

**EXTERNAL WATER SUPPLY SYSTEM
OPERATION AND MAINTENANCE ASSIGNMENT AGREEMENT**

CONTRACTING PARTIES:

THE HELLENIC REPUBLIC

AND

EYDAP FIXED ASSETS LEPL

AND

ATHENS WATER SUPPLY AND SEWERAGE COMPANY SA

CONTENTS

1	Definitions and Interpretation	4
2	Assignment of Services	8
3	Contractor's Obligations	8
4	Emergency Response Services	9
5	EWSS Monitoring and Security	9
6	EWSS Operation and Maintenance Plan	10
7	Water Loss	10
8	EPEYDAP's Obligations	12
9	Contractor's Fee	12
10	Pumping costs	13
11	Term	14
12	Termination	14
13	Termination by EPEYDAP	14
14	Execution of Works in case of Termination	15
15	Force Majeure	15
16	Guarantee	16
17	Limitation of Liability	16
18	No assignment	16
19	Subcontracting	16
20	HR Intervention	17
21	Reporting	17
22	Communication	17
23	Confidentiality	18
24	Amendment	18
25	Applicable Law - Dispute Resolution	18

ANNEX 1	20
EXTERNAL WATER SUPPLY SYSTEM	20
ANNEX 2	35
OPERATION AND MAINTENANCE SERVICES	35
ANNEX 3 - GUARDING & SECURITY PROCEDURES	50
ANNEX 4 - AVAILABLE EPEYDAP REPRESENTATIVE	53
ANNEX 5 - METER INSTALLATION DIAGRAM.....	54

This agreement (the “**Agreement**”) is entered in Athens, this [●] of [●] year 2021 by and between:

- (1) **The HELLENIC REPUBLIC**, legally represented herein by Mr. [●], Minister of Development and Investments, (“**HR**”);
- (2) the Legal Entity of Public Law under the name “**EYDAP FIXED ASSETS**” (**EPEYDAP**), with registered office in Athens (Kifissias Ave., GR - 115 26), legally represented by [●] by virtue of BoD Decision dated [●] (“**EPEYDAP**”); and
- (3) The “**ATHENS WATER SUPPLY AND SEWERAGE COMPANY SA**”, with registered office in Galatsi, Attica, (156, Oropou Str.) (GEMI No. 121578960000, Tax Reg. No. 094079101), legally represented herein by [●], by virtue of BoD decision dated [●] (hereinafter: “**Contractor**”).

HR, EPEYDAP and the Contractor being hereinafter collectively referred to as the “**Parties**” and individually as the “**Party**”.

PREAMBLE

- (1) By virtue of Article 4 of Law 2744/99 EPEYDAP was assigned with the management, maintenance and operation of the External Water Supply System.
- (2) Pursuant to Article One Hundred and Fourteen of Law 4812/2021, the HR and EPEYDAP enter into this Agreement, whereby the Contractor is assigned with the supply of External Water Supply System Operation and Maintenance Services.

NOW, THEREFORE, the Parties hereby mutually agree and stipulate the following:

1 Definitions and Interpretation

1.1 Definitions

Save as otherwise specified, the following terms and conditions apply to this Agreement (including the Preamble):

“**Environmental Terms Authorisation Decision**” (“**AEPO**”): the authorisation issued as per the provisions of Law 4014/2011.

“**Raw Water**”: water in the form found in the natural environment before undergoing any treatment.

“**Contractor's Fee**”: the Standard Fee and the Additional Fee.

“**Force Majeure Event**”: any extraordinary event evading the control and influence of the Parties and rendering a Party unable to fulfil its obligations under this Agreement, including:

- 1.1.1.1 war (declared or otherwise), invasion, armed conflict or acts of foreign enemies;

1.1.1.2 revolution, insurrection, stoppage, social unrest, sabotage or terrorist acts;

1.1.1.3 earthquake, sudden rock fall, landslide or precipitation;

1.1.1.4 extreme weather conditions such as frost or flood;

1.1.1.5 prolonged drought, nuclear / chemical / biological pollution, and

1.1.1.6 pressure waves caused by objects moving at ultrasonic speed,

provided that such Event:

(i) causes substantial and unavoidable material damage or destruction of any part of the External Water Supply System; or

1.1.1.7 substantially disrupts the effective and regular operation of the External Water Supply System; or

1.1.1.8 renders it practically impossible for the Contractor to fulfil its obligations hereunder.

“Insolvency Event”: the occurrence of one or more of the following events in relation to the Contractor:

(i) (i) the initiation of insolvency proceedings as per the provisions of Law 3588/2007 or Law 4738/2020 or Law 4307/2014 or any similar bankruptcy or pre-bankruptcy proceedings or

(ii) a resolution adopted by the shareholders on the dissolution and liquidation of the Contractor as per the provisions of Law 4548/2018.

“Secretariat”: the General Secretariat of Infrastructure of the Ministry of Infrastructure and Transport.

“Security and Safety Procedures”: the External Water Supply System guarding and security procedures to be implemented by the Contractor, as same are described in Annex 3.

“Available EPEYDAP Representative”: the person named in Annex 4, and each of his / her substitutes.

“Performance Guarantee”: the type of guarantee to be delivered by the Contractor to EPEYDAP by way of security for due implementation of the Agreement.

“Emergency” is a situation arising: (a) suddenly, due to failures in the main free-flow aqueducts, or (b) by way unavoidable choice, due to qualitative or quantitative inadequacy of the Mornos Aqueduct or lack of reserves in the main reservoirs due to water scarcity.

“Confidential Information”: information relating to this Agreement insofar as it would be reasonably considered as confidential under the circumstances (howsoever transmitted or

stored in whatever medium). This may include information which, if disclosed, will or may impair the commercial interests of any person, or the trade secrets, Intellectual Property rights or know-how of any Party hereto, including any personal and sensitive personal data.

“External Water Supply System”: any real estate properties, land, buildings, constructions, installations, fixtures or infrastructure owned by EPEYDAP from time to time and serving HR’s obligation to supply the Contractor with raw water, including the surface water resources / reservoirs located in the areas of Mornos, Evinos, Yliki and Marathonas, the underground aquifers/boreholes, water transmission installations e.g. external aqueducts, lambda regulators and pumping stations, and any ancillary installations such as access roads, drainpipes and overflow pipes, as thoroughly described in Annex 1.

“Committee”: the Special Three-Member Committee referred to in Article 21 hereof.

“Emergency Operations”: the Emergency Operations described in Annex 2, Section B.

Effective Date: [1.1.2021].

Joint Ministerial Decision A5 or JMD A5: Ministerial Decision no. A5/2280/1983 (Government Gazette 720/B/13.12.1983) "Protection of Water used for Water Supply to the Capital against Pollution and Contamination".

“Project Owner”: EPEYDAP. In particular, for the purposes of DSR implementation, the term refers to the person identified in Document Ref. Δ19/οικ.3671/Φ.ΔΑΦ/17-12-2019 (Online Publication No: 6ΦΞΓ465XΘΞ-7ΩΣ).

“Pre-selected Contractors & Suppliers”: the contractors and suppliers selected by the Contractor through open or closed procedures [Article 27 or 28 of Law 4412/2016 on Public Procurements], to whom the Contractor may assign all or part of the Emergency Response Services in accordance with Article 4 hereof.

“EWSS Operation and Maintenance Register”: the register described in article 11.3.

“Assets Register”: a register that will include a comprehensive and thorough list of all EWSS infrastructures.

“Water Treatment Plants”: any Raw Water Treatment Plants located within the Exclusivity Area, where Raw Water Treatment is carried out, i.e. the central treatment plants in the areas of Galatsi, Acharnes, Aspropyrgos and Polydendri and such other Treatment Plants as may be developed by the Contractor any time during the Contract Term within the Exclusivity Area by virtue of Law.

“Exclusivity Area”: the geographical area where the Contractor carries out exclusive operations as provider of water and sewerage services, as the latter are defined in article 8 (1) of Law 2744/1999, as readjusted from time to time.

“Intellectual Property”: any copyright, rights granted by law / common law or based on the sense of justice in connection to inventions (including patents), trademarks (registered or

not), designs (registered or not) and circuit plans, and any other rights arising from intellectual activities conducted in the industrial / scientific / literary / artistic fields.

"Expert": any expert appointed in accordance with Article 25.3 of the Agreement.

"Additional Fee": as defined in Article 9 hereof.

"Standard Fee": as defined in Article 9 hereof.

"Exclusivity Agreement": the Agreement [bearing today's date] entered between the HR, the Contractor and EPEYDAP whereby exclusive rights were granted for the provision of water supply and sewerage services in the Exclusivity Area.

"EWSS Operation and Maintenance Plan": the External Water Supply System operation and maintenance plan to be prepared and delivered by the Contractor in accordance with Article 6 hereof.

"Rapid Filtration Plants" (RFP): all rapid filtration plants currently installed along the EWSS, in particular the RFPs of: (g) Erythres-Villia, (b) Kaparelli-Melissochori, (c) Lefktra, (d) Ellopoia-Xironomi, (e) Domvraina, (f) Prodromos-Sarantis, (g) Kyriakio, (h) Distomo, (i) Tarsos-Kariotis, (j) Kalamiotissa and such other RFPs as may be established in the future along the EWSS.

"Emergency Response Services": the services described in Section B of Annex 2.

"Operation and Maintenance Services":

- (i) (i) the Ordinary Operation and Maintenance Services, and
- (ii) (ii) the Emergency Response Services

"Ordinary Operation and Maintenance Services": the services described in [Section A] of Annex 2.

"Dam Operator": the person identified in Article 4.2 of DAEE Decision οικ. 2287/27-12-2016 (GG 4420/B/30-12-2016) "Approval of the Dam Safety Regulation - Administration Authority for Dams".

1.2 Interpretation

- (a) Any reference to the provisions of any laws, regulations or other enactments shall include any amendments, replacement acts or re-enactments of the referenced laws.
- (b) Any reference to persons shall include successors and assignees.
- (c) Any reference to documents or agreements shall include any amendments, replacement acts or renewals thereof.

- (d) The headings of any sections, articles or annexes are added merely for ease of reference and shall not be considered in understanding or interpreting this Agreement.
- (e) Any reference to an "Article", "paragraph" or "Annex" shall refer to the referenced article, paragraph or annex of this Agreement.
- (f) Any reference to public entities, organisations, ministries or similar entities shall refer to those as same are restructured, reorganised, replaced or renamed from time to time.
- (g) Words in singular shall include the plural and vice versa.
- (h) The words "include(s)" and "including" shall be deemed to be followed by the words "without limitation".

2 Assignment of Services

2.1 Pursuant to Article One Hundred and Fourteen of Law 4812/2021, EPEYDAP assigns to the Contractor with the supply of External Water Supply System Operation and Maintenance Services, as same are thoroughly described in Annex 2 hereto, subject to the terms hereof.

2.2 The Operation and Maintenance Services include:

(a) the Ordinary Operation and Maintenance Services, as same are thoroughly described in Annex 2, Section A, and

(b) the Emergency Response Services, as same are thoroughly described in Annex 2, Section B.

3 Contractor's Obligations

3.1 The Contractor shall provide the Operation and Maintenance Services in thorough compliance with the applicable laws, the terms of this Agreement, the terms of any relevant permits effective from time to time (including any Environmental Terms Authorisation Decisions Permits ("AEPO")), the Operation and Maintenance Plan, the Security and Safety Procedures, the rules of craft and science and the best practices.

3.2 The Contractor promises to make all reasonable efforts to timely obtain, renew or extend the validity of any authorisations and permits required for the maintenance and operation of the EWSS, including any environmental permits. The Contractor states that it possesses the ability, capacity and experience as well as adequately experienced and specialized staff and business partners to implement the Agreement in a due and timely manner.

3.3 The Contractor shall meet all needs arising from the implementation of the PSEA (Emergency

Planning Policy) Plans on account of EPEYDAP along the EWSS (as it is indicatively stated also with respect to the EPEYDAP installations referred to in JMD 5310/1/46-vβ, GG 6193/B/31.12.2018).

- 3.4 The Contractor is obliged to apply controls/safety inspection procedures at the EWSS dams, as per the requirements of DAEE Decision οικ, 2287/27-12-2016 (GG 4420/B/30-12-2016) “Approval of the Dam Safety Regulation - Administration Authority for Dams” as in force from time to time. Throughout the time period the Contractor provides EWSS Operation and Maintenance Services, the Contractor shall be understood as Dam Operator (DO) for the purposes of Article 6 of the above Decision.
- 3.5 According to Document Ref. Δ19/οικ.3671/Φ.ΔΑΦ/17-12-2019 (Online Publication no.: 6ΦΞΓ465XΘΞ-7ΩΣ), the Contractor, as the body undertaking the operation of the dams, is responsible for ensuring compliance with Project Owner's (EPEYDAP's) requirements as well as with the applicable minimum staffing instructions, as per DAEE document Ref. οικ.1238 /ΔΑΦ/15-4-2019 (Online Publication no.: 7XHB465XΘΞ-5H5)

4 Emergency Response Services

- 4.1 In case a need for Emergency Response Services arises, the Contractor shall promptly take all necessary remedial actions, by notice to EPEYDAP.
- 4.2 If no Preselected Contractors & Suppliers have been appointed, before the Contractor assigns any Emergency Response Services directly to any person in the private sector, the Contractor shall contact the Available EPEYDAP Representative by phone and email no later than six (6) hours before the award procedure begins, informing them that they can monitor the award procedure and compliance with Article 269 of Law 4412/2016. The Contractor shall ensure full access to the whole process for the Available EPEYDAP Representative. In case the Available EPEYDAP Representative fails to respond to the invitation for any reason, the Contractor shall normally proceed with the procedure on its own.
- 4.3 Within a reasonable time the Contractor shall initiate a tender procedure to appoint Preselected Contractors and Suppliers as providers of Emergency Response Services and shall disclose the tender outcome to EPEYDAP.
- 4.4 The Contractor may outsource Emergency Response Services to Preselected Contractors & Suppliers without regard to the provisions of paragraph 4.2.

