWB
Water Supply	3.2 – Pumping or diverting flow – water supply	Prespes RB	4.352.667	70%	30%
		Aliakmon RB	109.561.149*	67%	33%
		Total	113.913.816	67%	33%
Irrigation	3.1 – Pumping or diverting flow – agriculture	Prespes RB	47.197.421	23%	77%
		Aliakmon RB	588.813.054**	16%	84%
		Total	636.010.475	16%	84%
Livestock		Prespes RB	669.985	23%	77%
		Aliakmon RB	7.580.048	16%	84%
		Total	8.250.033	16%	84%
Industrial Activities					
Industrial Units	3.3 – Pumping or diverting flow – industry	Prespes RB	296.971	47%	53%
		Aliakmon RB	8.892.768	15%	85%
		Total	9.189.739	16%	84%
Lignite Mines		Prespes RB	-	-	-
		Aliakmon RB	4.470.000***	38%	62%
		Total	4.470.000	38%	62%
Steam-electric Plants****	3.4 – Pumping or diverting flow – cooling water (industry, non-hydroelectrical power)	Prespes RB	6.800.000	100%	0%
		Aliakmon RB	48.700.000	97%	3%
		Total	55.500.000	98%	2%
TOTAL RBD EL09			827.334.063	31%	69%

* Including the water abstractions from EL09 through the Ag. Varvara reservoir for the water supply of the PS of Thessaloniki, which according to EYATH data for 2016 is of the order of 50 million m³ / year.

**** The water abstractions of EL09 through the Ag. Varvara reservoir used for the irrigation of Thessaloniki Valley is not included, which is in the order of 500 million m³ / year.**

***** It refers to the mining requirements. The return to surface waters and the quantity available for irrigation are not included.**

****** According to the operating data of the AES for 2016 provided by DEH.**

In the following tables are presented the abstractions from GWBs for each RB.

Table 5-7: Annual supply and abstractions from the GWB's in Prespes RB (EL0901)

WB CODE	WB NAME	Annual Average Recharge (10 ⁶ m ³)	Annual Average Abstracts (10 ⁶ m ³)	Irrigation (10 ⁶ m ³)	Drinking Water supply (10 ⁶ m ³)	Industry (10 ⁶ m ³)	Quantitative status
EL09AF040	Florinas	90	33,12	32,38	0,34	0,06	■ Good
EL090F291	Vora	-	0,06	0,01	0,00	0,00	■ Good
EL090F321	Vevis Flampourou	-	0,16	0,00	0,00	0,04	■ Good
EL09AF013	Prespon	-	-	-	-	-	■ Good

Table 5-8: Annual supply and abstractions from the GWB's in Aliakmona RB (EL0902)

WB CODE	WB NAME	Annual Average Recharge (10 ⁶ m ³)	Annual Average Abstracts (10 ⁶ m ³)	Irrigation (10 ⁶ m ³)	Drinking Water supply (10 ⁶ m ³)	Industry (10 ⁶ m ³)	Quantitative status
EL09AF010	Triklariou Orous	122,60	3,24	2,99	0,10	0,00	■ Good
EL0900021	Kastorias	20,00	20,00	29,84	0,57	0,32	■ Good
EL0900022	Mesopotamias-Hiliodendrou	15,00	10,80				■ Good
EL0900031	Grevenwn	20,00	15,00	30,85	1,86	0,20	■ Good
EL0900032	Kaloneriou-Kozanis	13,00	10,00				■ Good
EL0900033	Pulwriou-Kozanis	2,00	1,50				■ Good
EL0900034	Agiou Gewrgiou	1,50	0,50				■ Good
EL0900035	Koitis Venetikou	1,00	0,40				■ Good
EL0900050	Amuntaiou Florinas	35,00	35,36	20,53	1,42	5,2	■ Poor
EL0900061	Ptolemaidas	25,00	26,00	57,28	0,550	11,83	■ Poor
EL0900062	Notiou Pediou or Sarigkiol	25,00	30,00		0,600		■ Poor
EL0900063	Karioxwriou-Kleitous-Tetralofou	-	17,97				■ Poor
EL0900071	ND Vermiou Orous-Askiau Orous	360,00	15,00	21,00	4,95	0,16	■ Good
EL0900072	Vaterou	1,00	1,20		0,60		■ Good
EL0900073	Xirolimnis	2,00	1,80		0,30		■ Good
EL0900074	Krokou	1,00	0,74		0,75		■ Good
EL0900075	Lefkopigis	2,00	0,52		0,55		■ Good

WB CODE	WB NAME	Annual Average Recharge (10 ⁶ m ³)	Annual Average Abstracts (10 ⁶ m ³)	Irrigation (10 ⁶ m ³)	Drinking Water supply (10 ⁶ m ³)	Industry (10 ⁶ m ³)	Quantitative status
EL0900076	Argilou-Protoxoriou	3,00	0,28		0,30		■ Good
EL0900077	Polifitou	-	-				■ Good
EL0900081	BD Vermiou Orous (river Edessaïos)	200,00	10,53	13,77	3,43	0,05	■ Poor
EL0900082	Arnissas Pellas	10,00	7,00				■ Poor
EL090F090	BA Vermiou Orous	58,00	7,94	7,83	0,00	0,00	■ Good
EL0900100	Kentrikou-Anatolikou Vermiou Orous	132,00	2,84	0,00	2,60	0,24	■ Good
EL0900110	NA Vermiou (Veroia)	80,00	0,83	0,27	0,42	0,07	■ Good
EL0900120	Almopaiou	53,89	49,09	45,16	3,32	0,30	■ Poor
EL0900130	Kato Aliakmona	75,00	39,48	31,57	3,41	3,61	■ Poor
EL0900141	kokkodes Litorou	155,00	14,42	6,22	7,96	0,09	■ Poor
EL0900142	karstiko Litorou						■ Good
EL0900150	Katerinis	40,00	50,50	45,36	3,10	0,63	■ Poor
EL0900160	Kolindrou	30,00	53,98	51,23	1,35	0,18	■ Poor
EL0900170	Dasoxoriou Grevenwn	10,00	0,88	0,49	0,36	0,00	■ Good
EL0900180	Trikokkias Grevenon	5,00	0,29	0,29	0,00	0,00	■ Good
EL0900190	Paliourias Grevenon	1,00	0,33	0,33	0,00	0,00	■ Good
EL0900221	Korisou Kastorias	25	1,83	1,77	0,00	0,02	■ Good
EL0900231	Galateias-Emporiou Kozanis	15	13,99	13,81	0,17	0,00	■ Good
EL0900241	Pierion	53	2,84	2,00	0,29	0,02	■ Good
EL0900251	Naoussas	24	2,65	2,16	0,11	0,20	■ Good
EL0900261	Almwpias	18	11,65	9,59	1,67	0,05	■ Good
EL090F271	Aridaias	69	10,73	10,47	0,00	0,00	■ Good
EL0900281	Vourinou	-	4,23	4,18	0,05	0,00	■ Good
EL090F301	Varnounta Vernou	-	4,74	4,09	0,34	0,04	■ Good
EL0900311	Voreias Pindou	-	0,64	0,46	0,15	0,00	■ Good
EL0900331	Nimfaiou-Vlastis	-	1,78	0,85	0,61	0,00	■ Good
EL0900341	Perdikka-Filotta	-	0,45	0,42	0,00	0,00	■ Poor
EL090A330	Mesoellinikh's aulakas	-	40,90	39,24	0,89	0,05	■ Good
EL0900361	Elatis-Livaderou	-	1,90	0,68	1,03	0,04	■ Good
EL0900014	Xalaras Maurokampou	-	-	-	-	-	■ Good

WB CODE	WB NAME	Annual Average Recharge (10 ⁶ m ³)	Annual Average Abstracts (10 ⁶ m ³)	Irrigation (10 ⁶ m ³)	Drinking Water supply (10 ⁶ m ³)	Industry (10 ⁶ m ³)	Quantitative status
EL0900015	Aposkepou-Kefalariou	-	-	-	-	-	■ Good

5.5 OTHER PRESSURES

Other Pressures include:

- Artificial recharge of groundwater bodies
- Alteration in groundwater level and quantity due to underground holdings or the construction of large underground works.

Artificial recharge of groundwater bodies

In the Western Macedonia Region (EL09), an artificial enrichment program has been implemented in the area of GWB EL0900130 and more specifically in the Rizou-Petraias-Arseniou area.

Alteration in groundwater level and quantity due to underground holdings or the construction of large underground works

In Western Macedonia RBD (EL09), alteration in groundwater level and quantity due to overabstraction is identified in the GWBs Amintaiou EL0900050, Ptolemaidas EL0900061, Notiou Pediou EL0900062, Kariochoriou – kleitous - Tetralogou EL0900063, BD Bermiou EL0900081, Arnissas p- Pellas EL0900082, Almopaiou EL0900120, kato rou Aliakmona EL0900130, Kokkodes Litoxorou EL0900141, Katerinis EL0900150, Kolindrou EL0900160.

The mining activity in the GWBs of Amyntaio and Ptolemaida (Sarigiol basin) has caused a change in the groundwater level and the quantitative status of the GWB has been downgraded.

5.6 AGGREGATED PRESSURE DATA

In this section aggregated data for the significant pressures are presented. For each significant pressure quantitative indicators are given in order to describe the level of the pressure or the chemical substance that lead to failure of the good status. Additionally for each significant pressure the basic characteristics of the WBs involved (number of WBs, area or length) are also presented.

The pressures and the quantitative indicators used are according to the EU Guidance Document for reporting 2016.

Table 5-9: Aggregated data from the significant pressures in Western Macedonia RBD EL09

WB Category	Significant pressure or substance responsible for failure	Number of WBs	Length (km) /Area (km ²)	%WB	% Area / Length	Pressure Indicator	Indicator's Value	Remarks
River	2.2 – Diffuse – agriculture/agriculture	34	420	23%	27%	Nitrogen load	705 tn/έτος	The WB with ecological status less than good that bear loads of BOD, N and P which are larger than those of other diffuse pressures are considered. The indicators' value is equal to the total loads as calculated in the first update of RBMP
	2.6-diffuse-discharges not connected to sewerage/urban development	8	68,5	5%	4%	BOD load	~370 tn/έτος	The WB with ecological status less than good that bear loads of BOD, N and P which are larger than those of other diffuse pressures are considered. The indicators' value is equal to the total loads as calculated in the first update of RBMP
	2.10-Diffuse – other (livestock)	9	129	6%	8%	BOD load	~390 tn/έτος	The WB with ecological status less than good that bear loads of BOD, N and P which are larger than those of other diffuse pressures are considered. The indicators' value is equal to the total loads as calculated in the first update of RBMP
Lake	2.2 – Diffuse – agriculture	5	136	71%	46%	Phosphorus load	-47 tn/έτος	It refers to the lakes that fail to achieve good status and the phosphorus concentrations are indicative for mesotrophic to hyperfertile ecosystems (M. Prespa, Zazari, Cheimadiitis, Vegoritida, Kastoria) are accounted. The total loads from agricultural activities are given.
River	Abstractions- Obliquity (includes 3.1 – pumping or diverting flow – agriculture and 3.2 – pumping or diverting flow – public water supply	5	37,8			Volume (in hundreds m ³) of water to be reduced in order to achieve the objectives	The total amount of the required environmental discharge required to achieve the GEP	It refers to WBs downstream to the dams of Aliakmon rivers (Ilarion, Polyfytyou, Asomaton, Sfikias, Ag. Varvara

WB Category	Significant pressure or substance responsible for failure	Number of WBs	Length (km) /Area (km ²)	%WB	% Area / Length	Pressure Indicator	Indicator's Value	Remarks
GWB	Abstractions 3.1 – Abstraction or flow diversion – Agriculture, 3.3 – Abstraction or flow diversion – Industry	11	-	23%	-	Volume of water in million. M3 to be drawn up and should be reduced in order to achieve the objectives	~69 ^c million. m ³	It refers to the following GWBs EL0900050, EL0900061, EL0900062, EL0900063, EL0900150, EL0900160, EL0900081, EL0900082, EL0900120, EL0900130, EL0900141
River WB	4.1.1-Physical alteration of channel/bed/riparian area/shore - Flood protection	11	51.61	7%	3%	Length (in km) of the affected WB	51.6 km	It refers to the following WBs EL0901R0F0206110H, EL0901R0F0202002N, EL0902R0000010127H, EL0902R0000010129H, (EL0902R0001000114H, EL0902R0002020001H, EL0902R0002040004H, EL0902R0002040005H, EL0902R0003000116H, (EL0902R0004010102H,EL0902R0005000118H
Lakes	4.1.1-Physical alteration of channel/bed/riparian area/shore - Flood protection	1	28.84	14%	-	Area (in km ²) of the affected WB	28.84 km ²	It refers to Kastoria Lake
River WB	4.1.4 Physical alteration of channel/bed/riparian area/shore – Other (mining activities)	1	14,2	0,7%		Length (in km) of the affected WB	14,2	It refers to Soulou (Mine) (EL0902R0000010123H)
	4.1.4 - Physical alteration of channel/bed/riparian area/shore – Other (Hydroelectrical Energy)	5	19,73	3%	1%	Length (in km) of the affected WB	19,73	It refers to the WB of WBs of Edessaïos rivers with codes (EL0902R0002065092H, EL0902R0002065093H EL0902R0002065094H) and to the WB Aliakmonas EL0902R0002070011H

WB Category	Significant pressure or substance responsible for failure	Number of WBs	Length (km) /Area (km ²)	%WB	% Area / Length	Pressure Indicator	Indicator's Value	Remarks
Reservoirs	4.2.1-Dams, barriers and locks - Hydropower /4.2.3- Dams, barriers and locks - Drinking water ^b /4.2.4. Dams, barriers and locks - Irrigation	5 ^a	107,8 km ² (~114,7 km)*					It refers to the dams Ilarion, Polyfytou, Asomaton, Sfikias, Ag. Varvara
	4.2.6 Dams, barriers and locks - Industry /4.2.3- Dams, barriers and locks - Drinking water ^b /4.2.4. Dams, barriers and locks - Irrigation	1	0,58 km ² (~1,5 km*)					It refers to Papadia Reservoir
	4.2.3- - Dams, barriers and locks - Drinking water ^b	1						It refers to the reservoir Pramoritza
River WB	4.3.1-Hydrological alteration – hydropower /4.3.1- Hydrological alteration – hydropower – Agriculture/4.3.4- Hydrological alteration – hydropower – public water supply	6	42,1 km-			Length (in km) of the affected WB	42,1 km	It refers to WBs downstream to the dams of Aliakmon rivers (Ilarion, Polyfytou, Asomaton, Sfikias, Ag. Varvara)
River WB	4.3.1- Hydrological alteration – hydropower	4						It refers to r. Edessaïos (WBs EL0902R0002065091H, EL0902R0002065092H, EL0902R0002065093H, EL0902R0002065094H)

a It refers to the number of reservoirs created by the construction of dams

b They are presented aggregated due to the multiple nature of the dams that have been constructed

c Refers to GWBs with negative water balance

** Refers to the length of the modified riverbed (this length is not included in the total length of the river WB of the RBD)*

5.7 ASSESSMENT OF IMPACTS

5.7.1 Assessment of impacts on Surface Water Bodies

In assessing the impacts and the characterization of the water bodies on the basis of the possibility of achieving the environmental objectives of the Directive 2000/60/EC, the following are being taken into consideration:

- Pressure tension from all significant sources of pollution and abstractions: High (H), Moderate (M), Low (L).
- The available data and results from the Monitoring Program.
- Expert judgement when no other data is available.

The risk assessment of the achievement of the objectives by water category in the RBD is presented below.

Table 5-10: Statistics of risk assessment failure to achieve objectives of SWB in Prespes RB (EL0901) – Number of WBs

	Risk Assessment *								
	AR		PAR		PNR		NR		Total
WB Category	Number of WBs	% of number	Number of WBs	% of number	Number of WBs	% of number	Number of WBs	% of number	Number of WBs
River WBs	-	-	3	14%	3	14%	16	73%	22
Lake WBs	1	5%	-	-	-	-	-	-	1
Coasal WBs	-	-	-	-	1	5%	1	5%	2
Transitional WBs	-	-	-	-	-	-	-	-	-
River WBs	-	-	-	-	-	-	-	-	-
Total	1	4%	3	12%	4	16%	17	68%	25

*Risk Assessment of the achievement of the objectives: At Risk (AR), Probably At Risk (PAR), Probably Not at Risk (PNR), Not at Risk (NR)

Table 5-11: Statistics of risk assessment failure to achieve objectives of SWB in Aliakmon RB (EL0902) - Number of WBs

	Risk Assessment *								Total
	AR		Total		PNR		NR		
WB Category	Number of WBs	% of number	Number of WBs	% of number	Number of WBs	% of number	Number of WBs	% of number	Number of WBs
River WBs	16	13%	39	30%	9	7%	64	50%	128
Lake WBs	-	-	-	-	3	2%	3	2%	6
Coasal WBs	5	4%	-	-	-	-	-	-	5

	Risk Assessment *								Total
	AR		Total		PNR		NR		
WB Category	Number of WBs	% of number	Number of WBs	% of number	Number of WBs	% of number	Number of WBs	% of number	Number of WBs
Transitional WBs	1	1%	1	1%	-	-	-	-	2
River WBs	2	2%	-	-	-	-	-	-	2
Total	24	17%	40	28%	12	8%	67	47%	143

* Risk Assessment of the achievement of the objectives: At Risk (AR), Probably At Risk (PAR), Probably Not at Risk (PNR), Not at Risk (NR)

5.7.2 Assessment of impacts on Groundwater Bodies

In Prespes RB (EL0901), 4 GWBs are identified. Their status is given in the table below.

Table 5-12: Qualitative and Quantitative status of GWB in Prespes RB (EL0901)

No.	Code	Name	Quantitative Status	Tendency to level drop	Chemical Status	Qualitative Issues	Polluters
1	EL09AF040	Florina	■ Good	-	■ Good	Agriculture Livestock Sewerage	-
2	EL090F291	Vora	■ Good	-	■ Good	Industry Livestock Sewerage	-
3	EL090F321	Vevis - Flampourou	■ Good	-	■ Good	Agriculture Quarry PUBLIC POWER CORPORATION	-
4	EL09AF013	Prespon – Florinas	■ Good	-	■ Good	No	-

In Aliakmon RB (EL0902), 48 GWBs are identified. Their status is given in the table below.

