2.1

21	Closure to "Parapet Wall Effect on Piano Key
3	Weir Efficiency" by O. Machiels, S. Erpicum
4	P. Archambeau, B. Dewals, and M. Pirotton

DOI: 10.1061/(ASCE)IR.1943-4774.0000566

6	Sébastien Erpicum, Ph.D. ¹ ; Olivier Machiels, Ph.D. ² ;
7	Michel Pirotton, Ph.D. ³ ; Pierre Archambeau, Ph.D. ⁴ ; and
8	Benjamin Dewals, Ph.D. ⁵

¹Research Associate, Hydraulics in Environmental and Civil Engineering (HECE), Univ. of Liege (ULg), B-4000 Liège, Belgium (corresponding author). E-mail: s.erpicum@ulg.ac.be

²Project Engineer, Arcadis Belgium, B-4000 Liège, Belgium. E-mail: O.Machiels@arcadisbelgium.be

³Professor, Hydraulics in Environmental and Civil Engineering (HECE), Univ. of Liege (ULg), B-4000 Liège, Belgium.

⁴Research Associate, Hydraulics in Environmental and Civil Engineering (HECE), Univ. of Liege (ULg), B-4000 Liège, Belgium.

⁵Assistant Professor, Hydraulics in Environmental and Civil Engineering (HECE), Univ. of Liege (ULg), B-4000 Liège, Belgium.

The authors would like to thank the discusser for his comprehensive summary of recent findings on the piano key weirs (PKW) hydraulic design. All of the researchers have published recently, after the submission of the authors' paper, which is why they were not used in the authors' research.

To complete the discusser's review, Kabiri-Samani and Javaheri (2012), Leite Ribeiro et al. (2012), and Machiels et al. (in press) provided additional data on the tools available to

design a PKW. In particular, these three papers proposed an analytical formulation to predict a PKW discharge capacity from its geometric characteristics. In addition, two books (Erpicum et al. 2011, 2013) gathered most of the material related to numerical, experimental, and prototype studies on PKW conducted all over the world.

2 54

The large number of papers on PKW published in the *Journals of Hydraulic Research* (IAHR), *Hydraulic Engineering* (ASCE), and *Irrigation and Drainage Engineering* (ASCE) during the last five years proves the interest of the subject to the hydraulic engineers' community and shows that the topic is relevant for further analysis, as explained by the discusser.

References 41

Erpicum, S., Laugier, F., Boillat, J.-L., Pirotton, M., Reverchon, B., and Schleiss, A. J., eds. (2011). *Labyrinth and piano key weirs—PKW 2011*, CRC Press, Boca Raton, FL.

Erpicum, S., Laugier, F., Pfister, M., Pirotton, M., Cicéro, G.-M., and Schleiss, A. J., eds. (2013). *Labyrinth and piano key weirs II—PKW 2013*, CRC Press, Boca Raton, FL.

Kabiri-Samani, A., and Javaheri, A. (2012). "Discharge coefficients for free and submerged flow over piano key weirs." J. Hydraulic Res., 50(1), 114–120.

Leite Ribeiro, M., Pfister, M., Schleiss, A. J., and Boillat, J.-L. (2012). "Hydraulic design of A-type Piano Key Weirs." *J. Hydraulic Res.*, 50(4), 400–408.

Machiels, O., Pirotton, M., Archambeau, P., Dewals, B., and Erpicum, S. (in press). "Experimental parametric study and design of Piano Key Weirs." *J. Hydraulic Res.*, in press.

© ASCE 1 J. Irrig. Drain Eng.

Queries

- 1. Please provide the ASCE Membership Grades for the authors who are members.
- 2. Please provide updated information for Machiels (in press) if available.