5 EWSS Monitoring and Security

- 5.1 The Contractor is liable to apply the EWSS Security and Safety Procedures throughout the term of the Agreement. For the avoidance of doubt, all relevant costs are included in the Standard Fee.

- 5.2 The Contractor shall prepare at its own cost in cooperation with EPEYDAP and submit for approval with the Ministry of Infrastructure and Transport / Secretariat a proposal for the installation of an integrated system of state-of-the-art technologies for EWSS security and monitoring (SCADA, Geographic Information System, Hydraulic Model, security cameras, fibre optics, etc.), having due regard to the requirements of the ENISA Directive, within [six (6)] months from the signing of this Agreement. This system, as same will be approved by the Ministry of Infrastructure and Transport / Secretariat, must be fully installed and commissioned within [one (1)] year from the date it is approved. A central EWSS control and monitoring station shall be installed in facilities owned by the HR to be designated by the Ministry of Infrastructure and Transport.
- 5.3 Any costs to be incurred for the procurement and installation of the monitoring system referred to in the preceding paragraph shall be borne by EPEYDAP and paid by the Contractor as per the procedures prescribed in the applicable laws. Such costs shall be paid by the Contractor and then invoiced to EPEYDAP together with the EWSS Operation and Maintenance services (additional costs, properly documented). The same shall apply to any additional expenses essentially incurred to upgrade the system or procure new equipment for the system. Once the provision of EWSS Operation and Maintenance services by the Contractor is completed, the above equipment shall remain installed in the EWSS and shall remain the property of EPEYDAP.
- 5.4 The Contractor has already started to prepare an EWSS vulnerability study and will submit it with EPEYDAP as soon as it is completed. If such study indicates that any measures or procedures are essential or appropriate for EWSS monitoring and security purposes, the Contractor shall adopt these measures as if they were included in the Security and Safety Procedures, insofar as this involves no capital expenditure for the Contractor.

6 EWSS Operation and Maintenance Plan

- 6.1 Within nine (9) months from the signing of this Agreement the Contractor shall submit with the Secretariat and EPEYDAP: (a) an EWSS Operation and Maintenance Plan, including in particular any monitoring and maintenance protocols that need to be applied in respect of each EWSS infrastructure. Such Plan shall be updated by the Contractor whenever this is required based on best industry practices and the rules of craft and science; and (b) the Register of Assets.
- 6.2 Once the EWSS Operation and Maintenance Plan and the Register of Assets are approved by the Secretariat and EPEYDAP, the Contractor undertakes to comply with it at all times throughout the period the respective EWSS services are assigned to the Contractor. The approved EWSS Operation and Maintenance Plan and Register of Assets will be annexed to this Agreement.

7 Water Loss

- 7.1** Throughout the term of this Agreement, the Contractor shall ensure that EWSS Raw Water losses do not exceed 10% per year. The rate of EWSS Raw Water losses shall derive by comparing:
- 7.1.1.1** the water quantity flowing into the EWSS network, as same will be measured at the exit point of the reservoirs based on the data included in the Register referred to in paragraph 7.4 of this Article, and
 - 7.1.1.2** the total Raw Water quantity supplied for water supply purposes to the Water Processing Plants, to other consumers along the EWSS (Self-Government Authorities, private individuals, etc.) and for other uses (environmental uses, irrigation etc.).
- 7.2** Raw Water losses shall not include:
- 7.2.1.1** losses caused by natural phenomena inside the reservoirs (e.g. evaporation, ground movement);
 - 7.2.1.2** losses caused by Force Majeure Events;
 - 7.2.1.3** scheduled losses in the context of regular maintenance as per the EWSS Operation and Maintenance Plan;
 - 7.2.1.4** losses caused by theft, which are notified by the Contractor to EPEYDAP, provided that the Contractor has complied with the Security and Safety Procedures;
 - 7.2.1.5** losses incurred for environmental or community reasons dictated by the State (e.g. to support refugee / earthquake victim accommodation structures or tree planting activities).
- 7.3** For accurate loss calculation and effective EWSS monitoring, the Contractor, acting in cooperation with EPEYDAP, shall have appropriate metering devices installed at the locations specified in the diagram attached hereto as part of Annex 5, at EPEYDAP's cost. Such devices shall be certified by accredited laboratories ("ESYD") or other MLA-certified (Multilateral Agreements) bodies equivalent, in terms of status, with the European accreditation bodies. The meters shall be installed at the exit points of the storage installations (Evinos, Mornos, Marathonas and Lake Yliki reservoirs), at the boreholes and at any points where Raw Water is supplied to third parties, as well as at the major junctions of connection aqueducts. The final number and the installation points of the meters shall be defined based on a study of the EWSS monitoring system referred to in Article 5.2, as same will be approved by the Ministry of Infrastructure and Transport. The above meters and recorders must be thoroughly installed and fully commissioned within eighteen (18) months from approval of the study of the monitoring system referred to in Article 5.2 hereof.
- 7.4** The Contractor shall keep record of the above data, which must be electronically accessible at all times to the EPEYDAP executives to be designated for that purpose.

- 7.5 In case water losses exceed 9% per year, the Contractor shall, within one (1) year from the end of the year in which such rate was exceeded, submit for approval with the Ministry of Infrastructure and Transport a water loss detection/ control / reduction plan, with a view to limiting water losses to 9% within three years from the date such plan is submitted. If the Contractor fails to achieve such reduction, this requirement shall be deemed as inadequately fulfilled and the provisions of Article 13 shall apply.

8 EPEYDAP's Obligations

- 8.1 EPEYDAP is liable to pay the Contractor's Fee in accordance with the provisions of Article 9 hereof as well as any other costs provided for in the Agreement, in accordance with its terms.
- 8.2 EPEYDAP shall cooperate in good faith with and shall assist the Contractor where this is required, in accordance with the terms of the Agreement, to ensure smooth supply of Maintenance and Operation Services.

9 Contractor's Fee

- 9.1 For the Ordinary Operation and Ordinary Maintenance Services, a fixed annual flat fee of twenty-five million euros (€ 25,000,000) is agreed in addition to the corresponding VAT. ("Fixed Remuneration").
- 9.2 Throughout the three-year term hereof and, in case such term is extended, for an additional period of six months, EPEYDAP shall not pay the Contractor a Standard Fee, given that such Fee has been taken into account in determining the Price of Raw Water, as same is defined in Article 10 of the Exclusivity Agreement.
- 9.3 Without prejudice to paragraph 9.2, the Standard Fee shall be invoiced by the Contractor to EPEYDAP twice a year, in particular on [June 30] and [December 31], in advance for the next six months. Contractor's invoices shall be settled within one (1) month from issue.
- 9.4 In respect of any Emergency Response Services that were rendered otherwise than by cause of poor EWSS maintenance on the part of the Contractor in any previous years, exceeding in value EUR 150,000 per incident, EPEYDAP shall pay the Contractor an additional fee ("**Additional Fee**"), which will include the costs of any third-party private contractors and suppliers that were used by the Contractor in providing the Emergency Response Services, as such costs derive from the relevant invoices, including any applicable VAT, plus a management fee equal to 2% of the total relevant costs per incident. For the avoidance of doubt, no Additional Fee shall be payable in respect of any Emergency Response Services with a value up to EUR150,000 per incident.
- 9.5 The Contractor shall charge an Additional Fee for any Emergency Response Services that may have been rendered, in the same manner the Standard Fee is charged, provided that the the Emergency Situations concerned were effectively handled.

- 9.6 To the extent (a) the Additional Fee relates to costs paid to third parties employed by the Contractor who are not Preselected Contractors & Suppliers and (b) the EPEYDAP Representative was not invited to attend the execution and award of the relevant contracts in accordance with Article 4.2, the Contractor shall furnish to EPEYDAP:
- 9.6.1.1 the agreement entered with the subcontractor or supplier and the documentation of its direct award;
- 9.6.1.2 the project/procurement/study dossier (as appropriate) including a description of the physical scope of the agreement; any invoices or other tax information of the contractor documenting the final value/cost of the project/procurement/study and a project/procurement/study completion certificate, and
- If, following an audit conducted by EPEYDAP within two (2) months from the date the above documents were submitted, EPEYDAP considers that the Contractor's costs are excessive, EPEYDAP shall have a right to withhold the excessive amount at its discretion and resort to the dispute settlement procedure described in Article 25.3.1. The outcome of such procedure shall be binding on the Parties. If no objections are filed within the two-month period mentioned above, it will be irrefutably presumed that EPEYDAP has accepted the relevant costs.
- 9.7 Contractor's invoices shall be settled within one (1) month from receipt from EPEYDAP.
- 9.8 EPEYDAP may offset any outstanding amounts of Contractor's Fee against any cleared receivables it holds against the Contractor under the Exclusivity Agreement.
- 9.9 It is clarified that Contractor's costs and fees for carrying out sealing works at Kithaironas Canal in Kokkini, which has already been assigned to the Contractor, lie outside the scope of this Agreement.

10 Pumping costs

- 10.1 As part of the Regular Operation and Maintenance Services, the Contractor has designed the operation of a pumping unit at the Pumping Station of Yliki to support the operational readiness of the Aqueduct and has included the relevant annual power consumption charges in the Standard Fee..
- 10.2 If a pumping need arises or a need for non-gravitational water transport through the EWSS
- 10.2.1.1 in periods of prolonged drought based on a management plan of the available raw water supply systems, or
- 10.2.1.2 in the context of any Emergency Response Services,
- EPEYDAP shall bear the relevant power charges, as same will be certified by the Contractor

on the basis of power consumption data and tariffs.

- 10.3 The Contractor shall invoice the relevant costs (plus VAT, if applicable) to EPEYDAP along with the Additional Fee. The relevant invoices are payable within one (1) month from the date they are forwarded to EPEYDAP.

11 Term

- 11.1** This Agreement enters into effect as of the Effective Date and ends on December 31, 2023, subject to unilateral extension by the HR on the same terms as apply to a unilateral declaration by EPEYDAP for an additional period of six (6) months, i.e. until June 30, 2024. Any other extension is subject essentially to a mutual agreement of the Parties.

- 11.2** In any case, as a prerequisite of any extension as per the preceding paragraph, the Services must not have been assigned by the HR to third parties as a whole, as described above, and EYDAP SA must have been notified by EPEYDAP at least three (3) months before the expiry of the Term.

- 11.3** The Contractor is liable to:

11.3.1 deliver to EPEYDAP a copy of the entire file of EPEYDAP expropriations, within one (1) month from the Effective Date;

11.3.2 deliver to EPEDAP no later than one (1) month prior to expiry of this Agreement: (a) the EWSS Operation and Maintenance Register, including: a description of all operating and maintenance information for all fixed assets, with reference to the latest maintenance and specific observations and information regarding their condition at the time the register is delivered; and (b) the final EWSS Operation and Maintenance Plan referred to in Article 6, as updated upon expiry of the Term.

12 Termination

- 12.1** Without prejudice to Article 9.1, the Contractor can terminate the Agreement in case EPEYDAP delays payment of the Contractor's Fee, in whole or in part, for a period exceeding one (1) month from the contractual due date.

- 12.2** Before proceeding to termination, the Contractor shall notify EPEYDAP and the HR in writing of its intention to terminate the Agreement, setting a minimum ninety (90) calendar days' deadline to remedy the cause of termination.

13 Termination by EPEYDAP

- 13.1** EPEYDAP can terminate the Agreement on any of the following grounds:

(a) If the Contractor is in material breach of the terms hereof and this has a significant

impact on the effective and uninterrupted operation of the EWSS;

(B) If there is a an Insolvency Event in relation to the Contractor.

13.2 Before proceeding to termination, EPEYDAP shall notify the HR and the Contractor in writing of its intention to terminate the Agreement, setting a minimum ninety (90) calendar days' deadline to remedy the cause of termination.

13.3 In case the Agreement is terminated as above, EPEYDAP shall have a right to demand from the Contractor:

(a) forfeiture of the Performance Guarantee referred to in Article 16.1, and

(b) restoration of all damages sustained as a result of Contractor's illicit conduct, insofar as they are not covered by the proceeds deriving from forfeiture of the Performance Guarantee. In case of termination, any non-invoiced portion of Contractor's Fee due in respect of the period prior to Termination shall be due for payment (the Standard Fee shall be payable *pro rata* to the period elapsed, whereas the Additional Fee in its entirety). EPEYDAP may offset any outstanding amounts of Contractor's Fee against any cleared receivables it holds against the Contractor under the this Article.