Table 5-13: Qualitative and Quantitative status of GWB in Aliakmon RB (EL0902)

No.	Code	Name	Quantitative Status	Trends of the Groundwater level	Chemical Status	Qualitative Issues	Polluters
1	EL09AF010	Triklariou Orous	■ Good	-	■ Good	Livestock- Aviculture	-
2	EL0900021	Kastorias	■ Good	-	■ Good	Agriculture Overpumping	-
3	EL0900022	Mesopotamias- Hiliodendrou	■ Good	-	■ Good	Agriculture	-
4	EL0900031	Grevenon	■ Good	-	■ Good	Agriculture	-
5	EL0900032	Kaloneriou- Kozanis	■ Good	-	■ Good	Agriculture	-
6	EL0900033	Puloriou-Kozanis	■ Good	-	■ Good	No	-
7	EL0900034	Agiou Georgiou	■ Good	-	■ Good	No	-

No.	Code	Name	Quantitative Status	Trends of the Groundwater level	Chemical Status	Qualitative Issues	Polluters
8	EL0900035	Koitis Venetikou	■ Good	-	■ Good	Industry	
9	EL0900050	Amuntaiou Florinas	■ Poor	Downward trends of the groundwater level	■ Good	Agriculture Industry(PUBLIC POWER CORPORATION)	-
10	EL0900061	Ptolemaidas	■ Poor	Downward trends of the groundwater level	■ Poor	Agriculture Industry(PUBLIC POWER CORPORATION)	-
11	EL0900062	Notiou Pediou or Sarigkiol	■ Poor	Downward trends of the groundwater level	■ Poor	Agriculture Industry(PUBLIC POWER CORPORATION)	-
12	EL0900063	Karioxoriou-Kleitous-Tetralofou	■ Poor	Downward trends of the groundwater level	■ Poor	Agriculture Industry(PUBLIC POWER CORPORATION)	-
13	EL0900071	ND Vermiou Orous-Askiou Orous	■ Good	-	■ Good	Quarry-Mine, Industry	-
14	EL0900072	Vaterou	■ Good	-	■ Good	Agriculture Overpumping	-
15	EL0900073	Xirolimnis	■ Good	-	■ Good	Agriculture	-
16	EL0900074	Krokou	■ Good	-	■ Good	-	-
17	EL0900075	Lefkopigis	■ Good	-	■ Good	Livestock	-
18	EL0900076	Argilou-Protoxoriou	■ Good	-	■ Good	No	-
19	EL0900077	Polifitou	■ Good	-	■ Good	No	-
20	EL0900081	BD Vermiou Orous (river Edessaioi)	■ Poor	Downward trends of the groundwater levels	■ Good	Quarry Industry Livestock Aviculture Overpumping	-
21	EL0900082	Arnissas Pellas	■ Poor	Downward trends of the groundwater levels	■ Good	Agriculture Quarry Industry Livestock Aviculture Overpumping	-
22	EL0900090	BA Vermiou Orous	■ Good	-	■ Good	Industry Livestock Aviculture Wastewater	-
23	EL0900100	Kentrikou-Anatolikou Vermiou Orous	■ Good	-	■ Good	Livestock Aviculture Quarry	-
24	EL0900110	NA Vermiou (Veroia)	■ Good	-	■ Good	Quarry Industry Livestock	-
25	EL0900120	Almopaiou	■ Poor	Downward trends of the groundwater level	■ Good	Agriculture Sewerage Livestock Overpumping	-

No.	Code	Name	Quantitative Status	Trends of the Groundwater level	Chemical Status	Qualitative Issues	Polluters
26	EL0900130	Kato Aliakmona	■ Poor	Downward trends of the groundwater level	■ Good	Sewerage Agriculture Livestock Artisanship	-
27	EL0900141	Kokkodas Litorou	■ Poor	Downward trends of the groundwater level	■ Good	Sewerage	-
28	EL0900142	karstiko Litorou	■ Good	-	■ Good	-	-
29	EL0900150	Katerinis	■ Poor	Downward trends of the groundwater level	■ Good	Overpumping Sewerage Agriculture Livestock Artisanship	-
30	EL0900160	Kolindrou	■ Poor	Downward trends of the groundwater level	■ Good	Sewerage Agriculture Livestock Overpumping	-
31	EL0900170	Dasoxoriou Grevenon	■ Good	-	■ Good	Agriculture Livestock	-
32	EL0900180	Trikokkias Grevenon	■ Good	-	■ Good	Agriculture	-
33	EL0900190	Paliourias Grevenon	■ Good	-	■ Good	Agriculture	-
34	EL0900221	Korisou Kastorias	■ Good	-	■ Good	Agriculture	-
35	EL0900231	Galateias-Emporiou Kozanis	■ Good	-	■ Good	Agriculture Livestock Aviculture	-
36	EL0900241	Pierion	■ Good	-	■ Good	Agriculture Quarry Industry Livestock Aviculture Tourism	-
37	EL0900251	Naoussas	■ Good	-	■ Good	Agriculture Quarry Industry Livestock Aviculture	-
38	EL0900261	Almopias	■ Good	-	■ Good	Sanitary Landfill, Agriculture, Industry Livestock Aviculture	-
39	EL090F271	Aridaias	■ Good	-	■ Good	Industry(PUBLIC POWER CORPORATION) Livestock Sewerage Aviculture	-
40	EL0900281	Vourinou	■ Good	-	■ Good	Livestock Sewerage	-
41	EL090F301	Varnounta	■ Good	-	■ Good	Industry	-

No.	Code	Name	Quantitative Status	Trends of the Groundwater level	Chemical Status	Qualitative Issues	Polluters
		Vernou				Livestock Aviculture Sewerage	
42	EL0900311	Voreias Pindou	■ Good	-	■ Good	Industry Livestock Aviculture Sewerage	-
43	EL0900331	Nimfaïou-Vlastis	■ Good	-	■ Good	Industry(PUBLIC POWER CORPORATION) Livestock Aviculture Sewerage	-
44	EL0900341	Perdikka-Filotta	■ Poor	-	■ Good	Agriculture Industry(PUBLIC POWER CORPORATION)	-
45	EL090A330	Mesoellinikhs aulakas	■ Good	-	■ Good	Agriculture Industry(PUBLIC POWER CORPORATION) Livestock	-
46	EL0900361	Elatis-Livaderou	■ Good	-	■ Good	Agriculture	-
47	EL0900014	Xalaras Maurokampou	■ Good	-	■ Good	No	-
48	EL0900015	Aposkepou- Kefalariou	■ Good	-	■ Good	No	-

6 CLASSIFICATION OF WATER BODIES STATUS

6.1 CLASSIFICATION OF SURFACE WATER BODIES STATUS

6.1.1 Evaluation of River Water Bodies Status

The results of the evaluation of the River WBs status in the RBD are presented in the following table. Reservoirs (heavily modified river water bodies) are presented separately.

Additionally in a separate table the differences in the status compared to the 1st RBMP are presented.

Table 6-1: Classification of River WBs status in Western Macedonia RBD

No.	Code WB	WB Name		HMWB/ AWB	Relation to Protected Areas	Ecological Status/ Potential	Chemical Status	Confidence Level		Total Status
								Ecological	Chemical	
Prespes RB (EL0901)										
1.	EL0901R000001018N	Paliorema (Ag. Germanos)			√	Good	Good	1	1	Good
2.	EL0901R000001019N	Ag. Germanos			√	Good	Good	3	1	Good
3.	EL0901R000001020N	Kaloneri			√	Good	Good	1	1	Good
4.	EL0901R000002021N	Sirakio			√	Good	Good	1	1	Good
5.	EL0901R0F0201001N	Ligkos			√	Good	Unknown	1	0	Unknown
6.	EL0901R0F0202002N	Kalinikiotiko			√	Good	Good	1	1	Good
7.	EL0901R0F0202003N	Kalinikiotiko			√	Good	Unknown	1	0	Unknown
8.	EL0901R0F0202004N	Kalinikiotiko			√	Good	Good	1	1	Good
9.	EL0901R0F0203005N	Ligkos			√	Good	Good	1	1	Good
10.	EL0901R0F0204006N	Paleo			√	Moderate	Unknown	1	0	Unknown
11.	EL0901R0F0204007N	Paleo			√	Good	Unknown	3	0	Unknown
12.	EL0901R0F0205008N	Ligkos			√	Moderate	Good	3	3	Moderate
13.	EL0901R0F0206011N	Florina			√	Good	Good	1	1	Good
14.	EL0901R0F0206012N	Tropeouxos			√	Good	Good	1	1	Good
15.	EL0901R0F0206013N	Tropeouxos			√	Good	Good	1	1	Good
16.	EL0901R0F0206109N	Florina			√	Good	Good	1	1	Good
17.	EL0901R0F0206110H	Florina		√	√	Moderate	Good	1	1	Moderate
18.	EL0901R0F0206111N	Florina			√	Good	Good	1	1	Good
19.	EL0901R0F0207014N	Melpo			√	Good	Good	1	1	Good
20.	EL0901R0F0207015N	Melpo			√	Good	Good	1	1	Good
21.	EL0901R0F0208016N	Asprorema			√	Good	Good	1	1	Good
22.	EL0901R0F0209017N	Drosopigiotiko			√	Good	Good	1	1	Good
Aliakmon RB (EL0902)										
23.	EL0902R0000010122N	Koilada (Soulou)			√	Poor	Failing to achieve good	3	3	Poor
24.	EL0902R0000010123H	Soulou (Mines)		√	√	Moderate	Unknown	1	0	Unknown
25.	EL0902R0000010124A	Soulou (Sari Gkioli)		√	√	Moderate	Unknown	1	0	Unknown
26.	EL0902R0000010125A	Dioriga Vegoritida-Petron		√	√	Moderate	Unknown	1	0	Unknown
27.	EL0902R0000010126N	Amintas				Poor	Good	3	1	Poor

No.	Code WB	WB Name	HMWB/ AWB	Relation to Protected Areas	Ecological Status/ Potential	Chemical Status	Confidence Level		Total Status
							Ecological	Chemical	
28.	EL0902R0000010127H	Dioriga Chimaditida	✓	✓	Moderate	Unknown	1	0	Unknown
29.	EL0902R0000010128A	Dioriga Zazari-Chimaditida	✓	✓	Moderate	Unknown	1	0	Unknown
30.	EL0902R0000010129H	Sklithro	✓	✓	Moderate	Good	1	1	Moderate
31.	EL0902R0001000114H	Rema Korinos (Morphologically altered)	✓		Good	Good	3	1	Good
32.	EL0902R0001000115N	Stream Katerini			Moderate	Good	1	1	Moderate
33.	EL0902R0002010003H	Aliakmonass (Krasopouli-Delta)	✓	✓	Moderate	Good	1	1	Moderate
34.	EL0902R0002020001H	Krioneri (Morphologically altered)	✓	✓	Poor	Good	3	1	Poor
35.	EL0902R0002020002N	Kerasies			Moderate	Good	3	1	Moderate
36.	EL0902R0002030007H	Aliakmonas (T66-Krasopouli)	✓	✓	Moderate	Good	3	1	Moderate
37.	EL0902R0002030008H	Aliakmonas (T66-Krasopouli)	✓	✓	Moderate	Good	1	1	Moderate
38.	EL0902R0002040004H	Krasopouli (Morphologically altered)	✓	✓	Moderate	Good	1	1	Moderate
39.	EL0902R0002040005H	Krasopouli (Morphologically altered)	✓	✓	Moderate	Good	1	1	Moderate
40.	EL0902R0002040006N	Krasopouli		✓	Poor	Good	3	1	Poor
41.	EL0902R0002050009H	Aliakmonas (to T66)	✓	✓	Moderate	Good	1	1	Moderate
42.	EL0902R0002050010H	Aliakmonas (to T66)	✓	✓	Moderate	Good	1	1	Moderate
43.	EL0902R0002060079A	T66	✓	✓	Moderate	Failing to achieve good	3	3	Moderate
44.	EL0902R0002060081A	T66	✓	✓	Moderate	Unknown	1	0	Unknown
45.	EL0902R0002060083A	T66	✓	✓	Moderate	Good	3	3	Moderate
46.	EL0902R0002060086A	T66	✓	✓	Poor	Failing to achieve good	3	3	Poor
47.	EL0902R0002060088A	T66	✓	✓	Moderate	Good	1	1	Moderate
48.	EL0902R0002060095A	T66	✓	✓	Moderate	Good	1	1	Moderate
49.	EL0902R0002060100A	T66	✓	✓	Moderate	Good	1	1	Moderate
50.	EL0902R0002061080N	Tripotamos		✓	Moderate	Good	3	1	Moderate
51.	EL0902R0002062082N	Konticha		✓	Moderate	Unknown	1	0	Unknown
52.	EL0902R0002063084N	Arapitsa		✓	Moderate	Unknown	3	0	Unknown

No.	Code WB	WB Name	HMWB/ AWB	Relation to Protected Areas	Ecological Status/ Potential	Chemical Status	Confidence Level		Total Status
							Ecological	Chemical	
53.	EL0902R0002063085N	Arapitsa		√	Good	Good	3	1	Good
54.	EL0902R0002064087N	Lianorema		√	Moderate	Good	1	1	Moderate
55.	EL0902R0002065089H	Edeseos (Skidras part)	√	√	Moderate	Good	1	1	Moderate
56.	EL0902R0002065090N	Edeseos		√	Moderate	Good	3	1	Moderate
57.	EL0902R0002065091H	Edeseos (hydroelectric station part)	√	√	Moderate	Good	1	1	Moderate
58.	EL0902R0002065092H	Edeseos (groundwater diversion)	√	√	Moderate	Unknown	1	0	Unknown
59.	EL0902R0002065093H	Edeseos (diversion towards hydroelectric station)	√	√	Moderate	Good	1	1	Moderate
60.	EL0902R0002065094H	Edeseos (Agra part)	√	√	Moderate	Good	1	1	Moderate
61.	EL0902R0002066096N	Mavropotamos		√	Good	Good	1	1	Good
62.	EL0902R0002066097N	Mavropotamos		√	Moderate	Good	3	1	Moderate
63.	EL0902R0002066098N	Megalo - Karavidia		√	Good	Unknown	3	0	Unknown
64.	EL0902R0002066099N	Aspropotamos		√	Good	Good	1	1	Good
65.	EL0902R0002070011H	Aliakmonas (Polifitos-Sfikia)	√		Moderate	Good	1	1	Moderate
66.	EL0902R0002080012N	Skoularitikos Lakos			Good	Good	1	1	Good
67.	EL0902R0002080013N	Skoularitikos Lakos		√	Good	Good	1	1	Good
68.	EL0902R0002090024N	Aliakmonas			Good	Good	3	1	Good
69.	EL0902R0002100014N	Ftelias			Poor	Good	3	1	Poor
70.	EL0902R0002100015N	Ftelias		√	Good	Good	1	1	Good
71.	EL0902R0002110036N	Aliakmonas			Good	Good	1	1	Good
72.	EL0902R0002120016N	Ag. Markos			Moderate	Good	3	1	Moderate
73.	EL0902R0002120017N	Aikaterinis Lakos			Good	Good	1	1	Good
74.	EL0902R0002130038N	Aliakmonas			Good	Good	1	1	Good
75.	EL0902R0002150040N	Aliakmonas			Good	Good	1	1	Good
76.	EL0902R0002160018N	Smiksi			Good	Good	1	1	Good
77.	EL0902R0002170044N	Aliakmonas			Good	Good	1	1	Good
78.	EL0902R0002180019N	Vintza			Good	Good	1	1	Good
79.	EL0902R0002190047N	Aliakmonas			Good	Good	1	1	Good
80.	EL0902R0002190048N	Aliakmonas			Moderate	Unknown	1	0	Unknown
81.	EL0902R0002200020N	Akoniu Lakos			Good	Good	1	1	Good
82.	EL0902R0002210054N	Aliakmonas			Moderate	Good	1	1	Moderate

No.	Code WB	WB Name	HMWB/ AWB	Relation to Protected Areas	Ecological Status/ Potential	Chemical Status	Confidence Level		Total Status
							Ecological	Chemical	
83.	EL0902R0002220021N	Karavida			Good	Good	1	1	Good
84.	EL0902R0002230056N	Aliakmonas			Moderate	Unknown	1	0	Unknown
85.	EL0902R0002230057N	Aliakmonas			Good	Good	1	1	Good
86.	EL0902R0002240022N	Potamia			Good	Good	1	1	Good
87.	EL0902R0002240023N	Sioutsa			Good	Good	1	1	Good
88.	EL0902R0002250059N	Aliakmonas			Good	Good	3	1	Good
89.	EL0902R0002270063N	Aliakmonas			Good	Good	1	1	Good
90.	EL0902R0002280025N	Venetikos			Good	Good	1	1	Good
91.	EL0902R0002280029N	Venetikos		√	Good	Good	1	1	Good
92.	EL0902R0002280034N	Venetikos		√	Good	Good	1	1	Good
93.	EL0902R0002280035N	Venetikos		√	Good	Good	1	1	Good
94.	EL0902R0002281026N	Koutsafira			Good	Good	1	1	Good
95.	EL0902R0002281027N	Sravopotamos			Good	Good	1	1	Good
96.	EL0902R0002281028N	Koutsafira			Good	Good	1	1	Good
97.	EL0902R0002282030N	Venetikos		√	Good	Good	1	1	Good
98.	EL0902R0002282031N	Venetikos		√	Good	Good	1	1	Good
99.	EL0902R0002282032N	Venetikos		√	Good	Good	3	1	Good
100.	EL0902R0002282033N	Aspropotamos		√	Good	Good	1	1	Good
101.	EL0902R0002290067N	Aliakmonas			Moderate	Unknown	1	0	Unknown
102.	EL0902R0002300037N	Potamia			Good	Good	1	1	Good
103.	EL0902R0002310070N	Aliakmonas			Moderate	Unknown	1	0	Unknown
104.	EL0902R0002320039N	Greveniotikos		√	Moderate	Failing to achieve good	3	3	Moderate
105.	EL0902R0002330074N	Aliakmonas		√	Good	Good	1	1	Good
106.	EL0902R0002340041N	Ntroumpeta			Good	Good	1	1	Good
107.	EL0902R0002340042N	Lisamenis r.			Good	Good	1	1	Good
108.	EL0902R0002341043N	Potamia			Good	Good	1	1	Good
109.	EL0902R0002350077N	Aliakmonas		√	Good	Good	1	1	Good
110.	EL0902R0002350078N	Aliakmonas		√	Good	Good	1	1	Good
111.	EL0902R0002360045N	Milopotamos			Good	Good	1	1	Good
112.	EL0902R0002360046N	Milopotamos		√	Good	Good	1	1	Good

