Mueller Policy Paper #1: Reduce Standard Margin Settings

Following the Mueller Solution to reduce the default margin settings to 0.75" on University computers, Penn State could save over $120,000 per year (see details in Table 1). Reduction of margin settings, as with all Mueller Solutions, will in no way compromise the research, teaching, outreach, and administrative functions of the University.

Default margin settings in word processing software (e.g. Microsoft Word 2000) used at Penn State are left=right=1.25" and top=bottom=1". If all the margins are reduced to 0.75", 19% more area is available for text in a given page of an "ideal" document. This can be empirically demonstrated by changing the margins on a 100-page document from the status quo to 0.75", thereby reducing it to only 81 pages.

Paper is the end-product of an industry which moves trees from forests to chip, pulp, and paper mills, then to distributors, and finally to end-users. Each step of this process has a negative effect on the environment. The pulp and paper industry is the third largest consumer of chlorine, the second largest consumer of energy in the U.S., and is unrivaled in its use of water per ton of product. Paper production contributes to air and water pollution: to the *air* it adds greenhouse gases and pollutants, such as nitrous and sulfur oxides, acetone, methanol, and carbon monoxide; and to the *water* it adds many noxious chemicals, including deadly but avoidable dioxins, furans, and chloroform.[i] By reducing default margins Penn State will be reducing its ecological footprint due to paper consumption.

Policy Suggestions:
1. The Center for Academic Computing - reduce default margin settings to 0.75" in all CAC labs.
2. The Executive Administration - send a memo to all PSU units and departments explaining the benefits of margin reductions to 0.75" to their individual budgets.
3. The Executive Administration - request that default margin settings are reduced to 0.75" for all Microsoft free software available to students through the Microsoft/PSU liaison. (Microsoft, acting as a model of efficiency for industry, could adopt these changes for all of its software products).
4. President Spanier - write a letter to all the University presidents at other Pennsylvania Institutions and the Big 10 encouraging them to follow our lead of environmental stewardship by following suggestions 1 through 3 and reading/applying the PSU Mueller Report.

Table 1: Economic Savings from Default Margin Reductions at PSU			
	Status Quo	With 0.75" Margins [f]	Savings
Paper (reams/year) [a]	950,350	905,208	45,142
Disposal (tons/year) [b]	950	905	45
Forest acres [c]	1,524	1,452	72
Purchase of Paper Cost $ [d]	2,584,952	2,462,166	122,786
Disposal Cost $ [e]	4,750	4,525	225
Total Cost	2,589,702	2,466,691	**$123,011**

Notes: Data from Penn State Indicators Report 2000
a. 1 ream contains 500 sheets of paper
b. reams x (2 pound/ream) x (1 ton/ 2000 pounds)
c. tons x 70.6ft^3 wood per ton of paper / 44ft^3 of wood produced/acre/year
d. reams x $2.72/ream, Penn State General Store http://www.generalstores.psu.edu/
e. tons x $5/ton for disposal
f. The reduction in paper use is based on the following conservative estimates: page savings will only be realized for approximately 50% of documents (a 1.5 page paper would gain no reduction in paper use for margin reductions), 50% of paper is used for printing or photocopying printed documents, and 19% more area available with 0.75" margins. Thus the total reduction in paper use is 0.50x0.50x0.19 = 4.75% Finally, it is assumed that all PSU paper is recycled (PSU pays $48/ton for land filling of non-recyclables and only $5/ton for recyclables).

This policy paper represents the first in a series of PSU Green Destiny Council suggestions stemming from the Mueller Report. This study showed that it is possible to reduce ecological impact and save money by increasing efficiency, using technology intelligently, and increasing environmental awareness. The full text of the Mueller Report and the Indicators Reports are available free at www.bio.psu.edu/greendestiny/

For more information contact the Mueller Report Coordinator, Joshua Pearce at profpearce@gmail.com

i. J. Abramovitz and A. Mattoon, *Paper Cuts: Recovering the Paper Landscape* (Washington, DC: Worldwatch Institute, 1999).