14 Execution of Works in case of Termination

14.1 The Contractor shall continue to provide the Maintenance and Operation Services until those are assigned by the HR and EPEYDAP to third parties.

15 Force Majeure

15.1 If either Party is impeded by a Force Majeure Event, it shall notify the other Party as soon as practicably possible, in any case within seven (7) days from the date it originally gained knowledge of the Force Majeure Event.

15.2 The notice referred to in Article 15.1 shall essentially:

- (a) state the Force Majeure Event giving rise to the notice and shall include details about the relevant circumstances;
- (b) refer to the obligations hereunder which are delayed or impaired by the Force Majeure Event; and
- (c) provide an assessment of the effects of the Force Majeure Event on the impaired obligations.

15.3 Without prejudice to the obligation of the impaired Party to provide a notice as above, a Force Majeure Event shall release the impaired Party from any obligations which are impaired by the Event stated in the notice for as long as the impairment exists.

15.4 Occurrence of a Force Majeure Event shall not release the impaired Party of any obligations hereunder which are not impaired by such Event. The impaired Party shall continue to perform all obligations hereunder insofar as this is reasonably possible and shall make all reasonable efforts to minimise the effects and duration of the Event of Force Majeure.

16 Guarantee

16.1 The Contractor shall deposit in favour of EPEYDAP a Performance Guarantee equal to EUR 3,450,000 issued by a bank operating legitimately in Greece. Such guarantee shall be valid for a minimum period of one (1) month after the date the Agreement is terminated. In case the Term of the Agreement is extended, the validity of the Performance Guarantee shall be extended for an equal period of time, so that in any case it expires one (1) month after expiry of the Term.

16.2 EPEYDAP may demand forfeiture of the Performance Guarantee in case the Agreement is terminated by fault of the Contractor. The forfeiture of the Performance Guarantee shall not deprive EPEYDAP of its right to claim indemnification for further documented damages.

16.3 Once EPEYDAP has satisfied all claims against the Contractor arising from the termination, EPEYDAP shall return to the Contractor any excessive amount deriving from forfeiture of the Performance Guarantee which was not allocated to satisfy EPEYDAP's claims.

16.4 The Performance Guarantee shall be returned by EPEYDAP to the Contractor after its expiry, provided that the Contractor has furnished to EPEYDAP the EWSS Operation and Maintenance Register and the final EWSS Operation and Maintenance Plan pursuant to Article 11.3.

17 Limitation of Liability

It is agreed that Contractor's liability is limited to liquidated damages only. In this case, the indemnification amount shall not exceed in total 100% of the annual Standard Fee, for the entire Term of the Agreement. Contractor's liability may exceed the above limit in respect of any damages attributable to malicious intention or gross negligence on the part of the Contractor.

18 No assignment

18.1 It is expressly prohibited to the Contractor to assign the Agreement or any part thereof or any rights and obligations arising from the Agreement to third parties, save with EPEYDAP's prior written consent, except for any cash claims arising hereunder, which are freely transferable to third parties.

19 Subcontracting

19.1 The Contractor may assign the execution of any part of the Operation and Maintenance

Services to sub-contractors, in accordance with the applicable Laws.

- 19.2** Such subcontracting shall not release the Contractor from its responsibilities and obligations under this Agreement. The Contractor is liable towards EPEYDAP and the HR for all acts and omissions of its sub-contractors and their own employees and agents, as if such acts and omissions were its own.

20 HR Intervention

The Contractor acknowledges and accepts the right of the HR to Intervene in accordance with Article 21 of the Exclusivity Agreement. The Contractor holds no claims against the HR or EPEYDAP on these grounds.

21 Reporting

- 21.1** The provision of EWSS Operation and Maintenance Services shall be assessed on a semi-annual basis by a Special Three-member Committee to be set up by the Secretariat within three (3) months from the date this Agreement is signed.

- 21.2** Every six months after the above Commission takes up duties, the Contractor shall prepare (through its jointly responsible departments) and deliver to the Commission a duly authorised protocol of deliveries, including a detailed description of all services provided, certifying that the Services were rendered in a due and timely manner in accordance with all applicable quality standards. The Contractor shall be responsible for due execution of the services as per the terms of this Agreement for a period of seven (7) months from the end of each reporting period.

- 21.3 The Commission may carry out sample/periodic checks on Contractor's reports referred to in paragraph 2 of this Article.

22 Communication

- 22.1 Any notices or other communications exchanged between the Parties hereunder shall be executed in writing and may be delivered to the intended recipient in person or by post, fax or e-mail at the address stated herein below:

If addressed to the HR:

[Address]

[Email]:

Attn: []

If addressed to EPEYDAP:

[Address]

[Email]:

Attn: []

If addressed to the Contractor:

EYDAP SA

156, Oropou Street

Galatsi GR -11146 Email]: gdy@eydap.gr

Attn: General Director of Water Supply

22.2 Each Party may change their notification address by notice to the other Party.

23 Confidentiality

23.1 The Parties agree that the provisions of this Agreement shall not be deemed to constitute Confidential Information and can be disclosed by the Parties without restriction.

23.2 Each Party shall treat as confidential all Confidential Information received by the other party, save for:

- (a) any information which is provably already in or enters the public domain in any manner other than by breach of this Article;
- (b) any disclosure made by force of law or by order of any administrative or regulatory Authority, or in the context of a parliamentary requirement, and
- (c) any information which is already lawfully known to the Party receiving the Information from the disclosing Party.

24 Amendment

Any amendment to the terms and provisions of the Agreement is subject essentially to a written agreement of the Parties.

25 Applicable Law - Dispute Resolution

25.1 This Agreement shall be governed by and construed in accordance with Greek Law.

25.2 The HR and EPEYDAP shall be treated essentially as a single party exclusively for the purposes of the Dispute Resolution process.

25.3 Any dispute between EPYDAP and the Contractor arising from or in connection to this Agreement shall be resolved as follows:

- 25.3.1 If the dispute relates to a technical or financial issue based on a mutual agreement of the Parties, an expert opinion shall be obtained from a three-member expert committee whose members are either engineers duly registered with the Technical Chamber of Greece or Certified Auditors registered with the Chartered Accountants' Association ("SOE"). The Party referring the dispute to the expert committee shall appoint one member of the committee, which shall be notified to the other Party by process server, and the other Party shall appoint the other member by extra-judicial notice to the former within 14 working days. If the other Party fails to respond, the second member shall be appointed by the Chairman of the Hellenic Chamber of Greece at the request of the referring Party. The two members shall then designate a chairman of the committee. In case of disagreement, the committee chairman shall be appointed by the Chairman of the Technical Chamber of Greece.
- 25.3.2 The expert committee's decision shall be binding on the Parties, provided that it is rendered within six (6) weeks from the date the committee was set up as above (unless the Parties extend such deadline in writing), otherwise it shall be null and void as issued by a body lacking the necessary powers at the time it was rendered. The Parties are liable to comply with a timely rendered decision of the expert committee. If either Party has any reservations, it may refer the matter to arbitration. The costs of the expert committee shall be equally borne by the Parties.
- 25.3.3 If a dispute does not relate to a technical or financial matter based on a mutual agreement of the Parties; or if it does relate to such matters, but the Parties have agreed in writing to omit the expert opinion procedure; or if the matter was referred to an expert committee but the committee has failed to render a decision in time as above; or if the committee's decision has been indeed timely issued but any of Parties has reservations and wishes to refer the matter to arbitration; then, in any of the above situations, the dispute will be resolved by arbitration. The arbitration proceedings shall be carried out by three arbitrators. One arbitrator shall be appointed by the Contractor and one by the HR and EPEYDAP. The two arbitrators shall then appoint a third arbitrator. The HR and EPEYDAP shall be deemed as a single party for the purpose of appointing arbitrators. The request for arbitration shall include a clear description of the dispute and shall designate an Arbitrator on account of the applicant. Within twenty (20) days from notification of the request, the other Party is liable to provide a reply by process server. Such reply shall include a brief presentation of such Party's views on the dispute and shall designate the second Arbitrator. In case such notice is not provided, the relevant provisions of the Code of Civil Procedure shall apply.

25.4 The arbitration shall be conducted as per the rules of the Code of Civil Procedure in Athens

in the Greek language. Any advanced costs shall be equally borne by the Parties and a final allocation of costs between the Parties shall be made in the arbitral award.

IN WITNESS WHEREOF, the contracting parties have executed and signed this agreement at the above date, in three (3) original copies and each Party was delivered one (1) copy.

The Contracting Parties:

The Hellenic Republic

By:

Minister of Infrastructure and Transport

EYDAP SA

By:

EYDAP ASSETS SA

By:

ANNEX 1

EXTERNAL WATER SUPPLY SYSTEM

The projects/facilities forming the External Water Supply System (EWSS), which are the property of EPEYDAP (EYDAP Assets Company), are the fixed assets that were transferred in implementation of

Law 2744/99, including those that were built thereon (Ø1700 pipe, Acharnes Water Treatment Plant (WTP) - Chelidonou; completed sections of the Ø2000 pipe, Acharnes WTP - Kithaironas; reinforcement works for the Kremada-Dafnoula connecting aqueduct; Evinos dam and Evinos-Mornos tunnel etc.) and are used for collecting and transferring raw water, from the source to the consumers.

To avoid all doubt, it should be noted that this herein description of the EWSS does not concern the property rights over the EWSS fixed assets.

The EWSS consists of the entirety of the managed water sources and the water transfer system up to the WTP entrance, and includes the following:

- water sources, surface and ground;
- surface water storage systems (reservoirs, dams)
- groundwater abstraction systems (water well drilling)
- external aqueducts, aqueduct management systems (pumping stations, flow regulators)

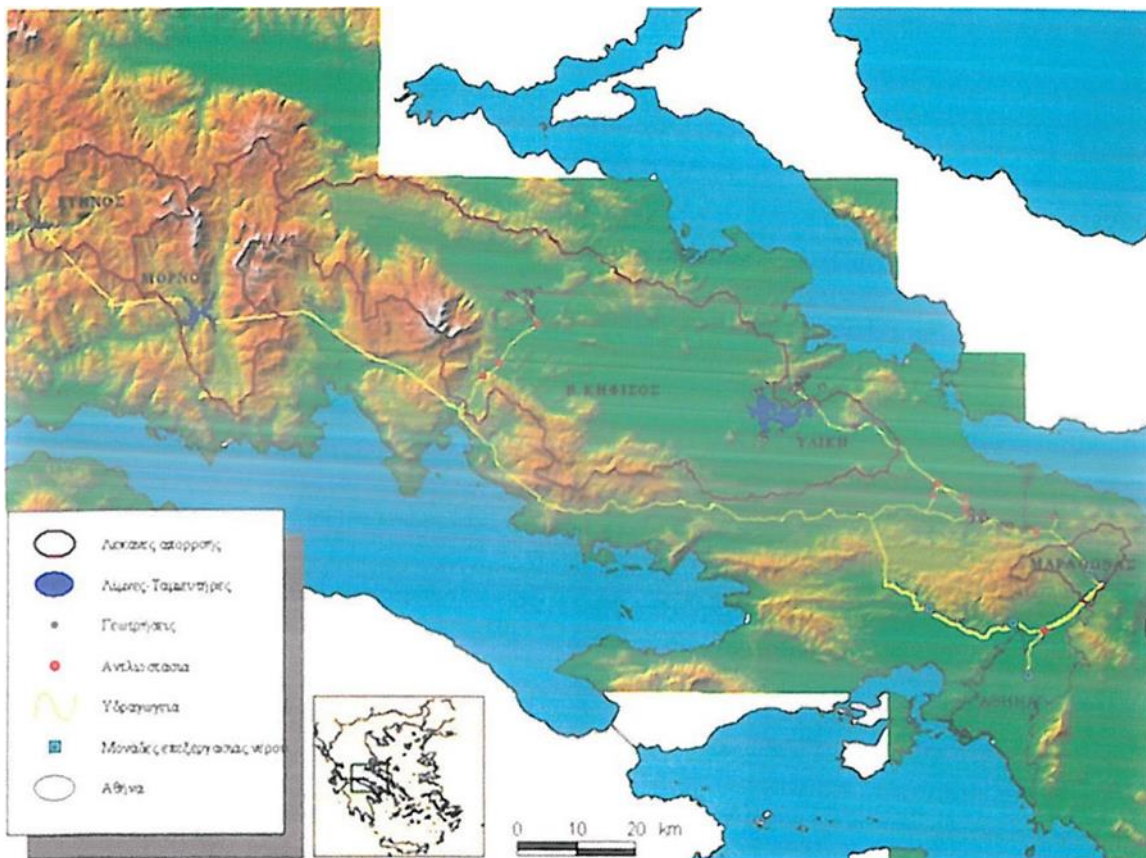


Figure 2: The Athens water supply system

The water resources available for the Athens supply system are mainly the Evinos and Mornos connected reservoir system, the Marathon reservoir, the Yliki reservoir and various groups of water

well drills. The water resources, based on their current operating conditions, may also be classified as main (Mornos, Evinos), auxiliary (Yliki, Marathon) and back up (groundwater resources).

