Kayne Anderson Midstream/Energy Fund

Kayne Anderson Midstream/Energy Fund Increases its Quarterly Distribution to \$0.48 per Share for Q2 2014

Houston, TX – June 26, 2014 – Kayne Anderson Midstream/Energy Fund, Inc. (the "Fund") (NYSE: KMF) announced today its quarterly distribution of \$0.48 per share for the quarter ended May 31, 2014. This distribution represents an increase of 1.6% from the prior quarter's distribution of \$0.4725 per share and an increase of 5.5% from the distribution for the quarter ended May 31, 2013. This represents the eleventh consecutive quarterly increase by the Fund.

The distribution will be payable on July 18, 2014 to common stockholders of record on July 11, 2014, with an ex-dividend date of July 9, 2014. The Fund estimates that none of this distribution will be treated as a return of capital for tax purposes. This estimate is based on the Fund's anticipated earnings and profits for fiscal 2014 and its accumulated earnings and profits as of May 31, 2014 (including gains and losses on sales of securities during the six months ended May 31, 2014). The Fund's estimate does not include a projection of gains or losses on the sale of securities for the remainder of fiscal 2014. The final determination of the tax character of the distribution will be made in early 2015 when the Fund can determine its actual earnings and profits for the full year (including gains and losses on the sale of securities for the remainder of fiscal 2014) and may differ substantially from this preliminary information.

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Kayne Anderson Midstream/Energy Fund, Inc. is a non-diversified, closed-end management investment company registered under the Investment Company Act of 1940, whose common stock is traded on the New York Stock Exchange. The Fund's investment objective is to provide a high level of total return with an emphasis on making quarterly cash distributions to its stockholders by investing at least 80% of its total assets in securities of companies in the Midstream/Energy Sector, consisting of: (a) Midstream Master Limited Partnerships ("MLPs"), (b) Midstream Companies, (c) Other MLPs and (d) Other Energy Companies. The Fund anticipates that the majority of its investments will consist of investments in Midstream MLPs and Midstream Companies. See Glossary of Key Terms on page ii of the Prospectus for definitions of certain key terms.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS: This press release contains "forward-looking statements" as defined under the U.S. federal securities laws. Generally, the words "believe," "expect," "intend," "estimate," "anticipate," "project," "will" and similar expressions identify forward-looking statements, which generally are not historical in nature. Forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ from the Fund's historical experience and its present expectations or projections indicated in any forward-looking statements. These risks include, but are not limited to, changes in economic and political conditions; regulatory and legal changes; MLP industry risk; leverage risk; valuation risk; interest rate risk; tax risk; and other risks discussed in the Fund's filings with the SEC. You should not place undue reliance on forward-looking statements, which speak only as of the date they are made. The Fund undertakes no obligation to publicly update or revise any forward-looking statements made herein. There is no assurance that the Fund's investment objective will be attained.

CONTACT:

KA Fund Advisors, LLC Monique Vo, 877-657-3863 http://www.kaynefunds.com