Overcrowded stacks, volumes with little or no use, and increasing demand for user seating and innovative use of library space require librarians to consider downsizing print collections. Print serials are often replaced by access to electronic subscriptions, but monographs pose more of a challenge, particularly in art collections, where a publication’s age is not an indicator of its relevance to the collection. Weeding a large collection can seem daunting, but having a systematic approach makes the task more manageable. The Michigan State University Libraries, with a collection of over 5 million volumes, is embarking on a major weeding project and has enlisted the services of Sustainable Collection Services™ (SCS) to aid in the deselection process. This poster will focus on the use of SCS GreenGlass™ reports as an aid in weeding the art collection at the MSU Fine Arts Library. GreenGlass reports are generated from data harvested from a library’s OPAC, including circulation and acquisitions statistics. Additional parameters can be included, such as holdings in OCLC, peer institutions, and Hathi Trust. The end result for the MSU Fine Arts’ art collection was a report total of 12,910 items to be considered for removal, out of a circulating collection of 99,382 volumes! The poster will provide detail on the parameters included in the GreenGlass report, factors taken into consideration while weeding, other ways to use GreenGlass reports, and what lies ahead for the MSU Fine Arts library’s print resources.