The water transfer system consists of two main axes:

- The Evinos-Mornos axis (high axis), which includes the Mornos aqueduct and is a gravity-flow system.
- The Yliki axis (low axis), which includes the Yliki aqueduct and is a pumped system.

The two axes are interconnected via connecting aqueducts, which usually allow bi-directional flow, to ensure an alternative source of supply for the Water Treatment Plants of Acharnes, Aspropyrgos, Galatsi and Polydendri, from both water supply axes.

In terms of the management, the water supply is carried out through the Mornos-Evinos reservoirs and the gravity-flow Mornos aqueduct, whereas Yliki and the water well drills are kept as strategic back up reserves, due to the high pumping costs. The Marathon reservoir is also part of the water supply system and is used as a proximate, daily and monthly equalising tank.

Within the context of a long term Water Resources Management Plan, considering alternating wet and dry seasons, and in order to deal with emergencies and extended maintenance services, the requirement to operate the Yliki facilities and the well drills to ensure the Athens water supply is an obvious one.

A complete and extensive list of the fixed assets that are active and available for operation and maintenance will be included in the EWSS Operation and Regular Maintenance Plan/Manual (article 6 of the Agreement).

This EWSS Operation & Maintenance Agreement does not include the inactive facilities and well drills, listed in Chapter E of the Annex (see Table 3), which will be included in the Fixed Asset Register.

Below is a brief description of all the available active fixed assets.

A. Reservoirs - Dams

Out of these reservoirs, the Yliki reservoir is the only natural one and is used today as an auxiliary water source. The Evinos reservoir operates in conjunction with the Mornos reservoir, to enhance the water potential of the later, by diverting the largest part of its upstream inflows. Lastly, the Marathon reservoir is mainly used to store water, for security reasons, due to its proximity to Athens.

Table 1: Reservoir characteristics

Name	Maximum surface area (km ²) (1)	Total capacity (hm ³)	Useful capacity (hm ³)	Overflow level (m)	Lowest water intake level (m)
Mornos	19.93	763.71	630.23	435.0	384.0
Evinos	3.60	137.63	112.05	505.0	458.3
Yliki	27.74	594.75	584.75	79.8	43.5

Marathon	2.57	42.85	32.20	224.0 (2)	204.4
----------	------	-------	-------	-----------	-------

(3) *The maximum surface area refers to the overflow level.*

(4) *The overflow level of the Marathon reservoir was raised 1.0m above the actual level by installing beams along the spillway.*

B. Underground aquifers – Water well drills

About 70 installed well drills are provided to support the surface water sources. These are considered active, they operate in groups and they are used as a backup resource. The well drills have a total nominal pumping capacity of approximately 135,000 m³/day (estimate based on the current operating state of the pumping stations).

Table 3 below lists the well drills in detail, also noting whether they are in operational readiness or not. However, in terms of the possibility of using the non-active well drills, the Water Supply Availability Policy must be updated and the well drills must be included in the EWSS, with the assistance of their Owners. Until this is accomplished, the Contractor must take measures to protect these well drills and ensure they are not further depreciated.

Table 2: Well drill groups

Name	Number of well drills	Nominal pumping capacity (m ³ /day)
NE PARNITHA		
Mavrosouvala	20 ^{1*}	115,000
Viliza (10th siphon)	8 ^{2*}	27,500
Avlona Camp	3 ^{2*}	10,800
7th siphon	2 ^{2*}	5,500
No3	4	17,280
No4	1	2,400
YLIKI		
Oungra	11 ^{3*}	60,000
SW Yliki	14 ^{4*}	94,000
Taxiarches	9 ^{2*}	63,000
BOEOTIAN CEPHISSUS MIDDLE COURSE		
Vasilika- Parori - Mavroneri	16 ⁵	100,000

- 1*: Out of the 20 well drills, 3 have been consigned to the Municipality of Oropos for use.
- 2*: The facilities of the well drills and the propeller pumping station are not operational.
- 3*: Two of the three substations have overflowed since 2019, because of the Yliki overflow (the Oungra drills have been built within the Paralimni Lake flood area. One of the 11 Oungra well drills has been consigned to Mr Akrivakis for use for irrigation purposes (the original owner of the property that had not been expropriated); this well drill has been maintained and operated at Mr Akrivakis' cost.
- 4*: The facilities are inactive.
- 5*: The facilities are inactive and inoperative since 1995.

Table 3: Operational Status of the Well Drills

WELL DRILLS INTERCONNECTED TO THE EWSS		
No.	DRILL CODE No.	OPERATIONAL READINESS
A. BOEOTIAN CEPHISSUS MIDDLE COURSE WELL DRILLS		
A.1 VASILIKA WELL DRILLS		
1	EMP-3	NO
2	EMP-4	NO
3	EMP-6	NO
4	EMP-7	NO
5	EMP-13	NO
6	EMP-22	NO
7	ΥΜΡΣ-10	NO
8	ΥΜΡΣ-11	NO
9	ΥΜΡΣ-13	NO
10	ΥΜΡΣ-14	NO
11	ΥΜΡΣ-16	NO
12	ΥΜΡΣ-17	NO
A.2 PARORI WELL DRILLS		
1	ΥΜΠΣ-11	NO
2	ΥΜΡΠ-2	NO
3	ΥΜΡΠ-3	NO
4	ΥΜΡΠ-4	NO
5	ΥΜΡΠ-7	NO

A.3 MAVRONERI WELL DRILLS		
1	Three (3) equipped drills of the Ministry of Agriculture, which can be used seven months a year, if required, to supply water to Athens. Only one (1) of the three drills is operational.	
2		
3		
AΔ1, AΔ2, AΔ3 Branch Propeller Pumping Stations		NO
B. YLIKI WELL DRILLS		
B.1 TAXIARCHES WELL DRILLS		
1	YT-1	YES*1
2	YT-2	NO
3	YT-3	NO
4	YT-4	NO
5	YT-6	NO
6	YT-7	NO
7	YT-8	NO
8	YT-9	NO
9	YT-11	NO
*1 Well drill No. YT-1 has been handed over for use to the Local Community of Akraifnio, to meet the water supply requirements; the drill's operating and maintenance costs are paid by the Municipality.		
B.2 SW YLIKI WELL DRILLS		
1	YNΔ-1	NO
2	YNΔ-2	NO
3	YNΔ-3	NO
4	YNΔ-4	NO
5	YNΔ-5	NO
6	YNΔ-6	NO
7	YNΔ-7	NO
8	YNΔ-8	NO
9	YNΔ-9	NO
10	YNΔ-10	NO
11	YNΔ-11	NO
12	YNΔ-13	NO
13	YNΔ-14	NO
14	YNΔ-15	NO
B.3 OUNGRA WELL DRILLS		
1	ΠΕ-4	NO
2	ΠΕ-5	NO
3	ΠΕ-6	NO

4	ΠΕ-7	NO
5	ΠΕ-8	NO
6	ΠΕ-9	NO
7	ΠΕ-10	NO
8	ΠΕ-13	NO
9	ΠΕ-14	NO
10	ΠΕ-15	NO
11	ΠΕ-16	NO
*2 Use of the ΠΕ-4 well drill has been consigned to Mr Akrivakis, for irrigation purposes; the drill's operating and maintenance costs are paid by Mr Akrivakis.		
C. N & NE PARNITHA WELL DRILLS		
C.1 Viliza Well Drills		
1	EM-1	NO
2	EM-4	NO
3	EM-5	NO
4	EM-11	NO
5	EM-15	NO
6	EM-13	NO
7	EM-16	NO
8	EM-21	NO
Branch Propeller Pumping Station		NO
C.2 Avlona Armoured Corps Training Centre Well Drills		
1	EM-3	NO
2	EM-12	NO
3	EM-14	NO
Branch Propeller Pumping Station		NO
C.3 7th Siphon Well Drills		
1	EM-17	NO
2	EM-19	NO
Branch Propeller Pumping Station		NO
C.4 Pumping Station No3 Well Drills		
1	AS-13	YES
2	AS-15	YES
3	AS-16	YES
4	EYDAP	YES
C.5 Pumping Station No4 Well Drills		
1	AS-23	YES
C.6 Mavrosouvala Well Drills		
	17 Well Drills	YES
	3 Well Drills*	YES

Branch Propeller Pumping Station (tank)	YES
*The 3 drills and their full equipment has been consigned for use to the Municipality of Oropos. They are operated and maintained by the Municipality.	

C. Aqueducts

The raw water transfer pipes can be categorised into main, connecting and auxiliary aqueducts, the most notable of which are the following:

The **Mornos aqueduct** (figures 2 and 3) transfers water from the Mornos reservoir to the water treatment plants at Aspropyrgos and Acharnes. It is connected to the Yliki aqueduct, at location Dafnoula, through the Marathon connecting aqueduct.

It consists of the following:

- a) 15 tunnels, diameter 3.6-4m. Nine of those tunnels are pressure-flow (Gkiona, Kirfi, Helicon A, Kithaironas, Amfissa, Monastiri, Ag. Nikolaos, Kyriaki, Thisvi) and six are free-flow tunnels (Kastalia, Delphi, Distomo, Helicon B, Taxiarches, Prodromos). The Gkiona, Kirfi, Helicon A and Kithaironas tunnels terminate at energy dissipators. For rate of flow higher than 7.0 m³/sec, the Gkiona energy dissipator operates as a PPC hydroelectric station, with a 13MW output.
- b) Twelve (12) siphons, 7km long. The six siphons that are upstream the Kithaironas mountain (Amfissa, Σ36, Σ38, Distomo, Kalogeriko, Helicon) are twin pipes, from stainless steel, lined with reinforced concrete, 2.55m in diameter, with a discharge capacity of 23.0m³/sec. The other six siphons that are downstream the Kithaironas mountain (Σ163, Σ168, Σ174, Chasia, Σ183, Σ188), are between 2.55-3.20m in diameter, with a total discharge capacity of 11.0m³/sec.
- c) Fifteen (15) channels, 73km long.

The Thebes channel, 40km long, has a trapezoidal cross-section, bottom base/top base/height 4.0/13.3/3.1m and slope gradient 3:2. It is lined with trapezoid ditch concrete, over natural or prepared ground.

The Kithaironas channel is an open channel, 4.00/5.20/3.45m in dimensions, with a 5:1 internal slope gradient. Parts of the channel (8km long) have been elevated and have a discharge capacity of 23m³/sec, while the discharge capacity of the rest of the channel is 11.0m³/sec.

The remaining 13 channels have self-supporting rectangular cross-sections, with a 5:1 internal slope gradient and dimensions as follows: 4.00/5.80/4.45m (Amfissa, Chrissos, Kirfi, Aspra Spitia, Kyriaki, Helicon A, Helicon B, Prodromos), 5.00/6.80/4.45m (Delphi 1, Delphi 2, Taxiarches 1, Taxiarches 2) and 6.00/7.35/3.40m (Thisvi-Ellopia).

Moreover, a section of the Ø2000mm pipe has been connected downstream of siphon 168 and up to upstream of siphon 183, parallel to the existing pipe, with an intermediate connection to the

Aspropyrgos WTP. The pipe operates at $4.5\text{m}^3/\text{sec}$. However, with suitable interventions it is estimated that the capacity may be increased to $6.5\text{m}^3/\text{sec}$.

The ***Evinos-Mornos aqueduct (tunnel)*** transfers water from the Evinos reservoir to the Mornos reservoir. This is a pressure-flow tunnel, with a total length of 29.4km, a 3.5m inner diameter and varying discharge capacity (maximum $27\text{m}^3/\text{sec}$), depending on the water level at the Evinos reservoir. The tunnel discharges at the Morons reservoir, approximately 10m over the dam overflow level (+445m).