No.	Code WB	WB Name	HMWB/ AWB	Relation to Protected Areas	Ecological Status/ Potential	Chemical Status	Confidence Level		Total Status
							Ecological	Chemical	
113.	EL0902R0002380049N	Pramoritsa			Moderate	Good	3	1	Moderate
114.	EL0902R0002380050N	Pramoritsa			Good	Good	1	1	Good
115.	EL0902R0002380051N	Koutsomilia			Good	Good	1	1	Good
116.	EL0902R0002380052N	Koutsomilia			Good	Good	1	1	Good
117.	EL0902R0002381053N	Paliochori			Good	Good	1	1	Good
118.	EL0902R0002400055N	Mirichos			Good	Good	1	1	Good
119.	EL0902R0002420058N	Poros			Good	Good	1	1	Good
120.	EL0902R0002440060N	Gkiole			Moderate	Good	3	1	Moderate
121.	EL0902R0002440061N	Gkiole			Moderate	Unknown	1	0	Unknown
122.	EL0902R0002440062N	Ksiropotamos		√	Poor	Good	3	1	Poor
123.	EL0902R0002460064N	Velas			Good	Good	1	1	Good
124.	EL0902R0002460065N	Velas			Good	Good	1	1	Good
125.	EL0902R0002460066N	Velas			Good	Good	1	1	Good
126.	EL0902R0002480068N	Sravopotamos			Moderate	Unknown	1	0	Unknown
127.	EL0902R0002480069N	Sravopotamos			Good	Good	1	1	Good
128.	EL0902R0002500071N	Aliakmonas			Moderate	Unknown	1	0	Unknown
129.	EL0902R0002500072N	Aliakmonas		√	Good	Good	1	1	Good
130.	EL0902R0002500073N	Aliakmonas		√	Good	Good	1	1	Good
131.	EL0902R0002520075N	Vrochopotamos			Good	Unknown	1	0	Unknown
132.	EL0902R0002520076N	Vrochopotamos			Good	Good	1	1	Good
133.	EL0902R0003000116H	Chelopotamos	√		Moderate	Good	1	1	Moderate
134.	EL0902R0003000117N	Ksirolaki		√	Good	Good	1	1	Good
135.	EL0902R0004010102H	Mavroneri (morphologically altered)	√		Poor	Good	3	1	Poor
136.	EL0902R0004010103N	Mavroneri			Moderate	Unknown	1	0	Unknown
137.	EL0902R0004020104N	Pelekas			Good	Good	1	1	Good
138.	EL0902R0004020105N	Pelekas			Good	Good	1	1	Good
139.	EL0902R0004021106N	Patsiaris			Good	Good	1	1	Good
140.	EL0902R0004030107N	Mavroneri			Good	Good	1	1	Good
141.	EL0902R0004040108N	Pisteries			Good	Good	3	1	Good
142.	EL0902R0004040109N	Pisteries		√	Good	Good	1	1	Good
143.	EL0902R0004050110N	Mavroneri			Good	Good	1	1	Good

No.	Code WB	WB Name		HMWB/ AWB	Relation to Protected Areas	Ecological Status/ Potential	Chemical Status	Confidence Level		Total Status
								Ecological	Chemical	
144.	EL0902R0004060111N	Petriotiko				Good	Good	1	1	Good
145.	EL0902R0004070112N	Mavroneri			√	Good	Good	1	1	Good
146.	EL0902R0004070113N	Mavroneri			√	Good	Good	1	1	Good
147.	EL0902R0005000118H	Rema Mana (morphologically altered)		√		Moderate	Good	1	1	Moderate
148.	EL0902R0005000119N	Mavrologos				Good	Good	1	1	Good
149.	EL0902R0005000120N	Mavrologos			√	Good	Good	1	1	Good
150.	EL0902R0005000121N	Mavrologos			√	Good	Good	1	1	Good

Table 6-2: Comparison of River WB classification status results of the Approved RBMP and the Approved RBMP - 1st Update of Western Macedonia RBD

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Revision	1st RBMP	1st Revision
EL0901R000001018N	Paliorema (Ag. Germanos)	Unknown	Good	Unknown	Good
EL0901R000001019N	Ag. Germanos	Unknown	Good	Unknown	Good
EL0901R000001020N	Kaloneri	Unknown	Good	Good	Good
EL0901R000002021N	Sirakio	Unknown	Good	Good	Good
EL0901R0F0201001N	Ligkos	Poor	Good	Unknown	Unknown
EL0901R0F0202002N	Kalinikiotiko	Poor	Good	Unknown	Good
EL0901R0F0202003N	Kalinikiotiko	Poor	Good	Unknown	Unknown
EL0901R0F0202004N	Kalinikiotiko	Poor	Good	Unknown	Good
EL0901R0F0203005N	Ligkos	Poor	Good	Unknown	Good
EL0901R0F0204006N	Paleo	Poor	Moderate	Failing to achieve good	Unknown
EL0901R0F0204007N	Paleo	Poor	Good	Unknown	Unknown
EL0901R0F0205008N	Ligkos	Poor	Moderate	Failing to achieve good	Good
EL0901R0F0206011N	Florina	Poor	Good	Unknown	Good
EL0901R0F0206012N	Tropeouxos	Poor	Good	Unknown	Good
EL0901R0F0206013N	Tropeouxos	Poor	Good	Unknown	Good
EL0901R0F0206109N	Florina	Poor	Good	Unknown	Good
EL0901R0F0206110H	Florina	Poor	Moderate	Unknown	Good
EL0901R0F0206111N	Florina	Poor	Good	Unknown	Good
EL0901R0F0207014N	Melpo	Poor	Good	Unknown	Good
EL0901R0F0207015N	Melpo	Poor	Good	Unknown	Good
EL0901R0F0208016N	Asprorema	Poor	Good	Unknown	Good
EL0901R0F0209017N	Drosopigiotiko	ΥΨΗΛΗ	Good	Good	Good
EL0902R0000010122N	Koilada (Soulou)	Poor	Poor	Failing to achieve good	Failing to achieve good
EL0902R0000010123H	Soulou (Mines)	Poor	Moderate	Failing to achieve good	Unknown
EL0902R0000010124A	Soulou (Sari Gkioli)	Poor	Moderate	Failing to achieve good	Unknown
EL0902R0000010125A	Dioriga Vegoritida-Petron	Unknown	Moderate	Unknown	Unknown

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Revision	1st RBMP	1st Revision
EL0902R0000010126N	Amintas	Unknown	Poor	Unknown	Good
EL0902R0000010127H	Dioriga Chimaditida	Unknown	Moderate	Unknown	Unknown
EL0902R0000010128A	Dioriga Zazari-Chimaditida	Unknown	Moderate	Unknown	Unknown
EL0902R0000010129H	Sklithro	Unknown	Moderate	Unknown	Good
EL0902R0001000114H	Rema Korinos (Morphologically altered)	Unknown	Good	Unknown	Good
EL0902R0001000115N	Stream Katerini	Unknown	Moderate	Unknown	Good
EL0902R0002010003H	Aliakmonass (Krasopouli-Delta)	Poor	Moderate	Failing to achieve good	Good
EL0902R0002020001H	Krioneri (Morphologically altered)	Unknown	Poor	Unknown	Good
EL0902R0002020002N	Kerasies	Unknown	Moderate	Unknown	Good
EL0902R0002030007H	Aliakmonas (T66-Krasopouli)	Poor	Moderate	Failing to achieve good	Good
EL0902R0002030008H	Aliakmonas (T66-Krasopouli)	Poor	Moderate	Failing to achieve good	Good
EL0902R0002040004H	Krasopouli (Morphologically altered)	Unknown	Moderate	Unknown	Good
EL0902R0002040005H	Krasopouli (Morphologically altered)	Unknown	Moderate	Unknown	Good
EL0902R0002040006N	Krasopouli	Unknown	Poor	Unknown	Good
EL0902R0002050009H	Aliakmonas (to T66)	Poor	Moderate	Unknown	Good
EL0902R0002050010H	Aliakmonas (to T66)	Poor	Moderate	Unknown	Good
EL0902R0002060079A	T66	Bad	Moderate	Failing to achieve good	Failing to achieve good
EL0902R0002060081A	T66	Bad	Moderate	Failing to achieve good	Unknown
EL0902R0002060083A	T66	Bad	Moderate	Failing to achieve good	Good
EL0902R0002060086A	T66	Poor	Poor	Failing to achieve good	Failing to achieve good
EL0902R0002060088A	T66	Poor	Moderate	Failing to achieve good	Good
EL0902R0002060095A	T66	Poor	Moderate	Failing to achieve good	Good

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Revision	1st RBMP	1st Revision
EL0902R0002060100A	T66	Unknown	Moderate	Unknown	Good
EL0902R0002061080N	Tripotamos	Moderate	Moderate	Unknown	Good
EL0902R0002062082N	Konticha	Unknown	Moderate	Unknown	Unknown
EL0902R0002063084N	Arapitsa	Poor	Moderate	Unknown	Unknown
EL0902R0002063085N	Arapitsa	Good	Good	Good	Good
EL0902R0002064087N	Lianorema	Unknown	Moderate	Unknown	Good
EL0902R0002065089H	Edeseos (Skidras part)	Poor	Moderate	Unknown	Good
EL0902R0002065090N	Edeseos	Poor	Moderate	Unknown	Good
EL0902R0002065091H	Edeseos (hydroelectric station part)	Unknown	Moderate	Unknown	Good
EL0902R0002065092H	Edeseos (groundwater diversion)	Unknown	Moderate	Unknown	Unknown
EL0902R0002065093H	Edeseos (diversion towards hydroelectric station)	Unknown	Moderate	Unknown	Good
EL0902R0002065094H	Edeseos (Agra part)	Unknown	Moderate	Unknown	Good
EL0902R0002066096N	Mavropotamos	Poor	Good	Unknown	Good
EL0902R0002066097N	Mavropotamos	Poor	Moderate	Unknown	Good
EL0902R0002066098N	Megalo - Karavidia	Poor	Good	Good	Unknown
EL0902R0002066099N	Aspropotamos	Unknown	Good	Unknown	Good
EL0902R0002070011H	Aliakmonas (Polifitos-Sfikia)	Unknown	Moderate	Unknown	Good
EL0902R0002080012N	Skoularitikos Lakos	Good	Good	Good	Good
EL0902R0002080013N	Skoularitikos Lakos	Good	Good	Good	Good
EL0902R0002090024N	Aliakmonas	Moderate	Good	Unknown	Good
EL0902R0002100014N	Ftelias	Unknown	Poor	Unknown	Good
EL0902R0002100015N	Ftelias	Good	Good	Good	Good
EL0902R0002110036N	Aliakmonas	Moderate	Good	Unknown	Good
EL0902R0002120016N	Ag. Markos	Good	Moderate	Good	Good
EL0902R0002120017N	Aikaterinis Lakos	Good	Good	Good	Good
EL0902R0002130038N	Aliakmonas	Moderate	Good	Unknown	Good
EL0902R0002150040N	Aliakmonas	Moderate	Good	Unknown	Good
EL0902R0002160018N	Smiksi	Good	Good	Good	Good
EL0902R0002170044N	Aliakmonas	Moderate	Good	Unknown	Good
EL0902R0002180019N	Vintza	Good	Good	Good	Good
EL0902R0002190047N	Aliakmonas	Good	Good	Unknown	Good

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Revision	1st RBMP	1st Revision
EL0902R0002190048N	Aliakmonas	Good	Moderate	Unknown	Unknown
EL0902R0002200020N	Akoniou Lakos	Good	Good	Good	Good
EL0902R0002210054N	Aliakmonas	Moderate	Moderate	Unknown	Good
EL0902R0002220021N	Karavida	Good	Good	Good	Good
EL0902R0002230056N	Aliakmonas	Moderate	Moderate	Unknown	Unknown
EL0902R0002230057N	Aliakmonas	Moderate	Good	Unknown	Good
EL0902R0002240022N	Potamia	Good	Good	Good	Good
EL0902R0002240023N	Sioutsa	Good	Good	Good	Good
EL0902R0002250059N	Aliakmonas	Moderate	Good	Unknown	Good
EL0902R0002270063N	Aliakmonas	Moderate	Good	Unknown	Good
EL0902R0002280025N	Venetikos	Moderate	Good	Unknown	Good
EL0902R0002280029N	Venetikos	Good	Good	Good	Good
EL0902R0002280034N	Venetikos	Good	Good	Good	Good
EL0902R0002280035N	Venetikos	Good	Good	Good	Good
EL0902R0002281026N	Koutsafira	Good	Good	Good	Good
EL0902R0002281027N	Stravopotamos	Good	Good	Good	Good
EL0902R0002281028N	Koutsafira	Good	Good	Good	Good
EL0902R0002282030N	Venetikos	Good	Good	Good	Good
EL0902R0002282031N	Venetikos	Good	Good	Good	Good
EL0902R0002282032N	Venetikos	Good	Good	Good	Good
EL0902R0002282033N	Aspropotamos	Good	Good	Good	Good
EL0902R0002290067N	Aliakmonas	Moderate	Moderate	Unknown	Unknown
EL0902R0002300037N	Potamia	Moderate	Good	Unknown	Good
EL0902R0002310070N	Aliakmonas	Moderate	Moderate	Good	Unknown
EL0902R0002320039N	Greveniotikos	Bad	Moderate	Failing to achieve good	Failing to achieve good
EL0902R0002330074N	Aliakmonas	Moderate	Good	Good	Good
EL0902R0002340041N	Ntroumpeta	Unknown	Good	Unknown	Good
EL0902R0002340042N	Lisasmenis r.	Unknown	Good	Unknown	Good
EL0902R0002341043N	Potamia	Unknown	Good	Unknown	Good
EL0902R0002350077N	Aliakmonas	Υψηλή	Good	Good	Good
EL0902R0002350078N	Aliakmonas	Υψηλή	Good	Good	Good
EL0902R0002360045N	Milopotamos	Unknown	Good	Unknown	Good

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Revision	1st RBMP	1st Revision
EL0902R0002360046N	Milopotamos	Unknown	Good	Unknown	Good
EL0902R0002380049N	Pramoritsa	Moderate	Moderate	Unknown	Good
EL0902R0002380050N	Pramoritsa	Good	Good	Good	Good
EL0902R0002380051N	Koutsomilia	Good	Good	Good	Good
EL0902R0002380052N	Koutsomilia	Good	Good	Good	Good
EL0902R0002381053N	Paliochori	Good	Good	Good	Good
EL0902R0002400055N	Mirichos	Unknown	Good	Unknown	Good
EL0902R0002420058N	Poros	Unknown	Good	Unknown	Good
EL0902R0002440060N	Gkiole	Bad	Moderate	Failing to achieve good	Good
EL0902R0002440061N	Gkiole	Bad	Moderate	Failing to achieve good	Unknown
EL0902R0002440062N	Ksiropotamos	Unknown	Poor	Unknown	Good
EL0902R0002460064N	Velas	Good	Good	Good	Good
EL0902R0002460065N	Velas	Good	Good	Good	Good
EL0902R0002460066N	Velas	Good	Good	Good	Good
EL0902R0002480068N	Sravopotamos	Unknown	Moderate	Unknown	Unknown
EL0902R0002480069N	Sravopotamos	Good	Good	Good	Good
EL0902R0002500071N	Aliakmonas	Unknown	Moderate	Unknown	Unknown
EL0902R0002500072N	Aliakmonas	Good	Good	Good	Good
EL0902R0002500073N	Aliakmonas	Good	Good	Good	Good
EL0902R0002520075N	Vrochopotamos	Good	Good	Good	Unknown
EL0902R0002520076N	Vrochopotamos	Good	Good	Good	Good
EL0902R0003000116H	Chelopotamos	Unknown	Moderate	Unknown	Good
EL0902R0003000117N	Ksirolaki	Good	Good	Good	Good
EL0902R0004010102H	Mavroneri (morphologically altered)	Poor	Poor	Unknown	Good
EL0902R0004010103N	Mavroneri	Poor	Moderate	Unknown	Unknown
EL0902R0004020104N	Pelekas	Unknown	Good	Unknown	Good
EL0902R0004020105N	Pelekas	Unknown	Good	Unknown	Good
EL0902R0004021106N	Patsiaris	Unknown	Good	Unknown	Good
EL0902R0004030107N	Mavroneri	Unknown	Good	Unknown	Good
EL0902R0004040108N	Pisteries	Good	Good	Good	Good

WB Code	WB Name	Ecological Status or Potential		Chemical Status	
		1st RBMP	1st Revision	1st RBMP	1st Revision
EL0902R0004040109N	Pisteries	Good	Good	Good	Good
EL0902R0004050110N	Mavroneri	Good	Good	Unknown	Good
EL0902R0004060111N	Petriotiko	Good	Good	Good	Good
EL0902R0004070112N	Mavroneri	Good	Good	Good	Good
EL0902R0004070113N	Mavroneri	Good	Good	Good	Good
EL0902R0005000118H	Rema Mana (morphologically altered)	Unknown	Moderate	Unknown	Good
EL0902R0005000119N	Mavrologos	Good	Good	Unknown	Good
EL0902R0005000120N	Mavrologos	Good	Good	Good	Good
EL0902R0005000121N	Mavrologos	Good	Good	Good	Good

6.1.2 Evaluation of Lake Water Bodies Status

The results of the evaluation of the Lake WBs status in the RBD are presented in the following table.

Additionally in a separate table the differences in the status compared to the 1st RBMP are presented.

