
MARKET RESEARCH (Rev 25-aug-2021)

PART 1 – GENERAL CONSIDERATIONS

1.1 Introduction: The Panama Canal uses water mostly for Potable Water Treatment Plants (PWTP) and for locks operations. The Canal is exploring alternatives to ensure sustainable operations for the future in light of increase demand for its services and climate changes affecting its lakes water basin. Most of the water is used for lock operations.

1.2 Scope: The Panama Canal Authority (ACP) is conducting a market research to determine the availability of companies interested in participating in a contract for:

- 1.2.1 Task 1: Evaluating the effects of a set of alternative plans, to be provided by the ACP, for water supply projects and,
- 1.2.2 Task 2: Upon completion of task 1, develop a conceptual design of ACP's selected alternative(s).

The ACP may issue a single contract for both tasks, or separate consecutive contracts for Tasks 1 and 2.

For Task 1, the ACP will provide a list of alternatives previously selected to address water issues which may include new dams segmenting the existing Gatun Lake to create new reservoirs; incorporate new water sources originated outside the existing Panama Canal Watershed; recirculation-reuse of water and other mechanisms to conserve or treat water among other alternatives. These projects are intended to increase the reliability of the Panama Canal in the years to come to guarantee an adequate supply of water for municipal usage and other mixed uses and navigation.

For evaluating the effects of the alternatives plan, the ACP will provide the selection criteria and the focused array of these plans for the contractor to compare against each other, with emphasis on the outputs and effects that will have the most influence in the decision-making process. A comparison of the outputs of the various plans must be made and the beneficial and adverse effects of each plan must be compared, including monetary and nonmonetary benefits, execution schedules and costs. Such effects may include elements like water yield, time for construction, time to yield, technical difficulties for construction, impact during construction and while yielding in Canal's operations, reliability of the solution, operating cost, environmental and social impact and its mitigating costs, life expectancy, ACP's control over the solution (inside or outside the ACP jurisdiction which include the current water basin), management and impact under excess water periods.

For the second task, the contractor will be expected to prepare a conceptual design on the selected alternative in the previous stage or other alternatives decided by the ACP. The conceptual designs to be developed should be sufficient for use for issuing a future solicitation for a Design-Build type contract. The conceptual design should also have enough details to reduce risk and uncertainty with cost data, engineering effectiveness, environmental impacts, and economic benefits.

The ACP will not recognize any costs incurred related to this market research.

As a reference (see Part 3 below), the ACP will provide general information on projects that may be part of the set of alternatives eventually included in a contract for evaluation by a contractor.

1.3 Participation of Contractor for Conceptual Design(s) in Design and Build of Selected Alternative(s) and Advisory Services: As the ACP may evaluate several alternatives, a company

selected for developing a conceptual design will be precluded from participating in the tendering process for design and build of its conceptual design; however, said company may participate in other tendering processes for design and build of conceptual designs developed by others.

For the design and build contract(s), the ACP may contract the conceptual designer(s) selected, for advisory services during the final design and construction of their conceptual design(s).

PART 2 – DOCUMENTATION TO BE SUBMITTED

2.1 Participation in Market Research: Any company interested in participating at no cost to the ACP in this market research, should notify the ACP in writing.

2.2 Documentation: The Company interested in participating in this market research is required to present the following, by August 30, 2021:

2.2.1 Technical capacity documentation: General information regarding the firm's Engineering capacity and reference of technical services provided in the past for work like the one considered for this market research.

2.2.2 Reference or suggested technical scope of work used for contracting services like the ones considered on this market research.

2.2.3 Typical mechanism, time for execution and pricing for producing the evaluation of effects of a set of alternative plans for water supply projects.

2.2.4 Recommended stages of the conceptual design development

2.2.5 As far as costs, explain how the conceptual design cost will be calculated (as a % of the construction cost, for instance). If the conceptual design cost is based on a % of the construction cost, what would be a typical range for that %?

2.2.6 Recommendations on minimum qualifications of companies that may participate in the contracting phase associated to this Market Survey, possible durations for the two identified tasks described in Part 1, above, as well as scope of work suggestions, work methodologies compliant with prudent industry practices, and budgetary estimates or typical rates associated with the type of work described in Tasks 1 and 2.

2.3. Questions: Questions will only be received and answered in writing.

2.4. ACP Disclaimer: Please note that this process is strictly confidential, and the information provided in this email and information exchange shall be treated as such. Therefore, participants should keep all the information as strictly confidential. Should the participant consider that some or all the information to be provided is confidential, it should be so indicated.

Additionally, no information contained herein and because of the terms contained in these exchanges shall be considered as an evaluation or acceptance by the ACP of the documentation to be provided by participants of this market survey or create expectations of any future contract award or to limit the ACP in any way to consult with other organizations not being part of the Market Research. Any ACP future procurement process related to this market study will be formally advertised and competed.