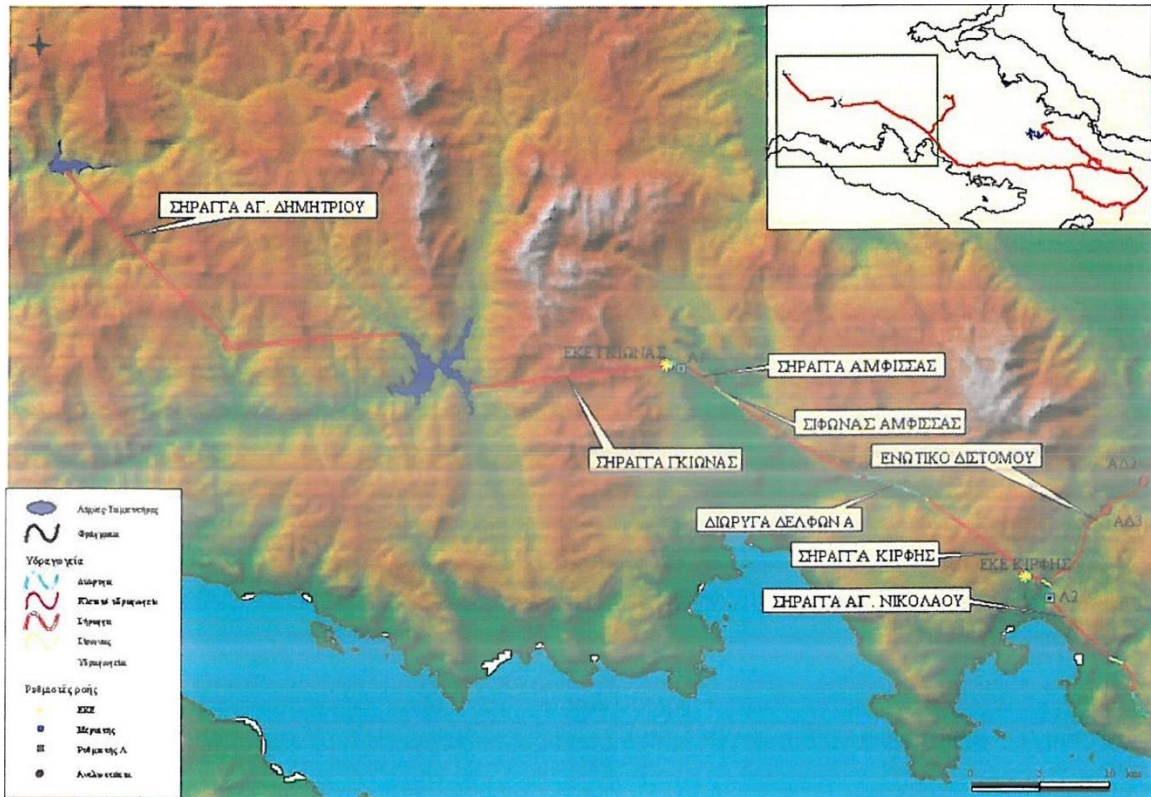


Figure 2: Mornos aqueduct upstream of the Distomo connecting aqueduct

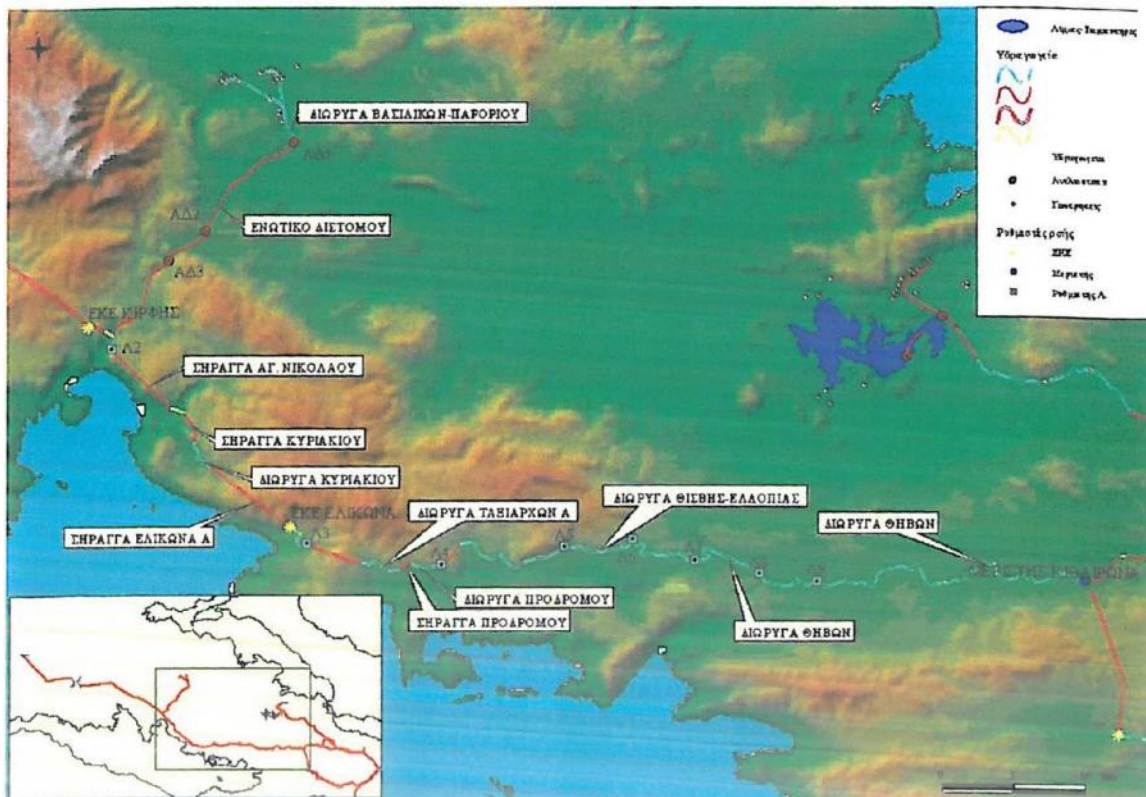


Figure 3: Mornos aqueduct downstream of the Distomo connecting aqueduct

The **Yliki aqueduct** (Figure 4) transfers water from Lake Yliki to the Marathon reservoir and the Polydendri water filtration plant. It is connected to the Mornos aqueduct via the Marathon connecting aqueduct at location Dafnoula (Kithaironas take-off divider).

The Yliki aqueduct consists of the following:

- The closed aqueduct, from the central pumping station (+80m) up to the resting tank; the Yliki open aqueduct (rectangular cross-section channel, 14.5km long), the Tanagra tunnel and the twin Yliki-Kremada open aqueduct, which is free-flowing up to the Kremada divider (+172m). The flow can then be directed towards the Marathon connecting aqueduct via the Kremada-Kleidi connecting aqueduct.
- Two siphons, diameter \varnothing 1300mm, up to the Viliza pumping station.
- A steel discharge pipe, diameter \varnothing 900mm, length 13km, from the Viliza pumping station to the N4 pumping station.
- The Sfindali tunnel, the Malakasa aqueduct and a steel pipe, diameter \varnothing 1900mm, parallel to the Malakasa aqueduct, up to the Kiourka tunnel.
- The Kiourka tunnel, up to the Polydendri WTP and the Marathon reservoir.

The ***Kremada-Kleidi connecting aqueduct*** consists of two pipes. The old pipe, made from pre-tensioned concrete, diameter Ø1300mm, and the new steel pipe, diameter Ø1600mm. The pipes run from the Kremada surge tank to the Kleidi tank, passing through the Asopos pumping station.

The ***Mornos-Marathon connecting aqueduct*** consists of an open, rectangular cross-section aqueduct, 7km long (from the Kleidi take-off divider to the Kakosalesi aqueduct) and a closed pipe, diameter Ø1800mm, length 9.5km from the Kleidi take-off divider to the Mornos aqueduct. The second section is a bi-directional flow section. After a number of ruptures of the connecting aqueduct in recent years, it is now being used (following a series of technical interventions) only in one direction of flow (Dafnoula-Kleidi), with a max flow rate of 3.5 m³/sec, resulting in the insecure supply of the Mornos aqueduct from the Yliki aqueduct through the Asopos pumping station.

The ***Kakosalesi aqueduct*** is an open aqueduct (closed, free-flowing aqueduct over a length of 12.8km) from the Viliza pumping station to the start of the Kiourka tunnel.

The ***Marathon-Chelidonou connecting aqueduct*** consists of the Bogiati tunnel up to the Chelidonou energy dissipator.

The ***Menidi-Chelidonou connecting aqueduct*** consists of one steel pipe, diameter Ø1700mm.

The ***Chelidonou Junction - Galatsi WTP*** has two separate branches: one is a pre-tensioned pipe, Ø1700 mm diameter, 7.4km length, while the other consists of two successive tunnels and one siphon (2.4km long) in its first section and two cast-iron pipes, Ø1250mm and Ø900mm diameter (5.7km long) in its second section.

Auxiliary aqueducts

In cases of emergency and when the need arises, the well drills are put into operation, to supply the Mornos and Yliki aqueducts, via the following aqueducts:

The ***Distomo connecting aqueduct***. The Distomo aqueduct transfers water from the Vasilika-Parori well drills and the Mavroneri torrent to the Mornos aqueduct. It consists of a steel discharge pipe, diameter 1200mm and total length 19km. To operate the Distomo connecting aqueduct, three pumping stations connected in series (AΔ1, AΔ2, AΔ3) must be operated; these have not been put to use since 1996. During a test operation in 2008, the well drills and the aforementioned pumping stations were not started, because of the strong pushback from local institutions and political organisations from the regions of Boeotia, Phocis and Phthiotis.

The aqueducts of the North & Northeast Parnitha, Yliki and Boeotian Cephissus Middle Course well drills, total length 36km.

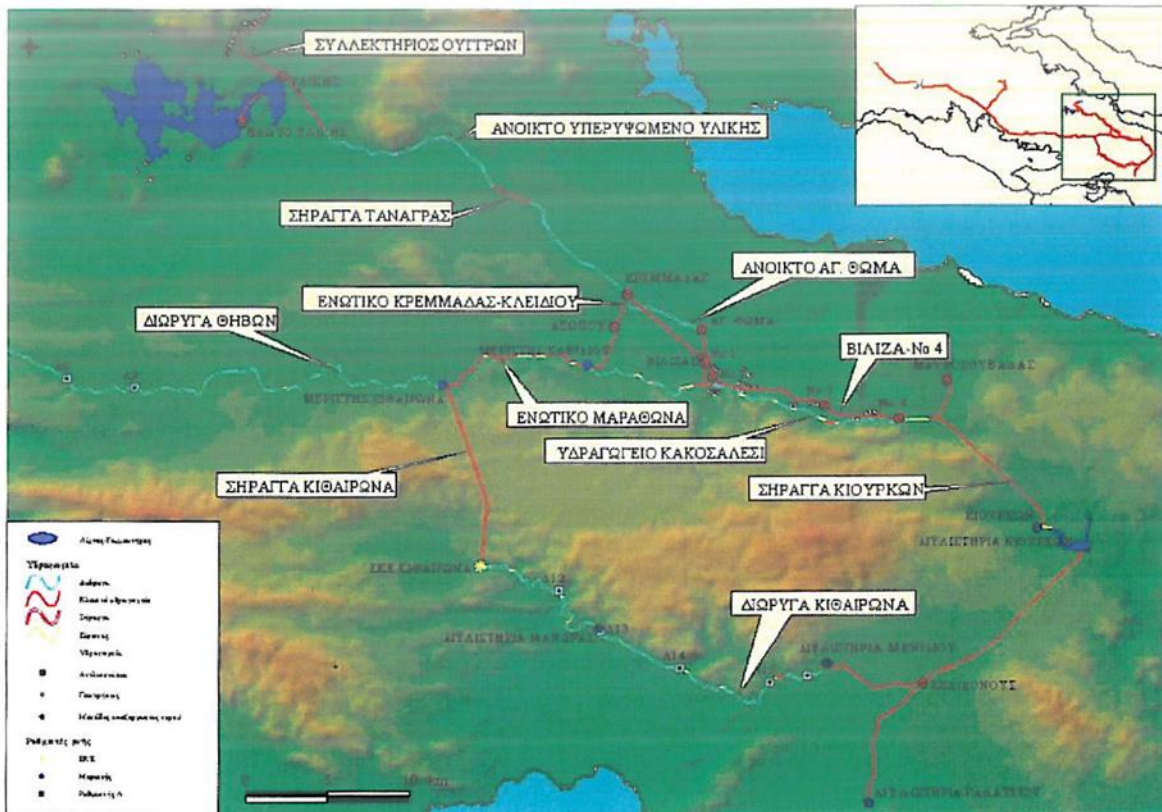


Figure 4: Marathon and Kremada-Kleidi connecting aqueducts and Yliki aqueduct

Water transfer

The aqueducts are operated with the use of free-flow regulators and pumping stations, as described below.

Flow regulators

Flow regulators are mainly used at the Mornos aqueduct, and can be classified as energy dissipators, take-off dividers and inverted V type control systems (Figures 3 & 4).

The energy dissipators are found at the exits of the pressure flow tunnels. They are equipped with sluice gates and combined with downstream resting basins and upstream surge tanks. There are five energy dissipators at the Mornos aqueduct, divided into two types:

- sleeve valves (Gkiona and Kleidi) and
- parallel radial sluice gates (Kirfi, Helicon, Kithaironas)

With the operation of the energy dissipators, up to 0.7 hm³ can be stored in the system, in cases of damage.

There are four take-off dividers (Kremada, Kleidi, Kithaironas and Chelidonou). The Chelidonou take-off divider is an important junction for the system, since it is used for the interconnection of the water treatment plants.

The inverted V type regulators are flat sluice gates, which open and close to control the rate of flow, isolate downstream sections or store water in upstream sections. The sluice gates are either open (completely or partially) or closed, whereby water passes through the overflow. There are 24 regulators at the aqueduct (18 inverted V type). With the operation of the inverted V type regulators, up to 1.15 hm³ can be stored in the system, in cases of water supply interruption.

The weirs are found upstream of the siphons and tunnels, and channel the water that cannot be stored in the system (cases of sudden drops in demand). The main weirs are found at the locations Dafnoula (upstream of the Kithaironas divider), Chasia, Eschatia (upstream of the Acharnes WTP) and at the entrances of the Kirfi and Helicon tunnels.

The evacuators are used to evacuate sections of the aqueducts in cases of accidents or maintenance operations. There are 34 evacuators in total, the Chasia one being the most important one (at Λ14). It is a remote-operated evacuator which can immediately divert water from the Kithaironas channel.

D. Pumping stations

The pumping stations, with a total power of 125,000 HP, are used to control the flow from low altitude water intakes (Yliki, well drills) to the Marathon reservoir and the Mornos aqueduct (Figure 40). The pumping stations can be divided into main and auxiliary stations.

