



Questions and Answers

for Generating Alternative Energy from Philadelphia Waterways RFI for

PHILADELPHIA ENERGY AUTHORITY

Last Updated: March 16, 2018

Issued by:

THE PHILADELPHIA ENERGY AUTHORITY (“PEA”)

Questions

All questions regarding the Generating Alternative Energy from Philadelphia Waterways RFI are to be sent by email to info@philaenergy.org.

*Responses to questions received by 5:00 p.m. on **March 16, 2018** will be issued by 5 p.m. on **March 30, 2018**. All effort will be made to respond to questions received after March 16, 2018 deadline, but responses are not guaranteed.*

PEA will post all responses to the RFI questions, clarifications and request for additional information at http://www.philaenergy.org/public_bids/request-for-information-generating-alternative-energy-from-philadelphia-waterways. Respondents are urged to check the website for the responses to the questions.

1. Please provide the waterway head, (height), & average volume of water over each dam.

Flow rates of the various waterways of the City of Philadelphia can be obtained at the U.S. Geological Survey website: <https://waterdata.usgs.gov/pa/nwis/current/?type=flow>

This RFI is not seeking traditional hydropower dam technology solutions, however innovative solutions that make use of the kinetic energy created by these structures are welcome.

Please note that the Fairmount Dam is an iconic Philadelphia landmark and is not under consideration for any technology installations due to the sensitive nature of the feature in the public realm.

Flat Rock Dam Characteristics

- Existing Fish Ladder Inv. 27.0' (note is should have a nominal 100 cfs running through it)
- The canal will need 100 cfs of flow.
- The Fish Ladder is on the west side of the dam; the canal and spillway are on the eastern side.
- Flat Rock Dam Low Flow Notches 31.2'
- Flat Rock Dam Main Spillway Crest: 31.7'
- Existing waste weir elevation: 33.4'
- Tail Water Elevation: between 15.5' and 16'
- The available head is in the 10 to 11 foot range.

2. Can respondents to the RFI also assess sites in the surrounding 5 counties of the City of Philadelphia (Bucks, Montgomery, Delaware, Chester, and Philadelphia counties) to broaden the search for innovative hydro-kinetic solutions?

Responses to the RFI must include solutions that are directly applicable to sites within the City of Philadelphia as this aligns with PEA and PWD's service areas.

3. Will detail be released to the public?

PEA will not be releasing RFI responses publically. However, PEA is subject to Right to Know requests. Therefore, all respondents should specifically flag any trade secrets or other intellectual property. Any details that are flagged will be redacted.

4. The current Flat Rock Dam is designed with a 100 cfs flow going to the Manayunk Canal. Is this flow rate final?

The current engineering designs for the Manayunk Canal are not complete. However, PEA cannot give any assurance that these design considerations can be changed.

5. What is the relationship between PEA, the Philadelphia Water Department, and other stakeholders?

PEA is managing this Request for Information and will lead the evaluation of responses with the help of an advisory committee. Presently, there are no set plans for next steps following the RFI. The Philadelphia Water Department is supportive of this RFI and is interested in learning about potential applications for innovative hydropower and thermal technologies in Philadelphia's waterways.

6. Will the City of Philadelphia or other group help finance or subsidize potential projects that emerge from this RFI?

Yes, it is possible that the Philadelphia Energy Authority may help finance or subsidize potential projects that emerge from this RFI.

7. Is PEA planning to hold any informational meetings with interested respondents in order to better understand technologies and concepts?

PEA will not hold informational meetings while the RFI is open. Technologies and concepts should be described in sufficient detail in the RFI response. PEA may elect to set up information meetings to clarify RFI responses during the RFI evaluation period.

8. For RFI purposes, please confirm these are the only dams located in the City AND please note the ownership of each dam.

Philadelphia PA Dams

	Latitude	Longitude	Class	GNIS ID	Watercourse	Permitee	DEP Dam No.
Debris Dam	40.0159454	-75.101008	Dam	1200022	Frankford Creek	City of Philadelphia	51-008
Fairmount Dam	39.9667794	-75.18629	Dam	1194447	Schuylkill River	City of Philadelphia -Fairmount Park Commission	51-002
Flat Rock Dam	40.0395562	-75.246847	Dam	1213623	Schuylkill River	Pennsylvania a DEP- Bureau of Abandoned Mine Reclamation	51-001
Joyce Dam	40.0573335	-75.2218455	Dam	1200021	Wissahickon Creek		
Lock Number Sixty-Eight	40.0378896	-75.2446247	Dam	1179753	Schuylkill River	City of Philadelphia -Fairmount Park Commission	
Margaree Dam	40.0598335	-75.2204564	Dam	1200020	Wissahickon Creek	City of Philadelphia -Fairmount Park Commission	51-009
Pa-237 Dam	39.8767798	-75.2079584	Dam	1194399	Delaware River		

- GNIS = Geographic Names Information System

- Map of Philadelphia
County: <https://pennsylvania.hometownlocator.com/maps/countymap,cfips,101,c,philadelphia.cfm>

9. Does the field labeled “gage height” at the USGS website signify the total head level at each site? There are a few sites with negative “gage height” values as well, which we wanted further clarification on. The USGS website in question is: <https://waterdata.usgs.gov/pa/nwis/current/?type=flow>.

These gage heights are not the total head level. The definition provided by USGS (<https://water.usgs.gov/edu/dictionary.html>) states the following:

“gage height--the height of the water surface above the gage datum (zero point). Gage height is often used interchangeably with the more general term, stage, although gage height is more appropriate when used with a gage reading.”

Note that when selecting a specific Station Number (e.g. [01467042](#)), you can plot gage height over time as it changes with the water surface height.