PART 3 – REFERENCE INFORMATION

3.1 Area Considerations: Figure 1 shows ACP Jurisdiction: An Area of 3,338 Km² where Gatun Lake (440 Km²) and Alhajuela Lake (50 Km²) are enclosed. These two lakes regulate Chagres River and tributaries and impound water for human consumption and operations.

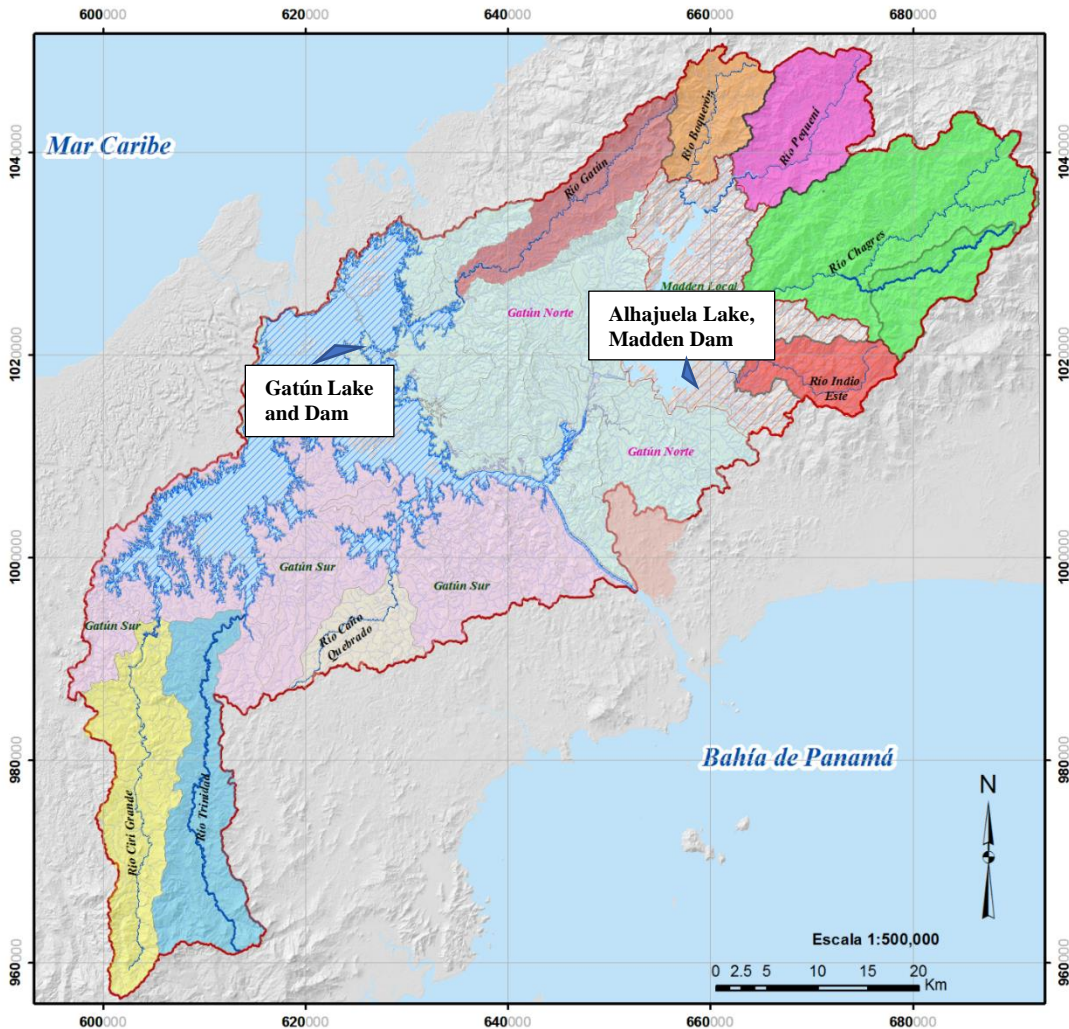


Figure 1: Hydrographic Basin of the Panama Canal (Area = 3,338 km²)

Also, in Figure 1 are depicted some of the sub-basins within the 3,338 km² total area. As expressed in the scope on page 1, ACP may incorporate new water sources originated outside the existing Panama Canal Watershed which may or not be next to it and may produce inflows to the Watershed by gravity or pumping depending to their proximity to the Watershed and the source elevation.

PART 4 – POINT OF CONTACT: Information and documentation regarding this market study must be submitted to: Mr. Rigoberto Delgado, email: RHDelgado@pancanal.com with cc to Mrs. Kerube Oduber de Sinclair, email: KOduberSinclair@pancanal.com.