

REQUEST FOR INFORMATION FOR A DECISION SUPPORT SYSTEM FOR FLOOD MANAGEMENT

General

1. **Yarkon Drainage and River Authority** (hereinafter: the “**Drainage Authority**”) hereby gives notice of its wish to receive from companies and/or entrepreneurs information regarding a decision support system (hereinafter: the “**System**” or the “**DSS**”) to manage natural floods and storm water detention facilities in the drainage basins of the Ayalon and the Yarkon rivers in its jurisdiction.
2. The request for information (hereinafter: the “**Request**” or the “**RFI**”) is a preliminary stage of a proceeding that might be held in order to select a supplier who will engage with the Drainage Authority to supply such a System.

It is clarified that this proceeding does not constitute an undertaking by the Drainage Authority to select any DSS at all, and particularly in accordance with the information that will be received in the course of this proceeding, and the bidders shall have no claim, demand or lawsuit against the Drainage Authority as a consequence thereof.

3. It is clarified that the RFI is not binding in any manner whatsoever on the Drainage Authority, and said Authority is not required to select any of the software programs, the suppliers or the proposals for any purpose whatsoever, and it is also not required to continue to advance the process for the selection and/or purchase of the System in any manner whatsoever. In addition, it is clarified that the information presented in this RFI has been presented solely for the sake of illustration, and the Drainage Authority is not bound by any data that is presented in the RFI documents.

A response to the RFI will not constitute a condition for participation in any future proceeding/tender – should same take place, and it will not confer any advantage on any entity that responds to the RFI solely due to the fact that it responded to the RFI, and it will not require its participation in any future proceeding or any engagement therewith in any other manner whatsoever.

4. **The objectives of the RFI are –**
 - (a) To identify an available System/technology for the purpose of flood incident management;
 - (b) To examine the proposed System/technology in terms of its suitability for the objectives and the conditions within the jurisdiction of the Yarkon Drainage Authority;

- (c) To use the information that will be received in order to determine parameters (including threshold conditions and/or criteria) for a tender or another proceeding to select a supplier (or suppliers) for the purpose of supplying the requested System/technology, in the event that the Drainage Authority shall decide to conduct such tender and/or proceeding.
5. The Response to this RFI will be submitted to **Drainage Authority** , by email to the address bid@rny.org.il by the date of **7.1.24 at the time of 16:00** . It is necessary to state in the heading of the email: **“Response to Request for Information (RFI) for a Decision Support System for Flood Incident Management.”**
6. The RFI respondents are required to specify in the Response to this RFI all of the relevant information that will allow them to achieve the objectives as set forth above.

Professional Background

7. The Yarkon Drainage Authority is a statutory authority which operates by virtue of the Drainage and Flood Protection (Establishment of Drainage Authorities) (Amendment) Law, 5757-1996, in the region of the drainage basins of the Ayalon and Yarkon Rivers. The declared area for which the Drainage Authority is responsible is approximately 800 km² in the region situated west of the Green Line, in which Israeli law applies, which constitutes only 40% of the area of the basin. Within this region, the Authority handles approximately 500 km of rivers and drainage ditches.
8. The duties of the Drainage Authority pursuant to the Law are to attend to the regular drainage of the region as determined for it in the Order that established the Authority, and to that end, to set up, modify, maintain and develop drainage facilities within the said region, including flood prevention and protection.
9. The Ayalon River basin drains an area of approximately 815 km², up to the point where it meets the Yarkon basin. The Yarkon River basin drains an area of approximately 1,800 km² (including the Ayalon River).
10. In the coming years, a number of regulation facilities will be set up in the area of the basins:
- At Stage A – the Ariel Sharon Park detention reservoir is due to be active by 2025.
 - At Stage B – the Modiim Quarry detention area and two detention ponds in the riverbed – A2, N-1 – to be completed in the years 2028-2030.
 - In addition, proceedings are currently underway to advance detailed plans for some 15 additional regulation facilities – mostly detention ponds - in the Yarkon River and Ayalon River basins, in accordance with the locations determined in National Outline Plan 47N.