Table 6-3: Classification of the Lake WBs especially HMWB in Western Macedonia RBD

No.	WB Code	WB Name	Relation to Protected Areas	Ecological Status/ Potential	Chemical Status	Confidence Level ²		Total Status
						Ecological	Chemical	
Prespes RB (EL0901)								
1.	EL0901L000000001H	Papadia	√	Unknown	Unknown	0	0	Unknown
Aliakmon RB (EL0902)								
2.	EL0902L000000006H	Varvara	√	Unknown	Unknown	0	0	Unknown
3.	EL0902L000000007H	Asomata	√	Good	Good	3	3	Good
4.	EL0902L000000008H	Sfikia	√	Good	Good	3	3	Good
5.	EL0902L000000009H	Polifitos		Good	Good	3	3	Good
6.	EL0902L000000010H	Ilarionas		Unknown	Unknown	0	0	Unknown
7.	EL0902L000000011H	Pramoritsa	√	Unknown	Unknown	0	0	Unknown

Table 6-4: Classification of the Lake WBs in Western Macedonia RBD

No.	WB Code	WB Name	Relation to Protected Areas	Ecological Status/ Potential	Chemical Status	Confidence Level ³	Total Status		Total Status
							Ecological	Chemical	
Prespes RB (EL0901)									
1.	EL0901LOA0000013N	Mikri Prespa		√	Moderate	Good	3	3	Moderate
2.	EL0901LFA0000014N	Megali Prespa		√	Good	Good	3	3	Good
Aliakmon RB (EL0902)									
3.	EL0902L000000002N	Zazari		√	Poor	Good	3	3	Poor

² «0» = No data, «1» = Little Confidence, «2» = Medium confidence, «3» = High Confidence. It refers to the ecological and chemical status

³ «0» = No data, «1» = Little Confidence, «2» = Medium confidence, «3» = High Confidence. It refers to the ecological and chemical status

No.	WB Code	WB Name	Relation to Protected Areas	Ecological Status/ Potential	Chemical Status	Confidence Level ³	Total Status		Total Status
							Ecological	Chemical	
Prespes RB (EL0901)									
4.	EL0902L000000003N	Cheimaditida		√	Bad	Good	3	3	Bad
5.	EL0902L000000004N	Petron		√	Poor	Good	3	3	Poor
6.	EL0902L000000005N	Vegoritida		√	Moderate	Good	3	3	Moderate
7.	EL0902L000000012H	kastorias	√	√	Moderate	Good	3	3	Moderate

Table 6-5: Comparison of River WB classification status results of the Approved RBMP and the 1st Update of Western Macedonia RBD

WB Code	WB Name	Ecological Status /Potential		Chemical Status		Remarks
		1 st RBMP	1 st Update	1 st RBMP	1 st Update	
Prespes RB (EL0901)						
EL0901LFA0000014N	Mikri Prespa	Moderate	Good	Failing to achieve good	Good	New approved national schemes for Ecological classification / No exceedances have been observed
EL0901LOA0000013N	Megali Prespa	Poor	Moderate	Failing to achieve good	Good	New approved national schemes for Ecological classification /No exceedances have been observed
Aliakmon RB (EL0902)						
EL0902L000000002N	Zazari	Bad	Poor	Unknown	Good	New approved national schemes for Ecological classification /No exceedances have been observed
EL0902L000000003N	Cheimaditida	Bad	Bad	Unknown	Good	New approved national schemes for Ecological classification /No exceedances have been observed
EL0902L000000004N	Petron	Unknown	Poor	Failing to achieve good	Good	New approved national schemes for Ecological classification /No exceedances have been observed
EL0902L000000005N	Vegoritida	Poor	Moderate	Unknown	Good	New approved national schemes for Ecological classification /No exceedances have been observed
EL0902L000000012H	kastorias	Poor	Moderate	Failing to achieve good	Good	New approved national schemes for Ecological classification /No exceedances have been observed
EL0902L000000007H	Asomata	Unknown	Good	Unknown	Good	New approved national schemes for Ecological classification /No exceedances have been observed
EL0902L000000008H	Sfikia	Unknown	Good	Unknown	Good	New approved national schemes for Ecological classification /No exceedances have been observed

EL0902L000000009H	Polifitos	Moderate	Good	Unknown	Good	New approved national schemes for Ecological classification /No exceedances have been observed
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6.1.3 Evaluation of Transitional Water Bodies status

The results of the evaluation of the Transitional WBs status in the RBD are presented in the following table.

Table 6-6: Classification of the transitional WBs in Western Macedonia RBD

No.	WB Code	WB Name	HMWB/AWB	Relation to Protected Areas	Ecological Status	Chemical Status	Confidence Level ⁴		Total Status
							Ecological	Chemical	
Prespes RB (EL0901)									
No transitional water systems are established									
Aliakmon RB (EL0902)									
1	EL0902T000000001N	Ekvoliko Sistima Loudias-Aliakmonas		√	Poor	Good	3	3	Poor
2	EL0902T000000002N	Limnothalassa Kitrous		√	Poor	Good	3	3	Poor

In the following table the comparison of the ecological and chemical status of the transitional WB of EL09 between the 1st and the updated RBMP.

Table 6-7: Comparison of transitional WB classification status results of the Approved RBMP and the 1st Update of Western Macedonia RBD

WB Code	WB Name	Ecological Status/Potential		Chemical Status		Remarks
		1 st RBMP	1 st Update	1 st RBMP	1 st Update	
Prespes RB (EL0901)						
No transitional water systems are established						
Aliakmon RB (EL0902)						
EL0902T000000002N	Ekvoliko Sistima Loudias-Aliakmonas	Poor	Poor	Unknown	Good	New approved national schemes for Ecological classification /No exceedances have been observed
EL0902T000000001N	Limnothalassa Kitrous	Moderate	Poor	Unknown	Good	New approved national schemes for Ecological classification /No

⁴ «0» = No available data, «1» = Low Confidence, «2» = Moderate Confidence, «3» = High Confidence. It refers to the ecological and chemical status.

WB Code	WB Name	Ecological Status/Potential		Chemical Status		Remarks
		1 st RBMP	1 st Update	1 st RBMP	1 st Update	
						exceedances have been observed

6.1.4 Evaluation of Coastal Water Bodies status

The results of the evaluation of the Coastal WBs status in the RBD are presented in the following table.

Table 6-8: Classification of the Coastal WBs in Western Macedonia RBD

No.	WB Code	WB Name	HMWB/AWB	Relation to Protected Areas	Ecological Status	Chemical Status	Confidence Level ⁵		Total Status
							Ecological	Chemical	
Prespes RB (EL0901)									
No coastal water systems are established									
Aliakmon RB (EL0902)									
1	EL0902C0001N	Ekso Thermaikos Kolpos-Paralia Katerinis		√	Moderate	Good	3	3	Moderate
2	EL0902C0002N	Eso Thermaikos Kolpos-Aliakmonas		√	Moderate	Good	3	3	Moderate

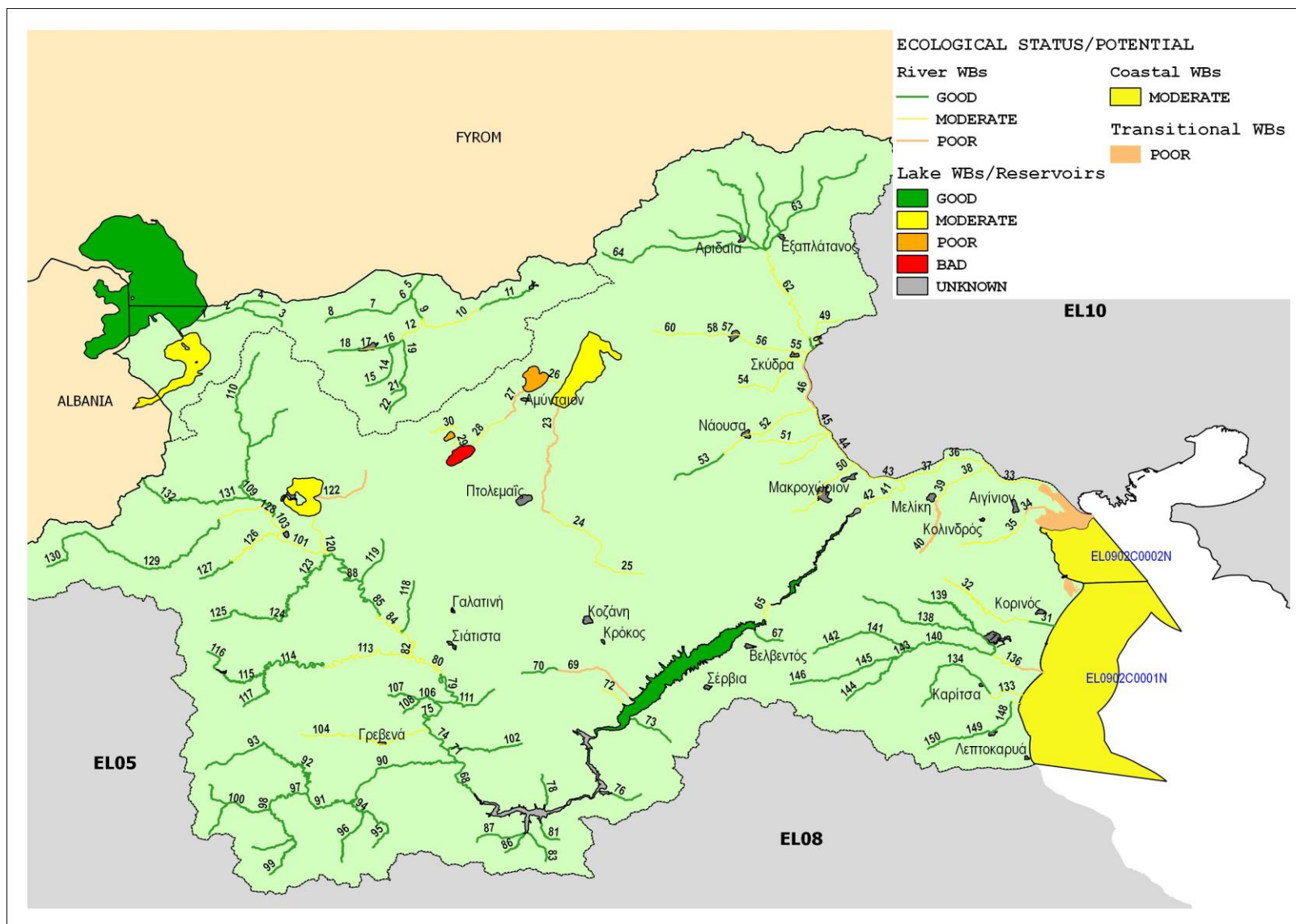
In the following table the differences in the status compared to the 1st RBMP are presented.

Table 6-9: Comparison of Coastal WB classification status results of the Approved RBMP and the 1st Update of Central Macedonia

WB Code	WB Name	Ecological Status/ Potential		Chemical Status		Remarks
		1 st RBMP	1 st Update	1 st RBMP	1 st Update	
Prespes RB (EL0901)						
No coastal water systems are established						
Aliakmon RB (EL0902)						
EL0902C0001N	Ekso Thermaikos Kolpos- Paralia Katerinis	Good	Moderate	Unknown	Good	New approved national schemes for Ecological classification /No exceedances have been observed

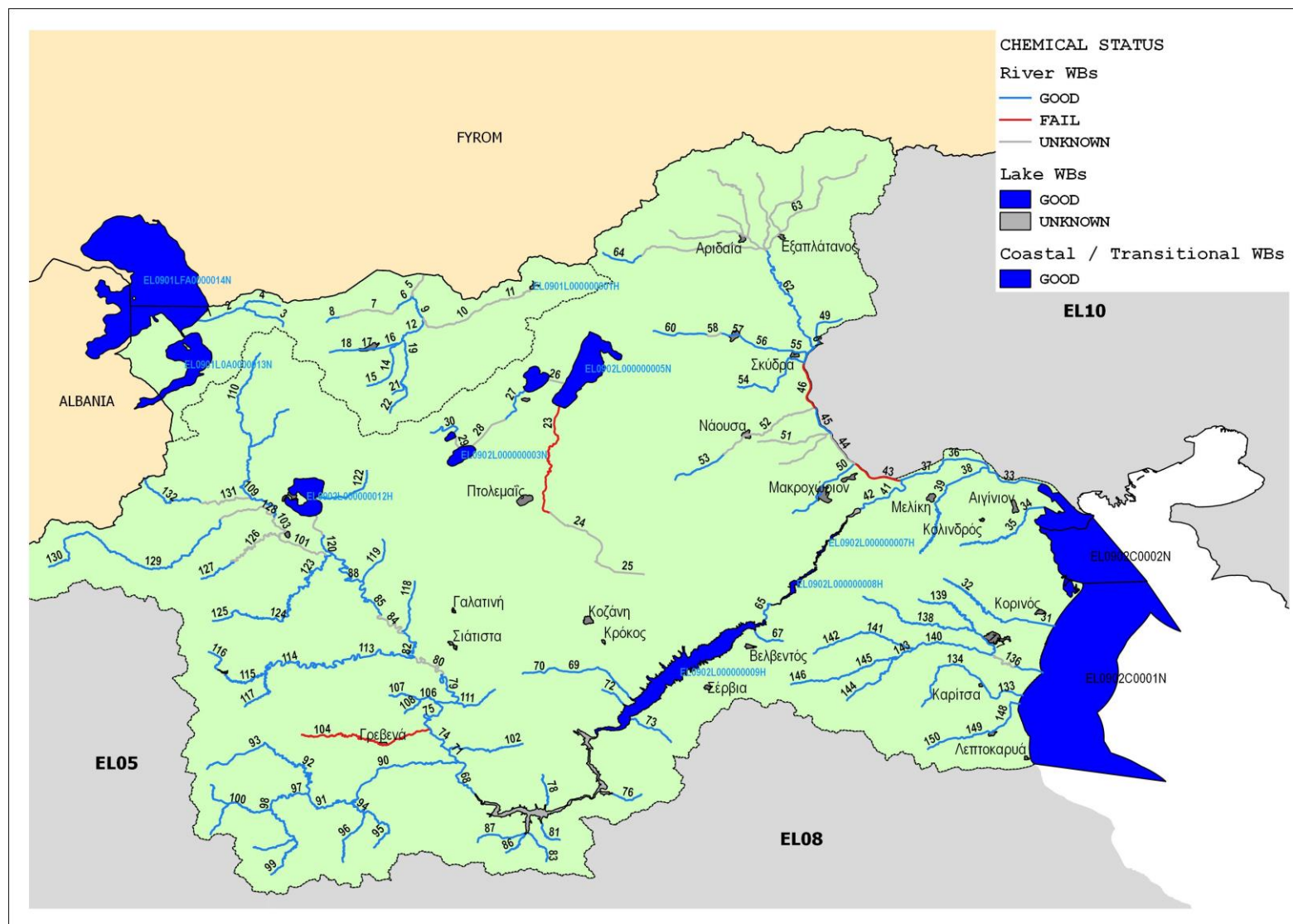
⁵ «0» = No available data, «1» = Low Confidence, «2» = Moderate Confidence, «3» = High Confidence. It refers to the ecological and chemical status.

WB Code	WB Name	Ecological Status/ Potential		Chemical Status		Remarks
		1 st RBMP	1 st Update	1 st RBMP	1 st Update	
EL0902C0002N	Eso Thermaikos Kolpos- Aliakmonas	Moderate	Moderate	Unknown	Good	New approved national schemes for Ecological classification /No exceedances have been observed



Note: River numbering is compatible with the numbering of the Table 4.4

Figure 5: Ecological Status of the Surface Water Bodies in the WD of Western Macedonia (EL09)



Note: River numbering is compatible with the numbering of the Table 4.4

Figure 6: Chemical Status of the Surface Water Bodies in the WD of Western Macedonia (EL09)

6.2 CLASSIFICATION OF GROUNDWATER BODIES

In the following tables the quantitative and qualitative status of the GWBs in the RBD (EL09) are presented.

Table 6-10: Prespes RB- Chemical and Quantitative status of GWBs

No	GWB Code	Name	Chemical Status	Quantitive Status	Increased Element Values due to the Natural Background	Increased Element Values due to Athropogenic Interventions	Main Pressures	Seawater Intrusion	Protected Areas	Remarks
1	EL09AF040	Florina	Good	Good	Fe, Mn, Ni, Ba, Al	NO ₃	Agriculture, Livestock, Sewage	NO	NO	
2	EL090F291	Vora	Good	Good	-	-	Industrial Livestock, Sewage	NO	NO	
3	EL090F321	Veis - Flampourou	Good	Good	-	-	Agriculture, Quarry, Public Power Corporation	NO	NO	
4	EL09AF013	Prespon – Florinas	Good	Good	NO	-	NO	NO	NO	

Table 6-11: Aliakmon RB - Chemical and Quantitative status of GWBs

No	GOB Code	Name	Chemical Status	Quantitive Status	Increased Element Values due to the Natural Background	Increased Element Values due to Athropogenic Interventions	Main Pressures	Seawater Intrusion	Protected Areas	Remarks
1	EL09AF010	Triklariou Orous	Good	Good	Mn, Fe, Zn	NH ₄	Livestock - Aviculture	NO	YES	
	EL0900020	Kastorias								
2	EL0900021	Kastorias	Good	Good	Fe, Mn, Al	Fe, Mn, NO ₃ , NH ₄	Agriculture Abstractions	NO	NO	
3	EL0900022	Mesopotamias-Hiliodendrou	Good	Good	NO	Fe, NO ₃	Agriculture	NO	NO	
	EL0900030	Grevenon								
4	EL0900031	Grevenon	Good	Good	Fe, Mn, Ba	NO	Agriculture	NO	NO	

No	GOB Code	Name	Chemical Status	Quantitative Status	Increased Element Values due to the Natural Background	Increased Element Values due to Anthropogenic Interventions	Main Pressures	Seawater Intrusion	Protected Areas	Remarks
5	EL0900032	Kaloneriou-Kozanis	Good	Good	Fe	Fe, Mn	Agriculture	NO	NO	
6	EL0900033	Puloriou-Kozanis	Good	Good	NO	Fe	NO	NO	NO	
7	EL0900034	Agiou Georgiou	Good	Good	NO	-	NO	NO	NO	
8	EL0900035	Koitis Venetikou	Good	Good	Mn	-	Industry	NO	NO	
9	EL0900050	Amuntaiou Florinas	Good	Poor	Mn, Fe, Ba	E.C., CL, Fe, Mn, Ba, Ni, Al	Agriculture, Public Power Corporation	NO	NO	
	EL0900060	Ptolemaidas								
10	EL0900061	Ptolemaidas	Poor	Poor	OXI	Fe, NO ₃ , NO ₂ , NH ₄ , Cr, Al	Agriculture, Public Power Corporation	NO	NO	
11	EL0900062	Notiou Pediou or Sarigkiol	Poor	Poor	Fe	Fe	Agriculture, Public Power Corporation	NO	NO	
12	EL0900063	Karioxoriou-Kleitous-Tetralofou	Poor	Poor	Fe, Mn, Ni, Pb, Cd, Cr	Cr	Agriculture, Public Power Corporation	NO	NO	Appearance of Cr due to human activity
	EL0900070	ND Vermiou Orous								
13	EL0900071	ND Vermiou Orous-Askiau Orous	Good	Good	NO	Fe, Mn	Quarantine-Mining, Industry	NO	NO	
14	EL0900072	Vaterou	Good	Good	NO	-	Agriculture Abstractions	NO	NO	
15	EL0900073	Xirolimnis	Good	Good	NO	-	Agriculture	NO	NO	