The Yliki central pumping station (Mouriki) operates for lake levels between 71.0-78.5m. For lake levels between 44.0-71.0m, the Yliki floating pumping station is also put into operation at four locations (A', Γ, E', Z'). These locations are connected with a small artificial lake (0.6 hm³ capacity) at the central pumping station water intake, and maintain the Yliki water level above 71m, so the main pumping station can operate. The Yliki pumping station is also used to transfer water from the SW Yliki and Oungra well drills to the Yliki aqueduct.

The Viliza pumping station is used to transfer water to the Marathon reservoir. The combined operation of the Viliza pumping station and the other smaller pumping stations in the area (Avlona No3, Sfendali No4) provides a discharge capacity of 5.7 m³/sec.

The Distomo pumping stations (AΔ1, AΔ2, AΔ3) transfer water from the Vasilika-Parori well drills and the Mavroneri torrent to the Mornos aqueduct.

The Asopos pumping stations (A0, A1) and B2 are used to transfer water from Yliki to the Mornos aqueduct, via the reverse flow operation of the connecting aqueduct.

The Asopos siphon pumping station transfers untreated water to customers (public sector organisations and industrial customers) in the area of the Municipality of Tanagra.

D. Aqueduct operation for water transfer

The water flow is regulated at the aqueducts as described below:

The hydraulic and quality characteristics of the water at the aqueducts are recorded in real time by the existing metering system (level, rate of flow, position of regulating sluice gates and valves, turbidity, conductivity, temperature). This information, along with other data describing the current operational status of the EWSS facilities (reservoirs, dams, flow regulators, energy dissipators, pumping stations, etc.), is collected via local stations and communication networks (wired and wireless) by a central Supervision and Control Information System.

Flow regulation is carried out by three data collection, control and decision-making cooperating processes, which operate as follows:

The system of the remote Controllers, which are installed at local flow regulation and control positions, and which receive and store metering data that are transmitted to the Supervisory Control and Data Acquisition System (SCADA system). This is the system that collects metering data from the Controllers to display it to the operators, who, assisted by the hydraulic operation simulation system, calculate the desirable sluice gate positions based on the water supply network conditions. The positions of the sluice gates are fed into the system, which transmits the corresponding commands to the Controllers. The Controllers implement the commands and then receive new metering data, etc.

In accordance with article 4.4 of the Agreement, this system will be updated and upgraded, aided by the installation of multimedia equipment and a geographic information system.

- a) Mornos aqueduct - Marathon connecting aqueduct - Yliki aqueduct branch downstream of Viliza (typical standard operation)

Water is transferred by gravity from the Evinos-Mornos reservoir system, fully meeting the WTP water intake requirements and the rest of the consumer needs, also preserving the Marathon Lake strategic reserves.

- b) Yliki aqueduct - Water well drills (emergency operation)

In cases of emergency, such as a drop or quality degradation of the reserves, aqueduct damage, etc., water is transferred by pumping from the backup system, i.e. Yliki (lower water intake level at +45m) and the operational well drills (Mavrosouvala, pumping stations No3 & No4), to Marathon (lowest level at +223m) or the Mornos aqueduct. This is mainly achieved using the pumping stations at Yliki, Viliza and Asopos.

E. INACTIVE FACILITIES OF THE EWSS

E.1. ASOPOS DAM AND PUMPING FACILITIES

As of February 1996 the following facilities are inoperative:

- Asopos river dam
- Agios Thomas aqueduct

- Agios Thomas pumping station

It should be noted that the discharge pipe of the Agios Thomas pumping station is in operation, to supply water to:

1. The Avlida Municipal District of the Municipality of Chalkis. Inside the premises of the Agios Thomas pumping station, in an area that the Municipality of Chalkis rents from EPEYDAP, a propeller pumping station has been installed and operates, to direct water to the filtration plant at the Avlida Municipal District.
2. The Oinofyta Municipal District of the Municipality of Tanagra

E.2 N. ATTICA WELL DRILL FACILITIES

- Evangelistes well drills
- Revythia well drills
- Markopoulo propeller pumping station
- Mavrosouvala propeller pumping station of Kalamos Aqueduct
- Agioi Apostoloi, Kalamos pumping station
- Kalamos aqueduct The Kalamos aqueduct, in accordance with the water supply contract of the former Association of the Oropos Municipalities, now Municipality of Oropos, had been consigned for use to the Municipality, to transfer pumped water from the Mavrosouvala well drills to the Municipality areas that are connected to the water supply network. Moreover, the MV Substation of the Markopoulo pumping station has also been consigned for use to the Municipality of Oropos, so the Municipality can operated its own propeller pumping station. The Municipality has also undertaken the maintenance and operation of the propeller pumping station, as well as the electricity costs..

E.3 PUMPING STATIONS, WATER SPRINGS AND WELL DRILLS FACILITIES OF THE BOEOTIAN CEPHISSUS MIDDLE COURSE

- Charites springs pumping station
- A1, A2, A3 and A4 pumping stations
- Karya, Orchomenus pumping station
- The interconnecting aqueducts

E.4 OLD DAMS OF THE KAKOSALESI AQUEDUCT

- the Kakosalesi dam and its aqueduct and the upstream diversion dam of the Voutima torrent
- the Skopelitis dam
- the Agios Merkourios dam

ANNEX 2
OPERATION AND MAINTENANCE SERVICES

A. NORMAL OPERATION AND MAINTENANCE SERVICES

The Standard Operation and Standard Maintenance Services include any service related to the operation, maintenance, repair and restoration of the fixed assets in the property of EPEYDAP, and which are used to collect, store and transfer raw water from the water sources to the entrance of the Water Treatment Plants, the rapid gravity filtration plants and the third party supplies, and comprise the Attica External Water Supply System (EWSS).

More specifically, the Contractor obligations include the following:

- The EWSS **Standard Operation Services**
- The **Standard Maintenance Services** (preventive and scheduled small-scale maintenance) and any individual interventions for improvements, upgrades, damage repairs, restorations, constructions etc., which the Contractor will carry out with the support of its personnel, as well as contracts, procurements and other service provisions.
- The **Operation/Maintenance Contractual Financial Scope** includes any type of personnel expenses, third party fees, purchases and installations of materials, consumables, supplies and equipment, energy, communications and other works and services, and the general expenses that relate to the standard maintenance and operation practices concerning the EPEYDAP fixed assets.

The Operation and Maintenance Services also include the interventions, replacements and other works carried out on the EWSS, as well as procurements, services or individual new projects, the actual cost of which does not classify them as Emergency Response Services.

The Contractor shall exert every effort to ensure the continuous, uninterrupted operation of the External Water Supply System.

The Contractor shall implement a system to thoroughly and timely notify EPEYDAP regarding the scheduled operation and inspection plan, in accordance with the Operation and Maintenance Plan.

The Contractor shall send to EPEYDAP, on a quarterly basis, the meter readings for the raw water supplies, concerning customer consumption along the entire EWSS.

1. Mornos, Evinos and Marathon Dams and Reservoirs

1.1. Standard Operation Services

- 24-hour shift for the supervision and operation of the dam facilities, using the Supervisory Control and Data Acquisition System (SCADA System).
- Regular maintenance, as arising from the dam Monitoring Manual and the applicable Dam Safety Regulation (DSR). They concern all the dams and auxiliary structures (e.g. spillways, tunnels, etc.)
 - Daily Visual Inspections

- Weekly Inspections
 - Bi-annual Inspections
 - Annual Inspections
- Safety Inspections, with the participation of specialised associates, every 5 years, as arising from the dam Monitoring Manual and the applicable Dam Safety Regulation (DSR).
 - Dam design parameter and method review, using the most current technology methodologies (every 10 years).
 - Unscheduled inspections, as arising from the dam Monitoring Manual and the applicable Dam Safety Regulation (DSR).
 - Visual inspections and test operation of the electromechanical facilities.
 - The visual inspection and test operation schedule may vary depending on the facility. Generally speaking, the test operation of the electromechanical facilities is carried out on an annual basis.
 - Geotechnical measurements, using the installed or embedded instruments, at the core, the support structures in the galleries, the foundations, and downstream of the dam, to verify its structural integrity and impermeability (instruments: water pore pressure cells, earth pressure cells, piezometers, settlement cells, relief wells, inclinometers, leakage flow meters and accelerometers). The frequency of the measurements arises from the dam Monitoring Manuals.
 - Geodetic measurements via surface markers and special survey points to monitor micro-movements on the dam crest, the slopes, the abutments, and the dam auxiliary structures (the spillway, the landslides areas, the resting basin, the slopes etc.).
 - Preparation of the relevant periodic reports and collaboration with science institutions or Technical Advisors to carry out specialised and precise measurements and perform the seismic monitoring of the dams and reservoirs.
 - Cooperation with the Administrative Authority for Dams (DAF).
 - Supervision of the expropriated areas with regard to the requirements of the applicable sanitary provisions (Health Regulation A5).
 - It should be noted that the aforementioned task involves supervising the expropriated areas and notifying EPEYDAP for further action, concerning activities and actions which shall take place after contract signing and for which indications of violation of or non-conformity to the sanitary provisions shall be evidenced (Health Regulation A5).
 - Water level measurement and observation of the hydrological and meteorological stations at the reservoirs.

- Testing of early warning systems for individuals downstream of dams, on an annual basis, along with updating the competent local Police Departments, and the Regional and Municipal Authorities.
When the early warning system for individuals downstream of dams is activated, the competent Police Departments, Regional Authorities and Municipal Authorities in the flooded areas are notified to take action, according to their Emergency Response Plans.
- 24-hour operation of a guardhouse, to control vehicle access on the public road at the crest of the Marathon dam.
- Operation of the Marathon Dam Museum, to accommodate school and other organisation visits.

The procurement of instruments and suitable equipment is also included in the scope of the standard operation services, in order to ensure the operation and protection of all the facilities, except for the integrated advanced technology system of article 5.2 of the Agreement.

1.2. Standard Maintenance Services

Construction maintenance works for the buildings, including but not limited to the following:

Cleaning the building indoor and outdoor areas; water spraying; waterproofing; roof insulation; painting; repair and maintenance of the electrical and plumbing facilities; restorations / reconstructions of local damages on walls, roofs and fences; coatings; window and door frame replacements; tile placement/replacement; painting of metal fixtures (pipes, rails, bannisters, etc.), metal structures etc.

Maintenance of electromechanical installations

- Replacing the lamps at the lighting systems (safety lights in underground areas, external lights, street lights, building lighting systems).
- Maintaining the elevator.
- Maintaining, repairing and upgrading the electrical panels; installing new electrical panels to ensure proper operation of the dam facilities or their conformance to new regulations and provisions etc.
- Restoring the communications system proper operation within the underground areas, by using only the consumables for the systems that are already installed. Procuring and installing new devices or designing and implementing a new system, when repair is not possible.
- Periodically maintaining, restoring proper operation and procuring monitoring instrumentation for the dam performance, and early warning systems for the populations downstream of the dams.
- Periodically maintaining and restoring the proper operation of the installed meteorological stations and the other measuring instruments that are necessary to prepare the water resource Management Plans, as well as procurement of new equipment to replace or expand the stations.
- Replacing the metal cable trays inside the galleries, due to oxidation.
- Maintaining the drainage pumps, in accordance with the manufacturer's instructions or the operating hours and procuring new pumps, when maintenance and repair is not possible.
- Maintaining the sluice gates. Changing the oil the hydraulic circuits; inspecting the screw connections; painting the metal fixtures.

- Recharging the fire extinguishers and procuring new fire extinguishers to replace the existing ones due to aging or to improve the fire suppression system.
- Maintaining the gantry cranes using a specialised external partner and updating the relevant certification.
- Repairing the ventilation system motors in the underground areas. Replacing the metal airducts due to rusting or procuring new airducts and motors in order to improve the system.

Testing and restoration of the proper operation of the central supervision and operating systems (SCADA).

Maintenance and calibration of the methane detection systems. Testing of proper operation of the methane detection system using a specialised external partner; repairing damages, once per year; performing the necessary calibration and issuing a relevant certificate.

Maintenance - verification of the proper operation of the geotechnical and topographic instruments. Procuring new geotechnical or topographic instruments to enhance the accuracy of the conducted measurements.

Construction maintenance works on the accompanying and auxiliary structures.

- Repairing and waterproofing potential leaks on dam auxiliary structures. The Mornos galleries and tunnels are excluded; the maintenance of the Mornos galleries and tunnels has been undertaken by the Ministry, based on incoming document ref. no. Γ.Γ. ΕΥΔΑΠ ΑΕ 14451/20.06.2017.
- Maintaining the parapet walls on the crest of the Marathon dam.
- Maintaining the dam spillways.
- Maintaining the metal fixtures (rails, staircases, etc.). Replacing metal fixtures due to aging or addition of new ones to improve the functionality of the facilities.

Reconstruction and maintenance of roads; ensuring access to the main and auxiliary structures, excluding the ventilation points of the Evinos-Mornos tunnel, due to lack of access by road for a large section of the tunnel.