11. **The Drainage Authority is requesting information regarding a system to manage storm water floods in real time, including the compilation and analysis of the data, the management and monitoring of regulation facilities and detention ponds, decision-making regarding the operation of the dynamic regulation detention facilities and the issuance of warnings to the emergency services.**

Manner of Submitting the Response

12. **The Response to the RFI should be divided into headings/chapters, based on the numbers of the subsections as set forth below (the RFI respondent's details – Section 12.1, confirmation of meeting the conditions for eligibility – Section 12.2, divided into subsections 12.2.1, 12.2.2, etc. ...).**

12.1. **The RFI respondent's details** – the respondent's name, address, details of the contact person on his behalf, and contact details (email, phone numbers, website).

12.2. **Basic conditions for eligibility to respond to the RFI** – confirmation by the respondent that the System proposed in the Response that he submitted, including any software and hardware pertaining thereto, satisfies, already on the date of the submission of the Response, the two cumulative conditions as set forth below:

12.2.1. It has been implemented in at least three drainage basins, in Israel or abroad, each one of which has an area ranging between 100-2,000 km². Basins which have similar physical characteristics to those in Israel (a Mediterranean climate, a winterbourne or a low base flow) have an advantage.

12.2.2. The proposed System is available and can be implemented immediately.

It is clarified that the Drainage Authority does not wish to receive information regarding systems that are not immediately available and operational and/or that have not already been actually implemented as required above and/or that are in the development stages.

12.3. **Confirmation of the System's capabilities** – the respondent will confirm that the proposed System has capabilities in the matters set forth below:

12.3.1. To receive spatial data (data entered at the outset, as well as data that will be received on an ongoing basis during a flow event) in connection with the occurrence, location and intensity of rain events, the analysis of the data and its translation into a flow forecast (river discharge, flow depths, velocity as a function of time, and flow volumes).

And this capability still exists even when taking into account the condition of the topographical background in the drainage basin, as well as installations and infrastructures that could have an impact on the flow processes (such as: regulation and detention facilities, dams, culverts, drainage ditches, etc.).

- 12.3.2. The creation of a projected data-based forecast of the anticipated flow events, including the creation of an envelope of expected hydrographs, and analysis and examination of the flow volumes and levels. Analysis and forecast of the various storage ponding volumes expected, and a recommendation of the optimal manner of operating the reservoirs.

The System must allow the end-user to enter scenarios manually in order to examine independent alternatives.

- 12.3.3. The presentation in real time of the development of the flow event, including the creation of projected hydrographs, based on measurements in real time (the amount of precipitation, flow levels, river discharge), combined with various hydrological models which include reference to various rain models.

- 12.3.4. An analysis of the risk that flooding will arise (when the water rises up and flows beyond the area of the rivers and the drainage facilities) at any point in the region of the drainage basin, and based on the above – giving recommendations for the manner of operating hydraulic facilities and drainage facilities in the basin, in such a manner that will prevent the flooding.

- 12.3.5. Simulation: I – building a simulation model during the summer period, to examine the System and to simulate a flood event, the System will simulate a rain event, and will allow the Drainage Authority to rehearse various operating scenarios of the implementation and operation of the regulation reservoirs.

- 12.3.6. The System is required to have operational flexibility that will allow adjustments to the engineering design base, which includes the addition/modification of regulation and detention facilities in the basin, the upgrading of culverts, the regulation of rivers, etc.

- 12.3.7. The System must also include the possibility of weighting the future effects of factors such as climate change, changes in the uses of the land, changes in the hydraulic regime in the rivers, etc., so that it will also serve

as a tool to identify the need for additional facilities (or other means of regulation) in the basin.

12.4. **Description of the proposed System** – divided into the subsections as set forth below:

12.4.1. A comprehensive, general description of the proposed System, including a demonstration of the software interface (at least five menus/main screens must be attached to the Response).