No	GOB Code	Name	Chemical Status	Quantitative Status	Increased Element Values due to the Natural Background	Increased Element Values due to Anthropogenic Interventions	Main Pressures	Seawater Intrusion	Protected Areas	Remarks
16	EL0900074	Krokou	Good	Good	NO	-	-	NO	NO	Appearance of NH ₄ , NO ₂ , NO ₃ . It is not used for water supply.
17	EL0900075	Lefkopigis	Good	Good	NO	-	Livestock	NO	NO	
18	EL0900076	Argilou-Protoxoriou	Good	Good	NO	-	NO	NO	NO	
19	EL0900077	Polifitou	Good	Good	NO	-	NO	NO	NO	
	EL0900080	BD Vermiou Orous								
20	EL0900081	BD Vermiou Orous (river Edessaïos)	Good	Poor	Fe	-	Industry, Quarry, Livestock, Aviculture, Abstractions	NO	YES	
21	EL0900082	Arnissas Pellas	Good	Poor	Fe	-	Agriculture Industry, Quarry, Livestock, Aviculture, Abstractions	NO	NO	
22	EL090F090	BA Vermiou Orous	Good	Good	NO	Fe, Mn	Industry, Livestock, Aviculture, Waste water	NO	NO	
23	EL0900100	Kentrikou-Anatolikou Vermiou Orous	Good	Good	NO	-	Livestock, Aviculture, Quarry	NO	YES	
24	EL0900110	NA Vermiou	Good	Good	NO	-	Quarry Industry	NO	YES	

No	GOB Code	Name	Chemical Status	Quantitative Status	Increased Element Values due to the Natural Background	Increased Element Values due to Anthropogenic Interventions	Main Pressures	Seawater Intrusion	Protected Areas	Remarks
		(Veroia)					Livestock			
25	EL0900120	Almopaiou	Good	Poor	B, As	Cd	Agriculture Sewage Livestock Abstractions	NO	NO	
26	EL0900130	Kato Aliakmona	Good	Poor	EC, B, Cl	EC, NH ₄ , NO ₃ , Al, As	Sewage Agriculture Livestock	YES	NO	
	EL0900140	Litoxorou								
27	EL0900141	Kokkodes Litoxorou	Good	Poor	Cr, Cd, Al	NO	Sewage	Locally	NO	
28	EL0900142	Karstiko Litoxorou	Good	Good	Cr, Cd, Al	-	-	NO	YES	
29	EL0900150	Katerinis	Good	Poor	Mn, Al, As	As	Abstractions Sewage Agriculture Livestock	YES	NO	
30	EL0900160	Kolindrou	Good	Poor	Fe, Mn, Ni, Cd, B, As	NO ₃ , Ni, As, Al	Sewage Agriculture Livestock Abstractions	YES	NO	
31	EL0900170	Dasoxoriou Grevenon	Good	Good	NO	-	Agriculture Livestock	NO	NO	
32	EL0900180	Trikokkias Grevenon	Good	Good	NO	NO	Agriculture	NO	NO	
33	EL0900190	Paliourias Grevenon	Good	Good	NO	-	Agriculture	NO	NO	

No	GOB Code	Name	Chemical Status	Quantitative Status	Increased Element Values due to the Natural Background	Increased Element Values due to Anthropogenic Interventions	Main Pressures	Seawater Intrusion	Protected Areas	Remarks
34	EL0900221	Korisou Kastorias	Good	Good	NO	-	Agriculture	NO	NO	
35	EL0900231	Galateias-Emporiou Kozanis	Good	Good	Mn, Fe	NO	Agriculture Livestock Aviculture	NO	NO	
36	EL0900241	Pierion	Good	Good	NO	-	Agriculture Livestock Aviculture Quarry Industry Tourism	NO	YES	
37	EL0900251	Naoussas	Good	Good	Fe, Pb, Al	-	Agriculture Quarry Industry Livestock Aviculture	NO	NO	
38	EL0900261	Almopias	Good	Good	Mn, SO ₄ , As, B	NO	Sanitary Landfill, Agriculture, Industry Livestock Aviculture	NO	NO	
39	EL090F271	Aridaias	Good	Good	As	-	Public Power Corporation Livestock Sewage Aviculture	NO	NO	
40	EL0900281	Vourinou	Good	Good	Mg, Cr	-	Livestock Sewage	NO	NO	Pollution from chromium mines that operated (formerly) in the

No	GOB Code	Name	Chemical Status	Quantitative Status	Increased Element Values due to the Natural Background	Increased Element Values due to Anthropogenic Interventions	Main Pressures	Seawater Intrusion	Protected Areas	Remarks
										area
41	EL090F301	Varnounta Vernou	Good	Good	Fe, Mn, Ni, Al, As	-	Industry Livestock Aviculture Sewage	NO	NO	
42	EL0900311	Voreias Pindou	Good	Good	-	-	Industry Livestock Aviculture Sewage	NO	NO	
43	EL0900331	Nimfaiou-Vlastis	Good	Good	-	-	Public Power Corporation Livestock Aviculture Sewage	NO	NO	
44	EL0900341	Perdikka-Filotta	Good	Poor	-	-	Agriculture Public Power Corporation	NO	NO	
45	EL090A330	Mesoellinikhs aulakas	Good	Good	Mn, Al	-	Agriculture Public Power Corporation Livestock	NO	NO	
46	EL0900361	Elatis-Livaderou	Good	Good	-	-	Agriculture	NO	NO	
47	EL0900014	Xalaras Maurokampou	Good	Good	NO	-	NO	NO	NO	
48	EL0900015	Aposkepou-Kefalariou	Good	Good	-	-	NO	NO	YES	

Table 6-12: Chalkidiki RB - Chemical and Quantitative status of GWBs

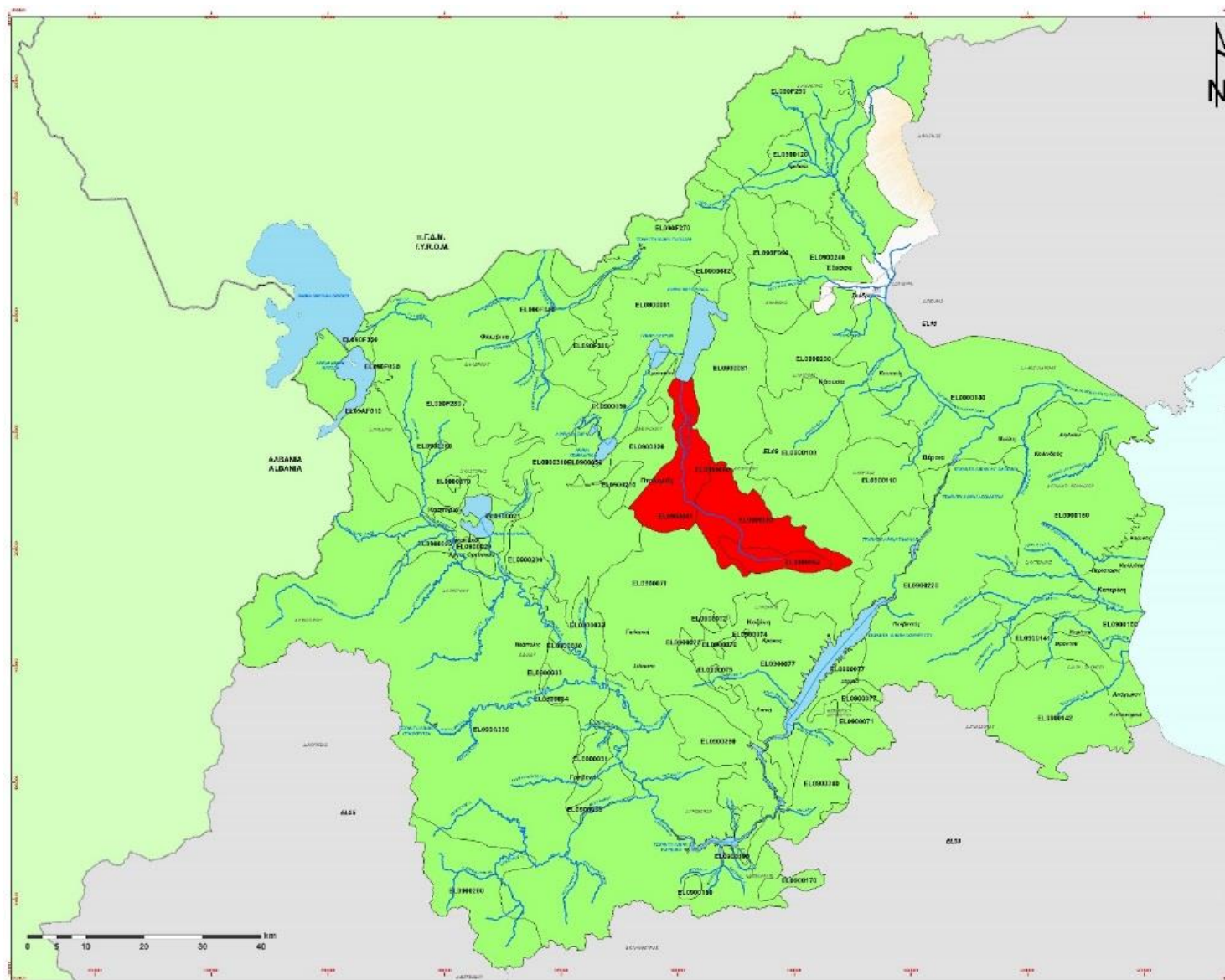


Figure 7: Chemical status of GWB of RBD Western Macedonia

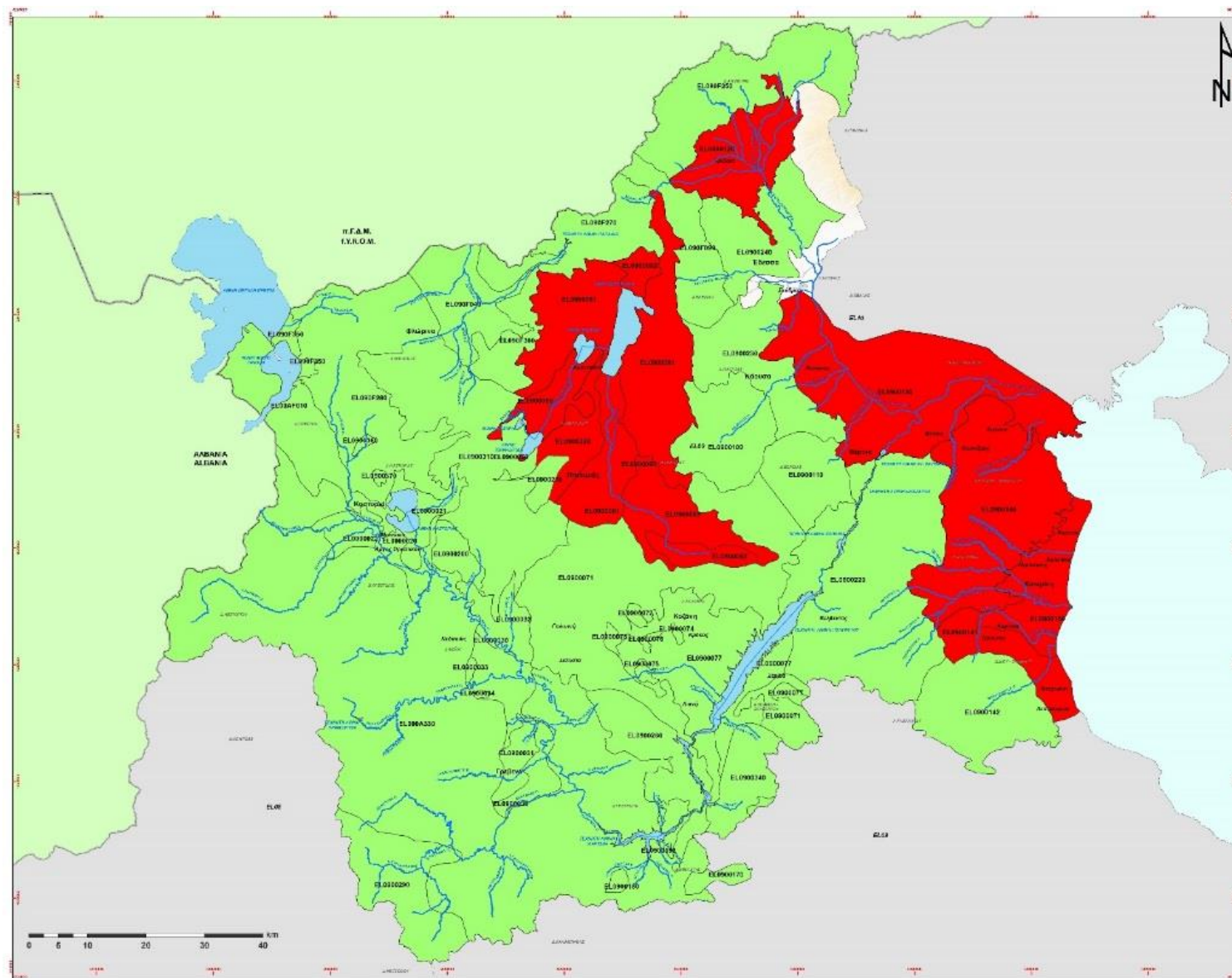


Figure 8: Quantitative status of GWB of RBD Western Macedonia

6.2.1 Comparative Results to the 1st RBMP

The following table records the changes in the qualitative and quantitative status of the groundwater WBs of Western Macedonia, between the 1st and the Updated RBMP.

Table 6-13: Change in the status of the GWBs between the 1st RBMP and the 1st Update

GWB Code	Name	Management Plan		1 st Update of the RBMP	
		Qualitative Status	Quantitative Status	Qualitative Status	Quantitative Status
EL09AF010	Triklariou Orous	■ Good	■ Good	■ Good	■ Good
EL0900020	Kastorias				
EL0900021	Kastorias	■ Good	■ Good	■ Good	■ Good
EL0900022	Mesopotamias-Hiliodendrou	■ Good	■ Good	■ Good	■ Good
EL0900030	Lekanis Grevenon				
EL0900031	Grevenon	■ Good	■ Good	■ Good	■ Good
EL0900032	Kaloneriou-Kozanis	■ Good	■ Good	■ Good	■ Good
EL0900033	Puloriou-Kozanis	■ Good	■ Good	■ Good	■ Good
EL0900034	Agiou Georgiou	■ Good	■ Good	■ Good	■ Good
EL0900035	Koitis Venetikou	■ Good	■ Good	■ Good	■ Good
EL09AF040	Florinas	■ Good	■ Good	■ Good	■ Good
EL0900050	Amuntaiou Florinas	■ Good	■ Poor	■ Good	■ Poor
EL0900060	Ptolemaidas				
EL0900061	Ptolemaidas	■ Poor	■ Poor	■ Poor	■ Poor
EL0900062	Notiou Pediou or Sarigkiol	■ Poor	■ Poor	■ Poor	■ Poor
EL0900063	Karioxoriou-Kleitous-Tetralofou	■ Poor	■ Poor	■ Poor	■ Poor
EL0900070	ND Vermiou Orous				
EL0900071	ND Vermiou Orous-Askiou Orous	■ Good	■ Good	■ Good	■ Good
EL0900072	Vaterou	■ Good	■ Good	■ Good	■ Good
EL0900073	Xirolimnis	■ Good	■ Good	■ Good	■ Good
EL0900074	Krokou	■ Good	■ Good	■ Good	■ Good
EL0900075	Lefkopigis	■ Good	■ Good	■ Good	■ Good
EL0900076	Argilou-Protoxoriou	■ Good	■ Good	■ Good	■ Good

GWB Code	Name	Management Plan		1 st Update of the RBMP	
		Qualitative Status	Quantitative Status	Qualitative Status	Quantitative Status
EL0900077	Polifitou	■ Good	■ Good	■ Good	■ Good
EL0900081	BD Vermiou Orous	■ Good	■ Poor	■ Good	■ Poor
EL0900082	BD Vermiou Orous (river Edessaioi)	■ Good	■ Poor	■ Good	■ Poor
EL090F090	Arnissas Pellas	■ Good	■ Good	■ Good	■ Good
EL0900100	BA Vermiou Orous	■ Good	■ Good	■ Good	■ Good
EL0900110	Kentrikou-Anatolikou Vermiou Orous	■ Good	■ Good	■ Good	■ Good
EL0900120	NA Vermiou (Veroia)	■ Good	■ Poor	■ Good	■ Poor
EL0900130	Almopaiou	■ Good	■ Poor	■ Good	■ Poor
EL0900141	Kato rou Aliakmona	■ Good	■ Poor	■ Good	■ Poor
EL0900142	Litoxorou	■ Good	■ Good	■ Good	■ Good
EL0900150	kokkodes Litoxorou	■ Good	■ Poor	■ Good	■ Poor
EL0900160	karstiko Litoxorou	■ Good	■ Poor	■ Good	■ Poor
EL0900170	Katerinis	■ Good	■ Good	■ Good	■ Good
EL0900180	Kolindrou	■ Good	■ Good	■ Good	■ Good
EL0900190	Dasoxoriou Grevenon	■ Good	■ Good	■ Good	■ Good
EL0900221	Trikokkias Grevenon	■ Good	■ Good	■ Good	■ Good
EL0900231	Paliourias Grevenon	■ Good	■ Good	■ Good	■ Good
EL0900241	Korisou Kastorias	■ Good	■ Good	■ Good	■ Good
EL0900251	Galateias-Emporiou Kozanis	■ Good	■ Good	■ Good	■ Good
EL0900261	Pierion	■ Good	■ Good	■ Good	■ Good
EL090F271	Naoussas	■ Good	■ Good	■ Good	■ Good
EL0900281	Almopias	■ Good	■ Good	■ Good	■ Good
EL090F291	Aridaias	■ Good	■ Good	■ Good	■ Good
EL090F301	Vourinou	■ Good	■ Good	■ Good	■ Good
EL0900311	Vora	■ Good	■ Good	■ Good	■ Good
EL090F300	Varnounta Vernou	■ Good	■ Good	■ Good	■ Good
EL0900331	Voreias Pindou	■ Good	■ Good	■ Good	■ Good

GWB Code	Name	Management Plan		1 st Update of the RBMP	
		Qualitative Status	Quantitative Status	Qualitative Status	Quantitative Status
EL0900341	Vevis-Flampourou	■ Good	■ Poor	■ Good	■ Poor
EL090A330	Nimfaiou-Vlastis	■ Good	■ Good	■ Good	■ Good
EL0900361	Perdikka-Filotta	■ Good	■ Good	■ Good	■ Good
EL09AF013	Mesoellinikhs aulakas	■ Good	■ Good	■ Good	■ Good
EL0900014	Elatis-Livaderou	■ Good	■ Good	■ Good	■ Good
EL0900015	Prespon	■ Good	■ Good	■ Good	■ Good

6.3 MONITORING OF THE WATER STATUS NETWORK

In the 1st update of the RBMP the monitoring network of SWB was based on a total of 43 monitoring stations, 22 of which were surveillance, and 21 operational. The 43 stations recorded data on ecological status and 12 on the chemical status. In the 1st update of the management plan the GWB monitoring network was based on a total of 88 monitoring stations, 44 of which were surveillance, and 44 operational. The 88 recorded data on the chemical and quantitative status.