- Maintaining the near lake road at the Marathon reservoir, in the fenced part of the facilities, approximately 5km in length, and a small section near the embankment dam at the Mornos reservoir.
- Maintaining the geotechnical instruments access road at the Evinos dam.
- Maintaining the geotechnical instruments access road at the Stamata dam.
- Maintaining the construction site road passing through the Oinoi torrent.
- Maintaining the rainwater collection drains and cleaning of the grates.

Maintenance of the dam galleries and drainage tunnels of the Marathon and Pynros water intake tower.

- Cleaning from sediments and debris.
- Replacing elements of the systems inside the galleries.

Maintenance of the firefighting hose reels at the Marathon facilities downstream of the dam.

Maintenance of the area surrounding the facilities.

- Clearing the inspection zones for the dam abutments and slopes.

- Clearing the dam evacuation pipe receiver.
- Maintaining the lawn and area surrounding the office building, the club and the Marathon dam Museum.

The cost of standard maintenance also includes the maintenance and repair costs for the evacuation sluice gates, except for the safety sluice gates at Mornos. The evacuation and water intake gates at the dams are also excluded.

2. Main Branch Water Transfer Aqueducts

Water transfer from the Evinos-Mornos reservoir system and the Mornos aqueduct, the Mornos-Marathon connecting aqueduct and the Yliki aqueduct branch downstream of Viliza towards the final receivers, the Water Treatment Plants, is carried out by free flow.

2.1 Standard Operation Services

Monitoring the aqueducts and the operation of the Mornos aqueduct regulating devices using the Remote Supervision and Control System (SCADA System). Coordinating the 24-hour shifts at the different Regional Control Centres (RCC) through the General Remote Operation Centre at Menidi.

Coordinating the parallel aqueducts operation (Mornos-Marathon connecting aqueduct, Yliki aqueduct branch downstream of Viliza, etc.).

Scheduling and implementing changes in the operation and planning of short-term water supply interruptions at the Aqueduct, to meet any intervention requirements.

Keeping a log for the primary hydrological measurements and data.

Issuing a Daily and Monthly Reserves Bulletin, as well as management reports for the Water Supply System.

Collecting and processing data from the Athens water supply resource management information system.

Developing and supporting the GIS of the external aqueducts.

Processing data, improving and expanding the operational support information systems (SCADA, GIS, etc.)

Drafting the annual Athens water supply resource management plan and the interim updates regarding the optimum financial and technical management and the sustainability of resources and reserves.

Keeping a record of the existing plans, design and construction documents and reports on the projects.

Supervising the expropriated areas with regard to the requirements of the sanitary provisions (Health Regulation A5).

The procurement of instruments and suitable equipment is also included in the scope of the standard operation services, in order to ensure the operation and protection of all the facilities, except for the integrated advanced technology system of article 5.2 of the Agreement.

2.2 Standard Maintenance Services

Construction maintenance works for the buildings, including but not limited to the following:

Cleaning the building indoor and outdoor areas; water blasting; waterproofing; roof insulation; painting; repair and maintenance of the electrical and plumbing facilities; restorations / reconstructions of local damages on walls, roofs and fences; coatings; window and door frame replacements; tile placement/replacement; painting of metal fixtures (pipes, rails, bannisters), metal structures etc.

Supervising and monitoring the structural elements of the aqueducts, which includes but is not limited to the following tasks:

- Inspecting the aqueducts for any overflow, sedimentation, damages, landslides and any type of risk in the wider area etc.
- Monitoring and systematically recording leaks and any type of risks.
- Inspecting and cleaning the grates
- Periodically clearing the vegetation that is in contact with the channel slopes
- Carrying out local interventions (cleaning, repairing, waterproofing)
- Carrying out local restorations and small-scale interventions on the structural elements of the aqueducts
- Carrying out topographic surveys

Drainage structures

- Opening new trenches and excavating new ones to collect rainwaters
- Cleaning the culverts using mechanical and manual means

Measurement drills

- Performing rotary drilling of exploratory boreholes and control boreholes
- Carrying out rotary percussive drilling to install instruments

Excavations - Backfilling

- Deepening - widening - cleaning of river or torrent beds
- Trench excavating and backfilling

Reconstructing and maintaining access/inspection roads at the aqueducts and the EWSS facilities

Installing, maintaining and replacing security measures along the aqueduct Such measures include but are not limited to the following:

- Maintaining or building safety walls, rails and fences in every facility.
- Installing warning/prohibition signs

Concrete laying / reinforcements

Sandblasting, water blasting and painting to maintain metal fixtures.

Piping structures

- Repairing and replacing pipes of different cross-sections in cases of damage
- Installing new water supply pipes
- Installing new drain pipes
- Carrying out the general repair and maintenance of the expansion joints
- Installing water connections
- Maintaining - repairing - replacing gate valves and bleed valves
- Maintaining - repairing - replacing sluice gates
- Maintaining the wells and other operational elements of the aqueducts

Maintenance of raw water pumping stations

- Repairing damages in pipes
- Repairing damages in the electromechanical equipment
- Upgrading and replacing the electromechanical equipment (pumps, motors, electrical panels, transformers), except for the replacement of large pumping systems, over 1,000 HP at the Yliki branch
- Repairing and upgrading the supervisory system (SCADA)

Maintenance of regulating structures (inverted V type, energy dissipators)

- Repairing damages in pipes
- Repairing damages in the electromechanical equipment
- Maintaining, upgrading or replacing the metal sluice gates (if required)

Waterproofing interventions for sealing leaks at the open aqueducts

- Repairing/waterproofing leaks inside the aqueducts, using suitable divers
- Repairing/waterproofing leaks outside the aqueducts, using suitable waterproofing materials.

Maintenance of fixed and automatic grates

- Maintaining the oil dynamic unit and the hydraulic circuit
- Maintaining the conveyor belt and other accessories
- Maintaining the electrical panels
- Replacing the fixed grates with automatic grates in areas of special operational concern

Clearing the grounds and cutting down trees along the aqueducts

Maintaining the automation systems

Maintaining the Metering System (level indicators, flow meters, water quality instrumentation etc.)

Maintaining the hardware and software of all information systems

The cost of standard maintenance also includes the cost of replacing any equipment that cannot be repaired or maintained.

Lake Yliki, Yliki Pumping Station and Aqueduct, Distomo Connecting Aqueduct

The main purpose of the facilities in the Lake Yliki area is the safe transfer of raw water, through pumping, as a **backup** water resource for the Athens water supply network.

Since the key objective of the water supply system is to mainly operate in free-flow and avoid the use of pumps that have associated electricity costs, during Standard Operation the pumping stations are normally kept at a state of operational readiness, to handle emergencies.

In some cases, during Standard Operation, the pumping stations operate at a low pumping level. This is done in order to achieve the sufficient and necessary water flow at the Yliki aqueduct, to limit, to the extent possible, water quality degradation, due to stagnancy and intense solar radiation, especially during the warmer months (Spring to Autumn) and to ensure the structural stability of the aqueduct.

If the Contractor deems it necessary, in order to ensure the functionality of the pumping stations, test operation of the facilities is carried out.

This way, the Yliki branch upstream of Viliza must always be kept at a state of readiness, in terms of the quality of the supplied water, and the System must be able to immediately transfer adequate quantities to ensure the alternative supply.

The Distomo aqueduct and the pumping facilities of the Copais field are used to transfer raw water from the underground aquifer, through pumping, up to the Mornos Aqueduct (Distomo area). The operation of these facilities is always considered an Emergency Operation. In accordance with Table 3, the well drills on the Copais field are inoperative today, and the Contractor shall not be obliged to repair, operate and maintain either them or the accompanying pumping stations AΔ1, AΔ2 & AΔ3.

3.1 Standard Operation Services

Supervising and operating the Yliki facilities, with onsite shifts and/or also utilising the Supervisory System (SCADA System). The operation and control points are:

- The Yliki central pumping station
- The pumping station No7
- The floating pumping station facilities: A, Γ, Δ, E, Z stage, Floating pumping stations Booster, tanks and pipes (disconnected and docked for average water levels above (+) 73.0m).
- The Yliki aqueduct, from the start up to the Tanagra tunnel entrance

Collecting and processing the operation log for the Pumping Stations, the Well Drills and the Hydrological data (pumping, energy consumption, operating hours etc.)

Keeping a record of the existing drawings for the facilities in their responsibility, the projects they are supervising and the measurements they perform.

Supervising the expropriated areas with regard to the requirements of the sanitary provisions (Health Regulation A5).

The procurement of instruments and suitable equipment is also included in the scope of the standard operation services, in order to ensure the operation and safety of all the facilities, except for the measuring arrangement referenced in article 7.3 of the Agreement and the integrated advanced technology system of article 5.2 of the Agreement.

3.2 Standard Maintenance Services

Construction maintenance works for the buildings, including but not limited to the following:

Cleaning the building indoor and outdoor areas; water blasting; waterproofing; roof insulation; painting; repair and maintenance of the electrical and plumbing facilities; restorations / reconstructions of local damages on walls, roofs and fences; coatings; window and door frame replacements; tile placement/replacement; painting of metal fixtures (pipes, rails, bannisters), metal structures etc.

Supervising and monitoring the structural elements of the aqueducts, which includes but is not limited to the following tasks:

- Inspecting the aqueduct for any overflow, subsidence, damages etc.
- Inspecting and cleaning the grates
- Periodically clearing the vegetation that is in contact with the channel slopes
- Carrying out extended interventions (cleaning, repairing, waterproofing)
- Carrying out local restorations and small-scale interventions on the structural elements of the aqueducts
- Carrying out topographic surveys

Drainage structures

- Opening new trenches and excavating new ones to collect rainwaters
- Cleaning the culverts using mechanical and manual means

Excavations - Backfilling

- Deepening - widening - cleaning of river or torrent beds
- Trench excavating and backfilling

Reconstructing and maintaining access/inspection roads at the aqueducts and the EWSS facilities

Installing, maintaining and replacing security measures along the aqueduct
Such measures include but are not limited to the following:

- Maintaining or building safety walls, rails and fences in every facility.
- Installing warning/prohibition signs

Concrete laying / reinforcements

Waterproofing

Sandblasting, water blasting and painting to maintain metal fixtures.

Piping structures

- Repairing and replacing pipes of different cross-sections in cases of damage
- Installing new water supply pipes
- Installing new drain pipes
- Carrying out the general repair and maintenance of the expansion joints
- Installing water connections
- Maintaining - repairing - replacing gate valves and bleed valves
- Maintaining - repairing - replacing sluice gates
- Maintaining the wells and other operational elements of the aqueducts

Keeping the pumping station facilities in constant operational readiness:

- The electromechanical and hydromechanical facilities of the pumping stations (substations, transformer, pumping stations distribution switchboards and control panels, pump motors, gate valves, floating pumping stations, floaters, hydraulic shock protection systems, etc.)

Maintenance of the Metering System (level indicators, flow meters, water quality instrumentation etc.)

Waterproofing interventions for sealing leaks at the open aqueducts

- Repairing/waterproofing leaks inside the aqueducts, using suitable divers.
- Repairing/waterproofing leaks outside the aqueducts, using suitable waterproofing materials.

Maintenance of fixed and automatic grates

- Maintaining the oil dynamic unit and the hydraulic circuit
- Maintaining the conveyor belt and other accessories
- Maintaining the electrical panels
- Replacing the fixed grates with automatic grates in areas of special operational concern

Clearing the grounds and cutting down trees along the aqueducts

The cost of standard maintenance also includes the cost of replacement any equipment that cannot be repaired or maintained, except for the replacement of large pumping systems over 1,000 HP (Yliki section), which are given in the following table.

Power (HP)	Operating voltage(V)	Number of similar pumps	Installation
2,500	6,600	5	Yliki central pumping station
1,050	500	2	Yliki central pumping station
1,850	6,300	6	AΔ1 pumping station
1,850	6,300	6	AΔ2 pumping station
1,850	6,300	6	AΔ3 pumping station

4 Viliza and Asopos Pumping Stations - Mornos-Marathon Connecting Aqueduct

The main purpose of the facilities in the Viliza area is the safe transfer of raw water, through pumping, in adequate quantities and depending on the demand, from Lake Yliki either to Lake Marathon or to the Mornos aqueduct, via the Kremada-Dafnoula connecting aqueduct.

4.1 Standard Operation Services

During Standard Operation the pumping stations are normally kept in operational readiness to handle emergency situations; however, in some instances, the pumping stations operate at a low pumping level.

During Standard Operation, there are the following activities:

Operational supervision of the Viliza area facilities, in shifts, with mobile crews and/or with the use of the Supervisory System (SCADA System). The most important facilities are the following:

- Asopos siphon pumping station to customers (Industries and Municipal District of Schimatari of the Municipality of Tanagra)
- Mavrosouvala well drills, supporting the water supply of the Municipality of Oropos
- Booster pumping station for the water supply of the Malakasa and Industrial Hot Spot
- Mornos-Marathon connecting aqueduct
- Yliki aqueduct, from the entrance of the Tanagra tunnel up to the Kremada tank, twin siphons, Ø1300 mm diameter, from Kremada up to the Viliza pumping station, Kakosalesi aqueduct, Ø900 bypass, Sfendali tunnel, Malakasa aqueduct, Kiourka tunnel.

Collecting and processing the operation log for the Pumping Stations, the Well Drills and the Hydrological data (pumping, energy consumption, operating hours etc.)