12.4.2. Details of the manner of the proposed System's compliance with/ adjustment to the basic requirements of this RFI (and particularly those set forth in Section 12.3 above).

12.4.3. Details of the data required to operate the System (what is the input) and in what format.

12.4.4. Details of the data that the System provides (output) and in what format.

12.4.5. Details of the user interface, the possible number of simultaneous users.

12.4.6. Is access to the cloud required (an online system) or is the System installed on a local computer?

12.4.7. Which operating system is required and what are the threshold requirements of the computer (memory, volume, graphic card, etc.)?

12.4.8. Information regarding availability and applicability: estimated timetable for building the System, assimilation, commissioning.

12.4.9. Details of prior experience: drainage basins/sites at which the System is installed and operational (please provide details for each basin: the name of the customer, the operator of the system, name, location and size of the controlled drainage basin, year of installation of the System in the basin).

12.5. **The model of engagement proposed by the respondent** –

12.5.1. What does the proposed model of engagement include, out of the following: the supply of the software; the integration and assimilation of the base data from the Drainage Authority; calibration commissioning; commissioning the System over a period of time; maintenance; operations; adding updates; etc.

- 12.5.2. Clear details of products, equipment, works, information and anything else which is required for the purpose of the full operation of the proposed System, but which will not be included in the bidder's deliveries.
- 12.5.3. The type and scope of the support that is proposed: an operating manual, a support team, forums, etc.
- 12.5.4. Updated versions of the System: Are these included in the proposal? How frequently will these be made? etc.
- 12.5.5. Updating the background information after the assimilation and operation of the System: in what manner can future updates be made to the background information, such as the topographical condition, soil uses, hydraulic facilities, hydrological models, climate data, and who will be responsible for such updates?
- 12.5.6. The supplier's warranty: warranty for the software and for the equipment that is provided, warranty for the System's performance, etc.

Miscellaneous

- 13. This RFI should not be viewed as anything other than a Request for Information, and it is not binding on the Drainage Authority in any matter whatsoever.
- 14. For the avoidance of doubt, it is hereby clarified that this RFI does not constitute a tender or a tender-like proceeding, and it does not constitute an engagement between the Drainage Authority and any of the bidders and/or an undertaking by the Drainage Authority to engage with any of the bidders.
- 15. The Drainage Authority may cancel this RFI at any time and for any reason whatsoever, without being subject to any obligation to provide reasons for its decision, and the participants shall have no claims or demands following the cancellation of the proceeding, including in respect of any costs that they incurred for the purpose of participation therein.
- 16. All of the expenses incurred in the submission of a proposal shall apply solely to the bidder, and under no circumstances shall the bidder be entitled to any refund and/or compensation and/or indemnity in respect of any damage and/or expenses that were caused thereto in connection with a proposal and/or the preparation thereof and/or the submission thereof.
- 17. The Drainage Authority may at any time, by giving written notice, bring forward or postpone the final date for the submission of a response to this RFI, and it may also change the dates and other conditions pertaining to this RFI, in its absolute discretion.
- 18. Without derogating from the foregoing, the Drainage Authority is entitled, in its absolute discretion: (a) to amend or clarify requirements in this RFI, even after the date of the

submission of the information; (b) to contact any or all of the participants for the purpose of the submission of supplemental and/or additional documents and to allow them to submit such documents, even after the date of the submission of the information; (c) to hold talks only with some of the companies; (d) to initiate making an application to additional relevant entities, even if they did not participate in the current proceeding, etc., and all in the Drainage Authority's absolute discretion.

19. The Drainage Authority shall have the possibility of using the proposals that will be submitted in response to this RFI, and the information contained therein for any purpose pertaining to this RFI proceeding and/or for the purpose of conducting a tender, should the Drainage Authority so decide.
20. The participants and all of the entities to whom this RFI has been directed shall not coordinate their responses in any manner whatsoever, and they shall refrain from acting as part of any collaboration whatsoever, either directly or indirectly, in connection with their participation in this proceeding.