7 ECONOMIC ANALYSIS OF WATER USES

7.1 FINANCIAL COST OF WATER SERVICES IN RBD AND RECOVERY RATE

7.1.1 Water services for drinking water supply and waste – water collection and treatment facilities

In RBD EL09 13 MEWSS are in operation, whereas the 8 Municipalities with the absence of MEWSS are responsible for the Drinking Water supply/ and waste water collection and treatment.

In the following table the main providers in the RBD EL09 are presented.

Table 7-1: Water/Sewerage service providers in the RBs of RBD EL09

No	Providers		
PRESPEs RB (EL0901)			
1	Municipality of Prespes		
ALIAKMON RB (EL0902)			
1	MEWSS Alexandraia*	11	MEWSS Naoussas
2	MEWSS Almopias	12	MEWSS Skydras*
3	MEWSS Verias	13	MEWSS Flvrinas
4	MEWSS Grevenon	14	MEWSS Amyntaiou
5	MEWSS Diou – Eastern Olympos	15	MEWSS Voiou
6	MEWSS Edessas	16	MEWSS Deskatis
7	MEWSS Eordaias (Former MEWSS Prolemaidas)	17	MEWSS Nestoriou
8	MEWSS Kastorias	18	Orestidos
9	MEWSS Katerinis	19	MEWSS Pidnas - Kolindrou
10	MEWSS Kozanis	20	MEWSS Servion – Velventou

* A part of Alexandria and Skydra MEWSS belongs to Axios RB of the RBD EL10.

The financial cost and the recovery rate are presented in the following table.

Table 7-2: Financial cost recovery of RB water supply in RBs of the RBD EL09

RB	Total financial cost (€)	Average financial unit cost (€/m ³)	Total Revenue (€)	Average unit revenues (€/m ³)	Recovery rate of total financial cost
Aliakmon (EL0901)	55.695.920	1,70	53.111.844	1,62	95,4%
Prespes (EL0902)	3.076.333	1,01	2.545.429	0,83	82,7%
Total	58.772.254	1,64	55.657.273	1,55	94,70%

7.1.2 Water Supply Service for Agricultural Uses

The water providers for agricultural uses in RBD EL09 are given in the following table.

Table 7-3: Water providers for agricultural uses in RBs of RBD EL09

No.	PROVIDERS
TOEV PRESPEs RB (EL0901)	
1	Limnochoriou
2	Melitis
3	Petron
4	Prespon

No.	PROVIDERS				
5	Sklithrou				
6	Triantafyllias				
	TOEV ALIAKMON RB (EL0902)				
1	Ag. Georgiou - Deskatis	20	Kalonerou - Eratiras	39	Neapolis
2	Agapis	21	Karperou - Dimitras	40	Nestriou
3	Agroktima Naousas	22	Katacha	41	P. Elefthorou
4	Aliakmona	23	Kentrou	42	Palaiochoriou
5	Arapitsas	24	Kibotou – Kokkinias - Polydendrou	43	Paliouras
6	Diktyo Dialektou	25	Klimatos	44	Paraskevis - Deskatis
7	Diktyo Ieorpigis	26	Kolindrou	45	Peponias
8	Vasileiadas	27	Kolokinthous	46	Pigaditsas
9	Vatolakou	28	Kolokinthous (Lefkis)	47	Polifytou
10	Velventou	29	Koresteion	48	Porou
11	Brachou	30	Kyrakalis	49	Pyloriou
12	Vissinias	31	Lithias – Korisou	50	Pyrgon Eordaias
13	Dasochoriou	32	Mavroanion	51	Pachis
14	Dafnerou	33	Medianis	52	Rodochoriou
15	Εδεσσαίου	34	Mesobouniou	53	Sevastis
16	Elos Barikou / Litochoroy	35	Milias	54	Taxiarchis
17	Enipea - Litochorou	36	Mikrokastro	55	Trapezitsis
18	Exarchou	37	Molochas	56	Tripotamou
19	Imeron	38	Baras - Deskatis	57	Chromiou
MUNICIPALITIES					
1	Amyntaiou	5	Edessas	9	Nestroriou
2	Kozanis	6	Slydras	10	katerinis
3	Florinas	7	Veroias		
4	Almopias	8	Pidnas - Kolindrou		

In the following table the recovery rate in the RBs of the RBD is presented.

Table 7-4: Financial cost recovery of water supply for agricultural used in RBs of the RBD EL09

RB	Total financial cost (€)	Average financial unit cost (€/m ³)	Total Revenue (€)	Average unit revenues (€/m ³)	Recovery rate of total financial cost
Prespes (EL0901)	1.995.707	0,183	1.123.977	0,103	56,32%
Aliakmon (EL0902)	9.361.653	0,140	5.277.262	0,079	56,37%
Total	11.357.360	0,146	6.401.239	0,08	56,36%

7.2 ENVIRONMENTAL COST AND RESOURCE COST

7.2.1 Environmental Cost Estimation

The environmental cost at RBD level is about 500.000 € and it is allocated in EB Aliakmon. The unit environmental cost at RBD level is estimated to be equal to 0,0001 €/m³.

Table 7-5: Environmental Cost in the RBs of the RBD EL09

RB	Total Environmental Cost (€)	Participation of the RB in the total cost	Annual Environmental Cost (€)	Unit Environmental Cost (€/m ³)
Prespes (EL0901)	0	0	0,0%	0,0000
Aliakmon (EL0902)	500.000	125.000	100,0%	0,0001
Total	500.000	125.000		0,0001

The distribution of environmental costs per water use is presented in the table below.

Table 7-6: Distribution of Environmental Cost per Water Uses in RBs of the RBD EL09

Environmental cost	Drinking Water	Agriculture	Livestock	Industry	Total
RB PRESPE (EL0901)					
Total costs for all years of measures implementation (€)	0	0	0	0	0
Annual cost per use (€)	0	0	0	0	0
Participation use (%) in total annual cost	0	0	0	0	0
Annual unit cost (€/m³)	0	0	0	0	0
RB ALIAKMON (EL0902)					
Total costs for all years of measures implementation (€)	26.959	465.506	1.865	5.670	500.000
Annual cost per use (€)	6.740	116.376	466	1.418	125.000
Participation use (%) in total annual cost	5,39%	93,10%	0,37%	1,13%	100,00%
Annual unit cost (€/m³)	0,00006	0,00011	0,00006	0,00011	0,00010

7.2.2 Estimation of the resource cost

The Resource Cost at RBD level is about 400.000€ and it is allocated in RB Aliakmonas. The Unit Resource Cost at RBD level is estimated at 0,00008 €/m³.

Table 7-7: Resource cost in the RBW of the RBD EL09

RB	Total Resource Cost (€)	Annual Environmental cost (€)	Unit Resource Cost (€/m ³)
Prespes (EL0901)	0	0	0,00000
Aliakmonas (EL0902)	400.000	100.000	0,00008
Total	400.000	100.000	0,00008

The distribution of resources costs per water use is presented in the table below.

Table 7-8: Distribution of Resources Cost per Water Uses in RBs of the RBD EL09

Environmental cost	Drinking Water	Agriculture	Livestock	Industry	Total
RB PRESPE (EL0901)					
Total costs for all years of measures implementation (€)	0	0	0	0	0

Environmental cost	Drinking Water	Agriculture	Livestock	Industry	Total
Annual cost per use (€)	0	0	0	0	0
Participation use (%) in total annual cost					
Annual unit cost (€/m³)	0,00000	0,00000	0,00000	0,00000	0,00000
RB ALIAKMON (EL0902)					
Total costs for all years of measures implementation (€)	35.945	357.217	2.487	4.351	400.000
Annual cost per use (€)	8.986	89.304	622	1.088	100.000
Participation use (%) in total annual cost	9,0%	89,3%	0,6%	1,1%	100,0%
Annual unit cost (€/m³)	0,00008	0,00008	0,00008	0,00008	0,00008

8 ENVIRONMENTAL OBJECTIVES - EXEMPTIONS

8.1 ENVIRONMENTAL OBJECTIVES FOR SWBS

The environmental objectives set for the 168 surface water bodies of the RBD EL09 by 2021 are presented in the following table:

Table 8-1: Environmental objectives of SWB by 2021

Environmental Objectives of SWB	River WBs	Lake WBs	Transitional WBs	Coastal WBs	Total number of WBs	% of SWBs	Environmental Objectives of SWB
Total number of WBs	150	7	7	2	2	168	
No further deterioration occurs in good and high ecological status /potential	88	3	1			92	55%
No further deterioration occurs in good chemical status	123	3	7	2	2	137	82%
Achievement of good Ecological status/potential	15	-	-	-	-	15	9%
Achievement of good Chemical status	3	-	-	-	-	3	2%
Improvement of Ecological status/potential	8	-	3	2		13	8%
Determination of Ecological status/potential	-	4	-	-	-	4	2%
Determination of chemical status	23	4	-	-	-	27	16%
Deadline extension (Article 4.4) for Ecological status/potential	44	-	3	-	2	49	29%
Deadline extension (Article 4.4) for chemical status	24	4	0	0	0	28	17%
Deadline extension (Article 4.5)	No WBs are included						
Deadline extension (Article 4.6)	In the 1 st update the procedure for the application of Article 4.6 is described for periods of severe droughts						
Deadline extension (Article 4.7)	3	0	0	0	0	3	2%

8.2 ENVIRONMENTAL OBJECTIVES FOR GWBS

The following table summarises the objectives set for the 52 GWBs in RBD of Western Macedonia.

Table 8-2: Environmental objectives of GWB by 2021

Environmental Objectives	Number of GWBs
No further deterioration occurs in good quantitative status	40
No further deterioration occurs in good chemical status	49
Achievement of good quantitative status	0

Environmental Objectives	Number of GWBs
Achievement of good chemical status	0
Deadline extension (Article 4.4)	12
Deadline extension (Article 4.5)	0
Deadline extension (Article 4.6)	0
Deadline extension (Article 4.7)	0

8.3 EXTENSION OF THE DEADLINE FOR THE ACHIEVEMENT OF GOOD STATUS (ARTICLE 4.4)

All categories of exemption of article 4.4 of Directive 2000/60/EC, as set in the 1st Update of RBMP, are presented in the following table.

Table 8-3: Exemptions of water bodies until 2021

EXEMPTION			Number of RBs	Remarks
CATEGORY	SUBCATEGORY			
Ecological and Chemical Status of WBs	Article 4.4/ Deadline Extension	Solving the problem requires more time than is available	49 (ecological status) 28 (chemical status)	It refers to: 35 SWB whose status/potential is less than Good and they are not expected to reach a good status; 13 SWB whose status/potential is less than Good and they are expected to improve their status by one class, whereas it is estimated that a good status will not be reached by 2021.
Ecological and Chemical Status of WBs	Article 4.4/ Deadline Extension	There is no information about the cause of the problem and therefore the solution can not be detected	31	It refers to: 27 SWB whose chemical status can not be evaluated during this management circle and 4 reservoirs whose ecological potential can not be evaluated during this management circle.
Quantitative Status of GWB	Article 4.4/ Deadline Extension	Solving the problem requires more time than is available	12	
Chemical Status of GWB	Article 4.4/ Deadline Extension	Solving the problem requires more time than is available	3	

8.4 LESS STRICT OBJECTIVES (ARTICLE 4.5)

In the current Update of RBMP, no less strict objectives are set for any surface or groundwater body. This exclusion category will be reviewed in the next RBMP, taking under consideration the new monitoring data and after the evaluation of the technically feasible measures.

8.5 TEMPORARY DETERIORATION IN THE STATUS (ARTICLE 4.6)

For the application of article 4.6 in drought periods, the drought has to be characterised as severe. For this purpose SPI indicator based on the data provided in the 1st Drought Management Plan is calculated. The rainfall data for the calculation of the SPI which can be used for each RB are from the following stations: Aliakmonas RB: Galatini, Axiou Florina RB: Skopos, Pediaia Katerinis: Lofos, T66: Agras – Nisia, Ptoelmaida: Limnochori, Prespes: Visisnia.

The estimation of the SPI indicator has to be done for each hydrological year. In the case that SPI for 3 years is estimated around -1.5, which indicates extreme or/and severe drought then article 4.6 is applied.

8.6 NEW MODIFICATIONS (ARTICLE 4.7)

In the 1st update of the RBMP is set the procedure for the examination of the potential trigger of Article 4.7 for planned projects. For this purpose a specific methodology which is available in the website of SWW <http://wfdver.ypeka.gr/>, is applied.

In the 1st RBMP are identified water bodies in which article 4.7 is applied. For these projects that are under development during the 1st update the application of article 4.7 for these WB is still valid.

In RBD EL09 WBs examined are 3 River WBs [Asporrema (EL0901R0F0208016N), Drosopigiotiko (EL0901R0F0209017N) and Aliakmon (EL0902R0002500072N)], related to planned dams for drinking water supply.

9 PROGRAM OF MEASURES

The Program of Measures is part of RBMP and aims to achieve the “Environmental objectives”. Especially the implementation of the Program Measure should ensure:

- the prevention of deterioration, the improvement and the remediation of surface water bodies, the achievement of “Good” ecological and chemical status, and the mitigation of the pollution due to discharge and emission of hazardous substances.
- the protection, the improvement and the remediation of groundwater water bodies, the prevention of the pollution and deterioration of water status in order to achieve balance between abstraction and discharge.
- the conservation of Protected Areas.

The measures are divided into **Basic** and **Supplementary**.

The Basic Measures, according to par. 3 of Article 11 of the WFD are the minimum requirements that should be taken and include:

- Measures for the implementation of Community and national legislation on water protection (**Group I**).
- Other basic measures (**Group II**). These measures are according to the basic principles of community and national legislation on water management and are related to the horizontal implementation of actions per water bodies groups, in order to achieve or maintain good status.

The **Supplementary Measures** are established and implemented in addition to the Basic Measures, in order to achieve the objectives identified in accordance with Article 4 of WFD. Member States may implement further supplementary measures with a view to additional protection or improvement of the water status beyond these that are specified by the Directive.

9.1 PROGRAM OF BASIC AND SUPPLEMENTARY MEASURES

9.1.1 Actions for implementing EU directives (Group I of basic measures)

In the following table the provisions for transposing the EU directives in the national law are presented.