Keeping a record of the existing drawings for the facilities in their responsibility, the projects they are supervising and the measurements they perform.

Supervising the expropriated areas with regard to the requirements of the sanitary provisions (Health Regulation A5).

It should be noted that the aforementioned task involves supervising the expropriated areas and notifying EPEYDAP for further action, when there are indications of violation of or non-conformity to the sanitary provisions shall be evidenced (Health Regulation A5). Moreover, the Contractor, via its departments, shall provide assistance to any type of technical matter related to the interpretation and implementation of the sanitary provisions as a whole (Health Regulation A5).

The procurement of instruments and suitable equipment is also included in the scope of the standard operation services, in order to ensure the operation and protection of all the facilities, except for the measuring arrangement referenced in article 7.3 of the Contract the integrated advanced technology system of article 5.2 of the Contract.

4.2 Standard Maintenance Services

Construction maintenance works for the buildings, including but not limited to the following:

Cleaning the building indoor and outdoor areas; water blasting; waterproofing; roof insulation; painting; repair and maintenance of the electrical and plumbing facilities; restorations / reconstructions of local damages on walls, roofs and fences; coatings; window and door frame replacements; tile placement/replacement; painting of metal fixtures (pipes, rails, bannisters), metal structures etc.

Supervising and monitoring the structural elements of the aqueducts, which includes but is not limited to the following tasks:

- Inspecting the aqueduct for any overflow, subsidence, damages etc.

- Inspecting and cleaning the grates
- Periodically clearing the vegetation that is in contact with the channel slopes
- Carrying out extended interventions (cleaning, repairing, waterproofing)
- Carrying out local restorations and small-scale interventions on the structural elements of the aqueducts
- Carrying out topographic surveys

Drainage structures

- Opening new trenches and excavating new ones to collect rainwaters
- Cleaning the culverts using mechanical and manual means

Excavations - Backfilling

- Deepening - widening - cleaning of river or torrent beds
- Trench excavating and backfilling

Reconstructing and maintaining access/inspection roads at the aqueducts and the EWSS facilities

Installing, maintaining and replacing security measures along the aqueduct
Such measures include but are not limited to the following:

- Maintaining or building safety walls, rails and fences in every facility.
- Installing warning/prohibition signs

Concrete laying / reinforcements

Waterproofing

Sandblasting, water blasting and painting to maintain metal fixtures.

Piping structures

- Repairing and replacing pipes of different cross-sections in cases of damage
- Installing new water supply pipes
- Installing new drain pipes
- Carrying out the general repair and maintenance of the expansion joints
- Installing water connections
- Maintaining - repairing - replacing gate valves and bleed valves
- Maintaining - repairing - replacing sluice gates
- Maintaining the wells and other operational elements of the aqueducts

Keeping the pumping station facilities in constant operational readiness:

- The electromechanical and hydromechanical facilities of the pumping stations (substations, transformer, pumping stations distribution switchboards and control panels, pump motors, gate valves, floating pumping stations, floaters, hydraulic shock protection systems, etc.)

Maintenance of the Metering System (level indicators, flow meters, water quality instrumentation etc.)

Waterproofing interventions for sealing leaks at the open aqueducts

- Repairing/waterproofing leaks inside the aqueducts, using suitable divers.
- Repairing/waterproofing leaks outside the aqueducts, using suitable waterproofing

materials.

Maintenance of fixed and automatic grates

- Maintaining the oil dynamic unit and the hydraulic circuit
- Maintaining the conveyor belt and other accessories
- Maintaining the electrical panels
- Replacing the fixed grates with automatic grates in areas of special operational concern

Clearing the grounds and cutting down trees along the aqueducts

The cost of standard maintenance also includes the cost of replacement any equipment that cannot be repaired or maintained, except for the replacement of large pumping systems over 1,000 HP (Viliza-Asopos section), which are given in the following table.

Power (HP)	Operating voltage(V)	Number of similar pumps	Installation
1,850	6,000	4	A1, New Asopos pumping station
1,850	3,000	4	A0, Old Asopos pumping station
1,700	3,000	3	Viliza central pumping station

B. EMERGENCY RESPONSE SERVICES

During the Emergency Operation all (or a large number) of the backup system pumping stations are put into operation, depending on the needs.

During the Emergency Operation, the following are put into operation, as required:

1. The pumping stations

- The Yliki central pumping station (Yliki)
- The pumping station No7 (Yliki)
- The Yliki floating pumping station facilities: A, Γ, Δ, E, Z stage, Floating pumping stations Booster, tanks and pipes (disconnected and docked for average water levels above (+) 73.0m).
- The Yliki aqueduct, from the start up to the Tanagra tunnel entrance
- The Viliza pumping stations (Viliza central pumping station, pumping station No2 and pumping station OMEGA)
- Viliza Booster pumping station (Viliza)
- Asopos pumping station (Viliza)
- B2 pumping station
- Pumping station No3 (Viliza)

- Pumping station No4 (Viliza)
- Chelidonou pumping station, to direct water from Marathon to the Acharnes WTP via the reverse flow operation of the Chelidonou-Menidi aqueduct.
- The well drills of the groups of North & Northeast Parnitha, Yliki and Boeotian Cephissus Middle Course, as required, provided these are made operational in accordance with Table 3. Moreover, in accordance with the provisions of Annex 1 (EWSS Description - Underground aquifers – Water well drills) the Contractor shall take measures to protect them and ensure they are not further depreciated. When the Vasilika-Parori well drills are used, the Davleia pumping stations ΑΔ1, ΑΔ2, ΑΔ3 of the Davleia-Distomo aqueduct are put into operation; these, however, are also inoperative and must be maintained by the Contractor to drive water to the Mornos aqueduct.

During an Emergency Operation, in addition to the Standard Services the following tasks are also defined:

- Increase of the personnel for the 24-hour operation shifts
- Continuous communication and coordination with the Viliza Control Centre and the Yliki, Asopos and Mavrosouvala pumping stations.
- Increased readiness and stand-by state for the relevant maintenance and repair crews
Additional tests/inspections of the Aqueducts

Note: The Yliki floating pumping stations are put into operation when the level of the natural Yliki lake is lower than 67m, in order to be able to feed the Yliki channel and hence be able to operate the Yliki pumping stations, **both during Standard Operation and in case of Emergency Operation.**

For the floating pumping stations to be operated, they must periodically be disconnected from one point and connected to another Water Intake Stage. The transfer is carried out with the help of a tugboat, provided and operated by the Contractor; the connection/disconnection procedure is a highly specialised operation. At each point, once the hydraulic connections are made, the MV cables are installed and connected and then the floating pontoons are installed for personnel access.

The energy cost for the use of the pumping systems in cases of emergency operation is not included in the Contractor's fee for Standard Operation and Standard Maintenance of the EWSS and shall be paid separately by EPEYDAP, as specified in article 10 (Pumping costs) of this Agreement.

C. OTHER SERVICES

C.1 Supply of raw water to third parties

The Contractor, via its technical infrastructure, undertakes to provide the following services, as dictated by EPEYDAP:

- Installing hydrometers or flow meters when implementing any new contracts or modifying existing contracts for the provision of raw water. Invoicing for the cost of any approved new meter installation or existing hydrometer modification shall be carried out directly between the Contractor and the recipient, without other formalities.

ii. Repairing damages and carrying out other technical interventions on the existing water supplies, as well as on any new ones implemented for the provision of raw water.

C.2 Water quality controls

In accordance with article [9] of the Exclusive Right Agreement, the Hellenic Republic has the obligation to supply the consumers along the EWSS with water of appropriate quality. In the context of this responsibility, the Contractor provides services for monitoring the quality of the raw water supplied to the recipients connected to the EWSS for processing and delivery for human consumption, in accordance with the provisions on ensuring the quality of waters intended for drinking.

To this end, the Contractor must, as a minimum, implement the following:

1. At least 8 times per year, carry out sampling and analyses at the extraction point and at the main inflows of every reservoir (Evinos, Mornos, Marathon) and Lake Yliki. The Contractor shall then test approximately 150 samples per year for a number of parameters, to monitor the specifications of A5/2280 and other regulatory provisions.
2. Sampling and analysis is carried out every day on the water entering the four main EYDAP WTPs. In total, approximately 1460 (4*365) samples are tested every year against key parameters. Four times per year, these samples are thoroughly tested and analysed.
3. Moreover, in order to further analyse incidents of increased cloudiness, odours etc., wherever required, the Contractor undertakes to control certain parameters in extraordinary samples from select locations of the EWSS.

To this end, the Contractor has installed online monitoring stations for critical quality parameters at 12 central locations of the EWSS; these stations transmit real-time results using telemetry and provide early warning in cases of outliers.

The sampling and analysis procedures are carried out in accordance with the requirements of the ISO 17025 standard at the accredited laboratories of the Contractor's Water Quality Control Service.

ANNEX 3 - GUARDING & SECURITY PROCEDURES

Current level of Guarding and Security of the EWSS

Below is a description of the current guarding and security level of the EWSS implemented by the Contractor, in the framework of the EWSS Standard Operation Services which are offered against the agreed-upon fee at the time when this Agreement is signed. A vulnerability assessment of the EWSS facilities is currently underway; the assessment may dictate the construction of additional works or the implementation of additional guarding and security procedures.

DAM FACILITIES SECURITY

EVINOS DAM

24-hour vehicle patrol, by one hired security guard per 8-hour shift (external Security Company). The control points are the following:

- The Evinos hydroelectrical plant building
- The entrance of the dam access tunnel
- The control building at the crest of the dam
- The instrumentation building at the crest of the dam
- The ΣΤ4 gallery entrance at the crest of the dam
- The entrance of the “street” drainage tunnel
- The building of the sluice gate well at the Evinos-Mornos tunnel
- The tunnel control building
- The office building
- The personnel accommodations building
- The meteorological station

MORNOS DAM

24-hour vehicle patrol, by one hired security guard per 8-hour shift (external Security Company). The control points are the following:

- The water intake building
- The facilities at location “Pyrnos”
- The crest of the dam
- All dam facilities (office building, control centre, resting basin)
- The Σ1 gallery entrance at the crest of the dam
- The spillway entrance
- The meteorological station

MARATHON DAM

1. 24-hour vehicle patrol, by one hired security guard per 8-hour shift (external Security Company).

Control points:

- Dam crest
- Fields and office buildings / club / museum / warehouses etc.
- Near-lake road, 5km from the entrance at the water intake tower to the north entrance towards Afidnes.
- Oinoi torrent, from the top of the downstream dam and along a length of 2km upstream the Ano Souli decommissioned pumping station
- Stamata dam

2. 24-hour vehicle patrols, by one person per 8-hour shift, from the EYDAP SA Security Service.

Control points:

- Marathon dam crest
- Fields and office buildings / club / museum / warehouses etc.

MORNOS AQUEDUCT FACILITY SECURITY

KITHAIRONAS FACILITIES (ENERGY DISSIPATOR / HYDROELECTRIC PLANT)

24-hour vehicle patrol, by one hired security guard per 8-hour shift (external Security Company).

Control points:

- Kithaironas energy dissipator and hydroelectric plant fields and buildings
- Mornos aqueduct from the Kithaironas energy dissipator to Kokkini (5km)

A local surveillance and control system is used (CCTV and motion detection radar) at these facilities.

THEBES ENERGY DISSIPATOR FACILITIES

The Thebes energy dissipator facilities are patrolled by a security employee, with a vehicle, during the morning shift (07:00 - 15:00) and the afternoon shift (15:00 - 23:00), to prevent possible sabotage or theft.

The control points are the following:

- Kithaironas take-off divider (Dafnoula)
- The Thebes energy dissipator facilities
- The Thebes section rapid gravity filtration plants

YLIKI AQUEDUCT FACILITY SECURITY

YLIKI FACILITIES

During the night shift (between the hours of 23:00 and 07:00) the facilities are patrolled by a security employee, with a vehicle. The main control points during the night shift are:

- the Yliki central pumping station
- the 7th unit pumping station
- the Oungra well drills
- the docked floating pumping stations

AVLONA AREA PUMPING STATIONS No3 & No4

During the night shift (between the hours of 23:00 and 07:00) a hired security guard (external Security Company) with a vehicle patrols the facilities.

VILIZA FACILITIES

A surveillance and control system (CCTV and motion detector radar system) is used at the Viliza Pumping Station to monitor the facilities.

FIRE PROTECTION SERVICES

MARATHON DAM

During the fire danger period, from May 1st to October 30, the facilities are additionally guarded on a 24-hour basis by two-person vehicle patrols, working 8-hour shifts (hired Security Company).

MAVROSOVALA FACILITIES

During the fire danger period, from May 1st to October 30, the facilities are additionally guarded on a 24-hour basis by two-person vehicle patrols, working 8-hour shifts (hired Security Company).

KITHAIRONAS ENERGY DISSIPATOR - HYDROELECTRIC PLANT

During the fire danger period, from May 1st to October 30, the facilities are additionally guarded on a 24-hour basis by two-person vehicle patrols, working 8-hour shifts (hired Security Company).

ANNEX 4 - AVAILABLE EPEYDAP REPRESENTATIVE

ANNEX 5 - METER INSTALLATION DIAGRAM