DIRECTIVE	TRANSPPOSITION IN NATIONAL LAW
Bathing Water Directive (Directive 2006/7/EC)	JMD 8600/416/E103/23.02.2009 (Government Gazette 356/B/2009) on «quality and management of bathing water, in compliance with the provisions of Directive 2006/7/EC “concerning the management of bathing water quality and repealing Directive 76/160/EEC”», as amended and in force.
Protection of Wild Birds (Directive 2009/147/EC) and Habitats (Directive 92/43/EEC) Natura 2000 Sites	JMD EP 37338/1807/E103/1.9.2010 (Government Gazette 1495/B/2010) «Determination of measures and procedures for the conservation of wildlife and its habitats, in compliance with the provisions of Directive 79/409/EEC of the Council Directive of 2 April 1979 “on the conservation of wild birds”, as codified by the Directive 2009/147/EC» and its amendment JMD EP 8353/276/E103/2012 (Government Gazette 415/B/2012) . JMD 33318/3028/11.12.1998 (Government Gazette 1289/B/1998) “Determination of measures and procedures for the conservation of natural habitats as well as wild fauna and flora” and its amendment JMD EP 14849/853/E103/2008 (Government Gazette 645/B/2008) in compliance with the provisions of Directive

DIRECTIVE	TRANSPOSITION IN NATIONAL LAW
	<p>92/43/EEC “on the conservation of natural habitats and of wild fauna and flora”.</p> <p>Law 3937/2011 (Government Gazette 60/A/2011) “Conservation of biodiversity and other provisions”.</p> <p>JMD 50743/2017 (Government Gazette 4432/N/2017) “Revision of the national list of sites of the European Natura 2000 Ecological Network”.</p>
<p>Environmental Impact Assessment for Projects/Activities (Directives 2011/92/EU, 2014/52/EU)</p>	<p>Law 1650/1986 (Government Gazette 160/A/1986) “on the protection of the environment”.</p> <p>Law 3010/2002 (Government Gazette 91/A/2002) “Harmonization of Law 1650/86 with Directives 97/11/EC and 96/61/EC, delimitation process and subject settings for waterfalls and other provisions”.</p> <p>Law 4014/2011 (Government Gazette 209/A/2011) “Environmental Licensing of projects and activities, arbitrary arrangement in connection with the creation of an environmental balance and other provisions of the Ministry of the Environment”.</p>
<p>Water Intended for Human Consumption (Directives 98/83/EC, 2015/1787/EU)</p>	<p>Law no. C1 (d)/G.P. oik. 67322/06.09.2017 (Government Gazette 3282/B/2017) “Quality of water intended for human consumption in compliance with the provisions of Directive 98/83/EC of the Council of European Union, of 3 November 1998 as amended with Directive (EU) 2015/1787 (L260, 7.10.2015)”.</p>
<p>Industrial Emissions Directive IED (Pollution Prevention and Control) (Directive 2010/75/EU)</p>	<p>MD 36060/1155/E.103/2013 (Government Gazette 1450/B/2013) Establishment of a framework of rules, measures and procedures for integrated prevention and control of environmental pollution by industrial activities, in compliance with the provisions of Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 “on industrial emissions (integrated pollution prevention and control)”.</p>
<p>Protection against pollution caused by nitrates from agricultural sources (Directive 91/676/EEC)</p>	<p>JMD 16190/1335/19.05.1997 (Government Gazette 519/B/1997) “Measures and conditions for the protection of waters against pollution caused by nitrates from agricultural sources” to harmonize with Directive 91/676/EEC “concerning the protection of waters against pollution caused by nitrates from agricultural sources”.</p> <p>MD oik. 19652/1906/1999 (Government Gazette 1575/B/1999) «Identification of waters subject to nitrate pollution of agricultural origin – List of vulnerable zones, in accordance with paragraphs 1 and 2 respectively of article 4 of 16190/1335/1997 JMD “Measures and conditions for the protection of waters against pollution caused by nitrates from agricultural sources” (B 519). Amendment of articles 3, 4, 5 and 8 of this Decision», as amended by MD 20419/2522/2001 (Government Gazette 1212/B/2001), MD 24838/1400/E103/2008 (Government Gazette 1132/B/2008), MD 106253/2010 (Government Gazette 1843/B/2010), MD 190126/2013 (Government Gazette 983/B/2013), MD 147070/2014 (Government Gazette 3224/B/2014) and in force.</p> <p>MD 1420/82031/2015 (Government Gazette 1709/B/2015) “Code of Good Agricultural Practice for the Protection of Waters Against Nitrate Pollution from agricultural sources”, as amended by MD 2001/118518/2015, (Government Gazette 2359/B/2015) «Amendment of No 1420/82031 (Government Gazette 1709/B/2015) Decision of the Deputy Minister of Production Reconstruction, Environment and Energy “Code of Good Agricultural Practice for the Protection of Waters Against Nitrate Pollution from agricultural sources”».</p>

DIRECTIVE	TRANSPOSITION IN NATIONAL LAW
Plant Protection Products (Directive 2009/128/EC, Regulation (EC) No 1107/2009, Regulation (EU) No 652/2014)	Law 4036/27.01.2012 (Government Gazette 8/A/2012) “Marketing of pesticides, rational use of these and related provisions” as amended and in force.
Major Accidents (Seveso) Directive (Directive 2012/18/EU)	JMD 172058/2016 (Government Gazette 354/B/2016) «Establishing rules, measures and conditions to deal with major-accident hazards in plants due to the presence of dangerous substances in compliance with the provisions of Directive 2012/18/EU of the European Parliament and of the Council of 4 July 2012 “on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC”. Replacement of No 12044/613/2007 (Government Gazette 376/B/2007), as corrected (Government Gazette 2259/B/2007)».
Sewage Sludge Directive (Directive 86/278/EEC)	JMD 80568/4225/05.07.1991 (Government Gazette 641/B/1991) “Methods, conditions and restrictions for the use in agriculture of sewage sludge from domestic and urban effluent treatment” for harmonization with the provisions of Council Directive 86/278/EEC “on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture”.
Urban Wastewater Treatment (Directives 91/271/EEC, 98/15/EC)	JMD 5673/400/05.03.1997 (Government Gazette 192/B/1997) “Measures and conditions for urban wastewater treatment” and its amendments MD 19661/1982/2.8.1999 (Government Gazette 1811/B/1999) and MD 48392/939/28.3.2002 (Government Gazette 405/B/2002) .

The planned actions for the implementation of the community and national legislation on water protection are presented in the following table.

Table 9-1: Actions for the implementation of Community Directives

DIRECTIVE	PLANNED ACTIONS	IMPLEMENTING BODIES
Bathing water Directive (2006/7/EC)	Continue to monitor the quality of bathing water in accordance with Directive 2006/7/EC. Updating the Greek Bathing Water Profiles Registry.	Special Secretariat for Water, Directorate of Water of the Decentralized Administration
Habitats Directive (92/43/EEC) Birds Directive (2009/147/EC)	Setting /Approval Management Plans for protected areas of Natura 2000 network relating with management water issues Monitoring/Assessment of the conservation status of habitats and species directly depending on water in Natura 2000 areas.	Ministry of Environment and Energy, Management Agencies of Protected Areas
Drinking water (Directives 98/83/EC, 2015/1787/EC)	Implementation of Water Safety Plans to ensure public health through the adoption and implementation of Good practice in the water supply distribution systems.	Ministry of Health
Environmental Impact Assessment Directives (2011/92/EC, 2014/52/EC)	Amendment of the Ministerial Decision 170225/2014 – Specifications for the contents of environmental permitting studies for projects and activities of category A) so that for certain projects, which should be specified, the following evaluations should be made: – Emissions of pollutants by category, – Estimation of pollution impacts in WB defined in the Management Plans and – Comparing these concentrations with the Environmental Quality Standards.	Ministry of Environment and Energy

DIRECTIVE	PLANNED ACTIONS	IMPLEMENTING BODIES
	Establishment of monitoring programs and notification of their results to the relevant Water Directorate.	
Industrial Emissions Directive IED, (2010/75/EC)	<ul style="list-style-type: none"> Keeping register of installations that are in line with the provisions of the Directive 	Decentralized administration
Nitrates Directive (91/676/EC)	<ul style="list-style-type: none"> Setting up an Action Plan and taking of any additional Supplementary measure or reinforcement action, in accordance with article 5 of Joint Ministerial Decision 16190/1335/1997. 	Special Secretariat for Water/ Ministry of Rural Development and Food
	<ul style="list-style-type: none"> Systematic monitoring of nitrate levels in WBs that are or may be subject to nitrate pollution. 	Special Secretariat for Water, Ministry of Rural Development and Food
Plant Protection Products (Directive 2009/128/EC, Regulation (EU) No. 1107/2009, Regulation (EU) No. 652/2014)	<ul style="list-style-type: none"> Rational use of plant protection products 	Ministry of Rural Development and Food
Major Accidents (Seveso) Directive (2012/18/EC)	<ul style="list-style-type: none"> Keeping registration and records of installations that are in line with the provisions of the Directive. 	Decentralized administration
Sewage sludge Directive (86/278/EEC)	<ul style="list-style-type: none"> Setting up a Joint Ministerial Decision, on Measures, Conditions and Procedures for the Use of Sludge from Domestic and Urban Wastewater Treatment and Certain Wastewater, in compliance with the provisions of Directive 86/278 / EEC and in replacement of Joint Ministerial Decision 80568/4225 / 1991 and promotion of actions related to the safe disposal of treated sludge. 	Ministry of Environment and Energy
Urban Waste Water Treatment Directive (91/271/ EC, 98/15/EC)	<ul style="list-style-type: none"> Completion of sewerage and waste water treatment projects of the settlements that concerns the provisions of the Directive (covering all agglomerations with a population greater than 2,000 p.e.). 	Region, MEWSS, Municipalities
	<ul style="list-style-type: none"> Strengthening actions to control the effective operation of existing wastewater treatment and drainage projects. 	Region

9.1.2 Other Basic measures (Group II of Basic Measures)

Table 9-2: Basic measures of other categories

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP	IMPLEMENTING BODIES
M09B0201 Upgrading of the organizational function of Organizations of Land Reclamation for the compliance with the financial and other data in order to meet the requirements of the Joint Ministerial Decision 132275/19.05.2017 (Government Gazette 1751 B'/22.05.2017) of the National Water Committee, which deals with pricing and costing rules for water supply services.	Measures to implement the cost recovery principle (Art. 9)	NEW MEASURE	Organization of Land Reclamation (Local, General) / Region / Ministry of Environment & Energy (Special Secretariat for Water) /Ministry of Rural Development & Food
M09B0202 Upgrade of the organizational function of MEWSS for the compliance with the financial and other data in order to meet the requirements of the Joint Ministerial Decision 132275/19.05.2017 (Government Gazette 1751	Measures to implement the cost recovery principle (Art. 9)	NEW MEASURE	MEWSS / Ministry of Environment & Energy (Special Secretariat for Water) / Ministry of

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP	IMPLEMENTING BODIES
B'/22.05.2017) of the National Water Committee, which deals with pricing and costing rules for water supply services.			Interior
M09B0203 Upgrading of the organizational function of the Local Government Organizations for the compliance with the financial and other data in order to meet the requirements of the Joint Ministerial Decision 132275/19.05.2017 (Government Gazette 1751 B'/22.05.2017) of the National Water Committee, which deals with pricing and costing rules for water supply services.	Measures to implement the cost recovery principle (Art. 9)	NEW MEASURE	Local Government Organizations / Ministry of Environment & Energy (Special Secretariat for Water) / Ministry of Interior
M09B0204 Training and expertise of all the stakeholders (Decentralized Administrations, Regions, MEWSS, LOLR, Local Government Organizations of the Joint Ministerial Decision 132275/19.05.2017 (Government Gazette 1751 B'/22.05.2017) of the National Water Committee, which deals with pricing and costing rules for water supply services.	Measures to implement the cost recovery principle (Art. 9)	NEW MEASURE	Ministry of Environment & Energy (Special Secretariat for Water)
M09B0301 Preparation / Update of the Water Supply Masterplan.	Measures to promote an efficient and sustainable water use (Art. 4)	Modification / Specialization of the measure OM02-08	MEWSS / Municipals / Water suppliers/ Decentralized Administration (Water Directorate)
M09B0302 Actions for the reinforcement, rehabilitation, modernization of water supply networks and leakage control.	Measures to promote an efficient and sustainable water use (Art. 4)	Modification / Consolidation of the measures OM02-01, OM02-03 ΣM11-20 and ΣM 17-100	Municipalities / MEWSS / Drinking water providers / Region / Decentralized Administration (Water Directorate)
M09B0303 Increase of the efficiency of water use in land reclamation infrastructures.	Measures to promote an efficient and sustainable water use (Art. 4)	Modification / Specialization of the measures OM02-04 and OM02-06	Ministry of Rural Development and Food, Regions
M09B0304 Investments for water saving in agriculture.	Measures to promote an efficient and sustainable water use (Art. 4)	Modification / Specialization of the measures OM02-06	Individuals / Irrigation water providers / Ministry of Rural Development and Food / Regions
M09B0305 Determination of maximum irrigation requirements for crops for private water abstractions.	Measures to promote an efficient and sustainable water use (Art. 4)	Modification / Specialization of the measure OM02-06 and OM04-03	Decentralized Administration (Water Directorate)/Regional directorate of Rural Economy and Veterinary Medicine
M09B0306 Strengthening loss reduction actions on collective irrigation networks.	Measures to promote an efficient and sustainable water use (Art. 4)	Modification / Specialization of the measure OM02-04	GOLR/LOLR/Collective Irrigation Networks, Region

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP	IMPLEMENTING BODIES
M09B0307 Preparation of manual of technical specifications for application of water reuse methods.	Measures to promote an efficient and sustainable water use (Art. 4)	Continuation of measure OM02-07	Ministry of Environment & Energy (Special Secretariat for Water)
M09B0308 Update of the existing Strategic Plan to Address Water Scarcity and Drought	Measures to promote an efficient and sustainable water use (Art. 4)	NEW MEASURE	Decentralized Administration (Water Directorate), Ministry of Environment & Energy (Special Secretariat for Water)
M09B0401 Definition and delination of zones and/or measures for the protection of water abstraction points, intended for human consumption from groundwater bodies.	Measures to meet the requirements of Article 7 (drinking water)	Modification / Specialization of the measures OM03-02 and OM03-03	Decentralized Administration (Water Directorate) and Drinking water providers (MEWSS, Municipalities etc.)
M09B0402 Protection of GWBs included in the register of protected areas for human consumption and establishment of an institutional framework of protection.	Measures to meet the requirements of Article 7 (drinking water)	Modification of the measure OM03-04	Decentralized Administration (Water Directorate) as it concerns the coordination for the implantation of the measure / Bodies responsible for the implantation of relative works as it concerns the hydrogeological studies needed and other Public Authorities as it concerns obligations according to the legislation in force
M09B0403 Protection of surface water abstraction points for drinking water supply	Measures to meet the requirements of Article 7 (drinking water)	Continuing measure OM03-01	Municipalities / MEWSS / Water providers / Decentralized Administration (Water Directorate)
M09B0404 Implementation of Water Safety Plans.	Measures to meet the requirements of Article 7 (drinking water)	Continuing measure OM03-05	MEWSS, Municipalities, Drinking water providers, Decentralized Administration (Water Directorate)
M09B0501	Measures to control	Modification /	Decentralized

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP	IMPLEMENTING BODIES
Restrictions, terms and conditions for the construction of groundwater abstraction projects (drilling, wells, etc.) for new uses, as well as extension of existing water use permits to: (a) areas of GWBs with a Bad quantitative status, (b) the protection zone II of the abstraction projects serving the water supply networks that operated by Municipalities, Municipal links, MEWSS, Inter-MEWSS and drinking water companies, (c) zones of collective irrigation networks, (d) coastal GWBs with extensive or local salinization problems, regardless of their origin.	surface and groundwater abstractions	Specialization of the measure OM04-07 and ΣM-08-30	Administration (Water Directorate)
M09B0502 Annual electronic recording of measurements of surface and groundwater abstractions.	Measures to control surface and groundwater abstractions	Modification / Specialization of the measure OM04-06 and OM04-01	Ministry of Environment & Energy (Special Secretariat for Water), Decentralized Administration (Water Directorate), Regions
M09B0601 Investigation of the conditions for application of artificial underground aquifer enrichment as a mean of quantitative enhancement and quality protection of GWBs, with a priority for GWBs with poor condition and treatment of sanitation	Measures to control the artificial recharge of groundwater aquifers	Continuing measure OM05-01	Regional Authorities / Municipalities/ Decentralized Administration (Water Directorate),
M09B0602 Establishment of a National Register of Waste Disposal Sites (Joint Ministerial Decision 145116/2011 - Government Gazette 354B/08.03.2011).	Measures to control the artificial recharge of groundwater aquifers	Continuing measure OM05-02	Ministry of Environment & Energy (Special Secretariat for Water), Decentralized Administration (Water Directorate)
M09B0701 Strengthening environmental inspections and controls.	Measures for point source pollution	NEW MEASURE	Region
M09B0702 Modernization of national legislation on waste and industrial waste management.	Measures for point source pollution	Continuation of measure OM06-07	Ministry of Environment & Energy (Special Secretariat for Water), Ministry of health
M09B0703 Program of exploratory monitoring of the quality of groundwater bodies and surface water bodies in the areas of existing Landfills.	Measures for point source pollution	NEW MEASURE	Landfill Operators, National Monitoring Network coordinated by the Water Directorate
M09B0704 Conditions for the licensing of new/extension of existing aquaculture units.	Measures for point source pollution	Modification / Specialization of the measure OM06-05	Ministry of Environment & Energy, Decentralized Administration, Region
M09B0705 Preparation of rules for cesspit protection.	Measures for point and diffuse source of pollution	NEW MEASURE	Decentralized Administration (Water Directorate)

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP	IMPLEMENTING BODIES
M09B0801 Biological agriculture.	Measures for diffuse source pollution	Modification / Specialization of the measure OM07-01	Ministry of Rural Development and Food (Directorate of Quality Systems, Organic Production and Geographical Indications)
M09B0802 Modernization of the institutional framework for sludge management by municipal waste water treatment plants with emphasis on widening the scope and updating the quality characteristics of the applicable sludge.	Measures for diffuse source pollution	Continuing measure OM07-02	Ministry of Environment & Energy (Environmental Certification Directorate)
M09B0803 Reduce diffuse pollution from agriculture in the vulnerable zones of the Directive 91/676/EEC.	Measures for diffuse source pollution	NEW MEASURE	Ministry of Environment & Energy (Special Secretariat for Water), Ministry of Rural Development and Food, Region
M09B0902 Determination of minimum natural lakes level, determination of maximum range of reservoir level variation.	Measures to confront the negative effects on water status	Modification / Specialization of the measure OM08-02	Project principal, Region, Protected Areas Management Bodies, Decentralized Administration (Water Directorate)
M09B0903 Development of national methodology and specifications for the determination of ecological provision of river water bodies.	Measures to confront the negative effects on water status	Continuation of measure OM04-02	Ministry of Environment & Energy (Special Secretariat for Water)
M09B0904 Special Measures for the Achievement of Good Ecological Potential in Heavily Modified Water Bodies (HMWB).	Measures to confront the negative effects on water status	NEW MEASURE	Ministry of Environment & Energy (Special Secretariat for Water), Decentralized Administration (Water Directorate), Region
M09B0905 Determination of selected areas for river sediment deposits removal to meet the needs of technical projects.	Measures to confront the negative effects on water status	Continuation of measure OM08-01	Municipalities, Region, Decentralized Administration (Water Directorate)
M09B0906 Monitoring, recording and remediation of coastal erosion	Measures to tackle the adverse effects on the surface water bodies status, especially effects due to hydromorphological alterations	NEW MEASURE	Ministry of Infrastructure and Transport/Prefecture/ Decentralized Administration (Water Directorate)
M09B1101 Compilation of pollution sources register (emissions, discharges and leaks).	Measures for Priority Substances and other pollutants	Modification / Specialization of the measure	Ministry of Environment & Energy (Special Secretariat for

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP	IMPLEMENTING BODIES
		OM06-04	Water)
M09B1102 Establishment / setting of emission limits for RBs for priority substances and other pollutants in the Joint Ministerial Decision 51354/2641/E103/2010 as in force, as well as for physicochemical (PSC) parameters in relation to the quality objectives set out in the Management Plans.	Measures for Priority Substances and other pollutants.	Modification / Specialization of the measure OM10-01	Decentralized Administration (Water Directorate), Ministry of Environment & Energy (Special Secretariat for Water)

9.1.3 Supplementary Measures

In RBD EL09 it was decided to propose additional measures for the following reasons:

(a) To maintain the “good” status of surface WBs or GWBs, as well as to increase knowledge and awareness on specific issues for the rational use of water by targeted users. In this case, the supplementary measures have a horizontal, general application and the affected water bodies are not identified.

(b) In the water bodies, which are estimated that despite the implementation of the basic measures program, they will not achieve the objective of “good” status by 2021, and in particular:

- in water systems which, according to measurements of the qualitative and quantitative parameters or the new methodological approach of their aggregation, are in a state of “Failing to achieve Good”,
- in water systems that are in “Unknown” or in “good” condition, but there is clear evidence, through the analysis of pressures, that they are at risk of not achieving their environmental objectives.

The measures of (b) case are taken into account for the calculation of environmental costs and/or resource costs, according to the provisions of Joint Ministerial Decision No 135275 of the National Water Committee (Government Gazette 1751/B/22-05-2017).

In the following table the supplementary measures for the RBD are presented.

Table 9-3: Supplementary Measures

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP.	AFFECTED WB	IMPLEMENTATION COST (€)	IMPLEMENTING BODIES
M09Σ0201 Development of the Monitoring System of the Measures Program of the RBMP of the River basic district and provision of support services for the implementation of the program of measures of the River basic district.	Administrative measures	New measure	All WBs	650.000€	Decentralized Administration (Water Directorate)
M09Σ0202 Inspection and control of artesian drilling	Administrative measures	ΣM08-020	All SWBs	ADMINISTRATIVE MEASURE	Owner, Decentralized Administration (Water Directorate)
M09Σ0501 Inspections of the surface water bodies at the discharge point of the rain drain systems and other point sources of pollution	Emission control	New measure	All SWBs	100.000	Municipalities / MEWSS / Region/ Decentralized Administration (Water Directorate), Ministry of Environment & Energy (Special Secretariat for Water)
M09Σ0502 Implementation of investment in agriculture and livestock holdings, aiming on improving environmental performances.	Emission control	OM06-03	All WBs	500.000	Ministry of Rural Development and Food/ Region
M09Σ0801 Designation and delineation of areas of GWBs exhibiting local salinization intrusion or with bad qualitative status due to salinization.	Abstractions Control	ΣM08-070 και ΣM08-080	EL0900160 EL0900150 EL0900141	300.000	Decentralized Administration (Water Directorate) / Regions
M09Σ0901 Requirements for the construction of new groundwater abstraction works (drillings, wells, etc.) and surface water abstraction works for new water uses as well as the for the quantitative extension of existing water use permits in Soulou WBs	Demand Management Measures	ΣM08-090	EL0902R0000 010123, EL0902R0000 010124AEL09 00060 (EL0900061, EL0900062, EL0900063), EL0900050, EL0900081, EL0900341	ADMINISTRATIVE MEASURE	Decentralized Administration (Water Directorate)

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP.	AFFECTED WB	IMPLEMENTATION COST (€)	IMPLEMENTING BODIES
M09Σ0902 Special arrangements for electricity production activities in Aliakmon RB related to surface and groundwater WBs	Demand Management Measures	ΣM08-100	EL0900060 (EL0900061, EL0900062, EL0900063) EL0900050 EL0900341 EL0902R0000 010123H EL0902R0000 010124A EL0902L00000 0009H	-	Operating entity / Decentralized Administration
M09Σ0803 Special Water Quantity Management Plan for Lake Vegoritida	Demand Management Measures	New measure	EL0902L00000 0005N	300.000	Decentralized Administration of Western and Central Macedonia (Water Directorate) /Regional Authorities
M09Σ1001 Studies on Reuse of treated wastewater for all existing tertiary treatment plants	Efficiency and reuse measures	New measure	Horizontal	40.000 (For every Wastewater Treatment Plan)	Operating entity, Decentralized Administration (Water Directorate) Directorates of Rural Development
M09Σ1501 Professional training of farmers for the protection of water bodies.	Educational Measures	ΣM15-40	All WBs	250.000	Special Management Service of the Rural Development Program of Ministry of Rural Development and Food, Region
M09Σ1502 Educational actions to promote the rational management of water resources	Educational measures	ΣM15-030	All WBs	100.000	Decentralized Administration (Water Directorate), Region
M09Σ1601 Pilot measures to apply precision agriculture to reduce water consumption.	Research, development & demonstration programmes	New measure	All WBs	450.000	Special Management Service of the Rural Development Program of Ministry of Rural Development and Food, Region

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP.	AFFECTED WB	IMPLEMENTATION COST (€)	IMPLEMENTING BODIES
M09Σ1602 Consultancy services for agriculture exploitation management	Research, development & demonstration programmes	ΣM15-40	All WBs	670.000	Decentralized Administrations of the Ministry of Rural Development and Food
M09Σ1603 Design and implementation of specific program exploratory monitoring with the aim of collecting data on the baseline identification of WB Downstream Dams as HMWB	Research, development & demonstration programmes	New measure	HMWBs with no monitoring station	150.000	Ministry of Environment & Energy (Special Secretariat for Water), Decentralized Administration (Water Directorate)
M10Σ1604 Special Hydrogeological – Hydrochemical Study for GWBs or part of them, that chemical elements with high values of natural background are presented (i.e. Fe, As, Mn, B, Mg, Cl etc.), in case the aforementioned parts of GWBs are related to water abstraction	Research, development & demonstration programmes	ΣM05-20	EL0900020 EL0900030 EL090F040 EL0900150 EL0900120 EL0900130 EL0900140 EL0900160 EL0900080 EL0900060 EL0900062, EL0900063) EL0900050 EL09AF010 EL0900251 EL0900231 EL0900261 EL090F271 EL0900281 EL090F301 EL090A351	1.700.000	Decentralized Administration (Water Directorate) / Prefecture/ Municipalities/ MWSC
M09Σ1605 Study for the hydrogeological characteristics of EPAP. A1 Zone	Research, development & demonstration programmes	ΣM17-070	EL0901L0A000 0013N	60.000	Prefecture
M09Σ1606 Further investigation on the Cr source found in the groundwaters of the Municipalities in Districts of the Municipality of Kozani in Sarigiol's basin (Aktini – Ag. Dimitrios - Riaki)	Research, development & demonstration programmes	New measure	EL0900060 (EL0900061, EL0900062, EL0900063) EL0900081 EL0900100 EL0900110 EL0900071 EL0900341 EL0900050 EL0900231	200.000	Decentralized Administration (Water Directorate)

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP.	AFFECTED WB	IMPLEMENTATION COST (€)	IMPLEMENTING BODIES
M09Σ1607 Recording of the water uses and updating water resource management models in the Ptolemaida basin.	Research, development & demonstration programmes	ΣM08-060	EL0902L00000002N EL0902L00000003N EL0902L00000004N EL0902L00000005N EL0902R0000010122N EL0902R0000010123H EL0902R0000010124A EL0902R0000010126N EL0902R0000010127H EL0902R0000010129H EL0900050 EL0900060 (EL0900061, EL0900062, EL0900063) EL090081 EL0900341	100.000	Decentralized Administration (Water Directorate)

CODE & NAME OF MEASURE	CATEGORY	RELATION WITH THE 1 st RBMP.	AFFECTED WB	IMPLEMENTATION COST (€)	IMPLEMENTING BODIES
M10Σ1701 Special protection measures for GWBs with thermal waters.	Other Measures	ΣM05-040	EL1000030, EL1000070, EL1000080, EL1000150, EL1000160, EL1000190, EL100F230	Administrative	Decentralized Administration (Water Directorate))/ Regional Authorities /Municipalities/ MESWW and other bodies Bodies responsible for the implantation of relative works as it concerns the hydrogeological studies needed and other Public Authorities as it concerns obligations according to the legislation in force
M10Σ1702 Special measures for the protection of GWBs with good quantitative status	Other Measures	New measure	All GWBs with good quantitative status	Administrative	Decentralized Administration (Water Directorate)

10 NEXT STEPS

10.1 DIFFICULTIES ENCOUNTERED IN THE PREPARATION OF THE 1ST UPDATE

During the process of drafting the 1st Update of the RBMP, the following issues and difficulties arose, regarding mainly the available data of the National Monitoring Network:

- The statutory National Monitoring Network, in some cases, presents particularities in the distribution of the monitoring stations for GWBs (i.e. thickening/thinning).
- Measurement deficiencies were observed in the data required for the chemical classification of the GWBs and no trend analysis was possible.
- Further investigation of the correlation between morphological modifications and classification results from the National Monitoring Network data in bodies identified as HMWB is required.
- The National Monitoring Network data in bodies identified as HMWB have in many cases resulted in a classification that is inconsistent with the theoretical underlying of the assessment (i.e. finding a systemic degradation of macroinvertebrates in conditions of good physicochemical status).
- There were no measurements of all biological quality elements in all National Monitoring Network stations in surface water bodies.
- Available measurements for priority substances were relatively limited.
- Fragmentation of technical and economic data obtained from the completed questionnaires by the water service providers.

10.2 NEXT STEPS – IMPLEMENTATION OF THE 1ST UPDATE OF THE RBMP

In order to achieve the objectives of the Management Plan, the Program of Basic and Supplementary Measures is required. For the optimal implementation of the Program, the Regional Working Group on the Implementation of the Programs of River Basin Management Plans, which was already established during the implementation of the 1st RBMP, is required to draw up an Action Plan. The main axes for structuring the Action Plan are as follows:

- Programs to monitor/investigate the quantitative and qualitative status of surface and groundwater bodies.
- Ensuring drinking water in sufficient quantity and satisfactory quality, according to the requirements of the relevant legislation.
- Water for agriculture.
- Protected Areas.
- Strengthening environmental inspections and controls.
- Other Measures under the proposed Program of Measures.

Further critical issues that determine the degree of implementation of the Program of Measures are as follows:

- Coordination of the bodies involved in the implementation of the Program and provision of channels of communication with other stakeholders.
- Assessing the results of the National Monitoring Network and adapting it where deemed appropriate.
- Transboundary cooperation at local and national level.

11 TRANSBOUNDARY COOPERATION

11.1 CROSS-BORDER WATERBODIES - GENERAL FRAMEWORK

11.1.1 International Prespes Basin

The Prespa catchment area is a single transboundary basin shared by three countries, Greece, Albania and FYROM, and is considered among the few areas in Europe with so many different forms of life compared to the small area it covers. This small basin includes two of the oldest lakes of our continent: The Lake of Megali Prespa which extends to three countries and mainly in FYROM, while the main part of Lake Mikri Prespa is located inside the greek borders with a small section belonging to Albania. The Prespa basin is connected hydrologically with the Lake Ohrid (Albania-FYROM) merely through underground runoff scattered on the limestone mount of Mal-i-Thate / Galicica (see Figure 11 1).

Prespa Park is the first cross-border protected area in the Balkans. It was founded in 2000 (2/2/2000) by a joint declaration of the Prime Ministers of Greece, Albania and FYROM on the creation of the Prespa Park and the "Environmental protection and sustainable development of the Prespa Lakes and the surrounding area". In 2009 the Prime Ministers of the three countries agreed in Prespa (27/11/09) to sign an international agreement on protection and sustainable development of the Prespa Park.



Figure 9: Prespes Basin

In order to better organize, empower, promote and reinforce the actions of the declaration of the three Prime Ministers for the protection and sustainable development of the region, a tripartite coordinating committee of the Prespa Park (Prespa Park Coordination Committee) was established, a few months after the declaration of the three Prime Ministers. The Committee consists of a tenpartite body comprised of representatives of the Government (Ministries of Environment), local government and non-governmental organisations (NGOS) of the three lakeside countries and a

permanent observer from the Ramsar Convention on Wetlands and the Mediterranean Wetlands Initiative (MedWet).

Greece, Albania, FYROM and the European Union concluded the "Agreement on the Protection and Sustainable Development of the Prespa Park Area" (2/2010) (sanctioned law of the 2010 International Agreement on the Protection and Sustainable Development of the Prespa Park Area Law. 4453/2017, Government Gazette 19 A). The agreement between the three countries and the European Union essentially aims to establish the conditions for the effective preservation of the Prespa ecosystem as a basis for the sustainable development of the region.

11.1.2 International Axios RB

Axios is one of the longest rivers of the Balkan peninsula, with a total length of 380 kilometres, of which only the downstream 74 km are on Greek soil (Figure 11 2). It has its springs on Mount Shar (Ancient Skardos) near the borders of Albania and FYROM, the most part lays on the latter's territory. The river flows with the direction of south – southeast and enters Greece from RBD EL10, Prefecture of Kilkis and empties into the Thermaikos Gulf. In the RBD of Western Macedonia, river Lygkos, a tributary of Axios, crosses the plain of Florina and receives all the torrents of the surrounding mountainous area. The river basin of Lygkos (Sakoulevas) is one of the three sub-basins of Axios located in Greek territory (the other two are the sub-basins of Axios and Doiranis of the RBD of Central Macedonia) and the only one upstream of the section to be located on the territory of Macedonia. In fact, it is a part of the Crna Reka River, i.e. one of the four sub-basins of the Axios within FYROM.



Figure 10: Axios River Basin

11.2 COOPERATION FRAMEWORK FOR TRANSBOUNDARY RBD

A prerequisite for the sustainable management of the common water resources in cross-border areas is the cooperation and coordination of actions through the exchange of information and active participation of all stakeholders.

Elements of cooperation and coordination with the competent authorities of Albania

In 2003, an agreement was signed between Greece and Albania on the establishment of a permanent Greek-Albanian Committee on cross-border freshwater matters (Law. 4305/2005, GG A' 264). The objectives of this agreement are cooperation for the protection of transboundary water bodies (Aoos and Dinos rivers and Prespa Lakes), as well as the reinforcement of national and bilateral pollution prevention actions. On the basis of the aforementioned agreement, the two countries shall cooperate in the collection and evaluation of data for the identification of sources of pollution, the recording and exchange of relevant information, for the establishment of common water quality objectives and criteria as well as propose measures to achieve the objectives, exchange information on uses (existing and planned) and facilities with potential impacts on water quality, as well as information on water policy issues. Additionally, the two countries shall share practical experiences and technical knowledge (exchange of hydrological and meteorological data/transfer of experience in water monitoring etc.) and ensure the promotion of cooperation between the competent national authorities.

The meeting of the permanent Greek-Albanian Committee, which was held on 10.07.2008, tackled issues of transboundary freshwater (Law 0544/M. 6133/AS 362, GG B' 134/2008). The protection and sustainable use of the Aoos River basin and the environmental parameters of Prespa were identified as issues of great significance. It is worth noting that a Commission regulation was adopted during the session.

On 09.01.2015, the second meeting of the permanent Greek-Albanian Committee on issues of transboundary freshwater (Law 0544/M. 6770/AS 9, GG A' 107/2016) took place in Athens. During the meeting there were presentations from the Greek side on the Water Framework Directive (2000/60/EC), on the river basin management plans of the water districts of Greece, on the surface and Groundwater monitoring network, as well as the river basin management plans of the Epirus water district (Law 1005/2013, GG B' 2292/2013) and Western Macedonia (107/2014, GG B 181/2014). On behalf of the Albanian side, the actions for the management of water resources in Albania and the monitoring of surface and groundwater waters were presented. As token of the promotion of cooperation and coordination, the two parties agreed to exchange information on the implementation of the Water Framework Directive. The Greek side informed Albanian that they commenced the second cycle of management plans and proposed coordinating management plans under Directive 2000/60/EC. The two sides proposed national contact points (Special Secretariat for Water of the MEE in Greece and technical Secretariat of the National Water Council of Albania).

It is noted that on 14-15 December 2016 the 4th Conference of the Stakeholders took place in Drin (4th Drin Stakeholders Conference), attended by representatives of the Ministry of Environment and Energy, where was presented the legal Framework for the integrated management of Prespa.

11.2.1 Elements of co-operation and coordination with the competent authorities of FYROM

In 1959, an agreement was signed between Greece and Yugoslavia on issues of water economy (Law 4012/1959, GG A' 232). Pursuant to article 1, a permanent Greek-Yugoslav committee for the Hydroeconomy was established, which included in its competence the areas of Axios, Doiranis and Prespa. This committee met twice, in 1995 and in 2002 and signed two proceedings. In 1995, the interim agreement between Greece and the former Yugoslav Republic of Macedonia (FYROM) was

signed under the auspices of the United Nations. According to the interim agreement, the 1959 agreement was maintained in force.

In the frame of the implementation of the 1st Management plan, two meetings were held with representatives of FYROM with the aim of developing and cultivating a climate of cooperation between Greece and the neighbouring country on environmental policy issues.

The first meeting took place in June 2012 (07.06.2012) in Athens, where the upgrading of sectoral cooperation-and especially on environmental issues-was discussed at the level of experts from the two countries. Moreover, the special secretariat water of the MEE drafted and presented a memorandum on the cooperation in specific sectors (EU Directive Framework for Water (60/2000/EC) and protection of biodiversity). On the subject of water management was submitted by the Greek side a proposal for a new meeting in May 2013.

The second meeting of Experts on Water and the environment took place on 13 May 2013 in Thessaloniki, with the aim of strengthening cooperation and exchanging know-how between the two sides on issues of water resources management, with particular emphasis on the management of the transnational basins of Axios and Prespes. It was attended by experts from both Greece and FYROM and in its context presented:

- On the Greek side the actions of Greece, under the Directive Framework for Water (2000/60/EC), as well as the phases, progress, the precursor results of the management plans of the water districts of the Western and Central Macedonia (EL09 and EL10, respectively) and the difficulties and the conclusions resulting from the implementation of the directive in Greece.
- On the FYROM's side, the progress and actions of the neighbouring country were presented in relation to its compliance with the European Directive Framework for Water (2000/60/EC) and the management plan for the sub-basin of Prespa.

Finally, the two sides agreed on the exchange of information and know-how on water resource management issues.

The second bilateral meeting of Experts on Water and the Environment between Greece and FYROM took place in Skopje on 26 June 2014. The meeting was attended by a significant number of FYROM's Authorities and was dedicated to the cooperation in the management and protection of cross-border water resources. The meeting was focused on the Axios River and Lake Doirani, as well as biodiversity.

More specifically, with regard to the Axios river, which is burdened with urban, industrial wastewater and agricultural pollution by FYROM, the two sides expressed the willingness to cooperate in shaping a common perception of the chemical and ecological status of the river in the border area.

Under the same spirit of cooperation, the most recent meeting took place in Athens on 28 December 2015. The two sides exchanged information on Axios river, Doirani lake and biodiversity in compliance with EU requirements. On the Greek side, it was noted that FYROM's admission to the UN Economic Commission for Europe Convention on the Protection and use of cross-border rivers and international lakes would reinforce bilateral cooperation on water issues. The Greek side also provided the other side copies in English of the summaries of the 1st management plans for the EL09 and EL10 water districts.

