

# **Grainger Engineering Library Information Center**

**Annual Report, July 1, 2012 – June 30, 2013**

## **I. Unit Narrative.**

### **Introduction**

The Grainger Library continues to focus on expanded services to users, including access, liaison, research support, and data management services. Grainger users place a high premium on the provision of enhanced access to licensed and local information resources and in providing quality facilities for research, study, meetings, and collaborative scholarship. We are also very cognizant of the need to adapt science and engineering librarianship to changing research paradigms and methodologies and to focus on the library's role in the end-to-end knowledge creation processes and scholarly communications activities.

### **Major Accomplishments**

One of the Grainger Library's fundamental roles, since its opening in 1994, has been to serve as a testbed or laboratory for the analysis and application of emerging information technologies. Working under a series of grants and utilizing supporting Grainger endowment funds (often used as matching funds in grants), Grainger librarians and staff have been involved with leading-edge investigations within a number of service initiatives. This includes:

Development and monitoring work on the **Easy Search** suite of federated search applications which run in the Library Gateway, the Grainger Library Portal, and the UGL main, UGL advanced, Biology, Library and Information Science, Physics, Music and Performing Arts Library, ACES, Aquifer America History Online project, and the IMLS DCC search pages. Implemented Images and Datasets search categories and targets. Increased targets to over 170. Implemented MyEasySearch module. In 2012, there were 3.7 million user actions in ES, including 1.7 million searches. Conducted online user survey (75 responses) and individual user interviews (6 users). Modified Easy Search version at UIC. (ES Also running at UIS).

Performed detailed **transaction log analysis of Easy Search** user activities 2010-2011. Examined effectiveness of search assistance mechanisms and modeled user searching behaviors. In the process of implementing custom title search mechanisms (using capitalized word cues and punctuation cues) to enhance known-item search (constitutes 50% of searches). Enhanced the XML gateway APIs in Easy Search allowing Easy Search to serve as a target in other applications, in particular Primo.

Implemented **Primo as an Easy Search target** (maximum of 7 searches into Primo) and developed **Primo custom tile** with search assistance suggestions and additional searches within our Ex Libris Primo implementation. As part of first Next-Generation Catalog

committee and Primo Implementation team, made presentations on Primo search capabilities and features. Custom tile examines user search arguments and Primo results and offers direct links to popular search terms, links back into primo to journal/database results, enhanced author searches in Primo, Libguide matches, title word matches, direct DOI links, and additional searches in I-Share catalog and HathiTrust. Analyzed user searches in ES that resulted in clickthroughs into Primo.

Continued development of **Journal and Article Locator (JAL)**. JAL provides a one-step link into the publisher/vendor full-text article presentation/splash page and saves the user an enormous amount of time in retrieving the full-text of an article. Enhancements include DOI search, article title searching, and a version that displays DOI, SFX, VuFind, Scopus, and Ebsco persistent links. JAL sees about 1.5 thousand searches every day and totaled over 250,000 user searches in 2012.

Continued work on what we call the **GRIPTS (Group Information Productivity Tools) e-scholarship support service** tools for faculty groups. GRIPTs now include author linking, pre-determined Google News matches, author H-index links, pre-stored key search terms which display ES results, a citing references search, and a self-contained version of Journal and Article Locator. Developed a multi-group version. Implemented for several Physics groups, Geology department, a Biophotonics group, a Biophysics group, Mechanical Engineering and Sciences department, Nuclear Science and Engineering, and GRIPTS are being developed for Chemistry, Civil and Environmental Engineering, and other departments. With Kyushu University developed a multi-university GRIPT for **I2CNER (International Institute for Carbon Neutral Energy Research)** – see below.

Developed **Citing References Search** module for Grainger Portal and standalone application at <http://search.grainger.uiuc.edu/citedsearch/citeform.asp>. Operates over Scopus -- using custom proxy software – and provides direct one-step access to a display of articles that cite a specific article.

Participated in the Elsevier Development Partners **SciVerse Applications** API program. Grainger team developed a VuFind Library Catalog search applet.

Prepared and implemented a **DMP (Data Management Plan) Template for the NSF requirement** of a DMP for all grants. With assistance of OSPRA and in conjunction with campus-wide Data Stewardship Committee and Research Support Services initiative, monitored usage of our Template and analyzed NSF DMPs through UIUC grants submitted through Fastlane (NSF). Current analyzed 1,200 proposals; the Grainger template has been used on 142+ NSF proposals.

Made **presentations** to all incoming graduate students in Materials Science, Mechanical Science and Engineering, Industrial and Enterprise Systems Engineering, Electrical and Computer Engineering, Computer Science, and Civil and Environmental Engineering – approximately 700 students. Made presentations to Civil and Environmental Engineering

390 and research methods classes in Civil and Environmental Engineering, Computer Science, and Mechanical Science and Engineering.

With 85% of collection materials inflation covered by Student Fee monies in FY12, funds were made available for additional Elsevier, AIAA, and Taylor and Francis **backfiles**, ASME Journal Archive, Optics Infobase, ArXiv, and the 6<sup>th</sup> edition of the Morgan and Claypool Synthesis files.

Worked closely with the College of Engineering (COE) administration to implement the **CARE (Center for Academic Resources in Engineering) center** aimed at improving student retention and providing tutoring services. Implemented a library information literacy program in CARE. Expended \$65K of student IT fee monies for furniture, digital signage, and collaborative workstations. Includes remodeling projects on the 4<sup>th</sup> floor; installation of glass wall-boards, CITES project for AV projection on Grainger 4 West, and large-screen monitors for group studies. Worked closely with the COE administration and the Library AUL for Collections on withdrawal/transferring of collection materials for the CARE project on the 4<sup>th</sup> floor of the Grainger Library.

Worked with **I2CNER (International Institute for Carbon Neutral Energy Research)**. This is a U.S.—Japanese cooperative initiative involving the University of Illinois and Kyushu University in Japan. Also involved are the Japanese World Premier International Research Center Initiative (WPI), the U.S. Department of Energy, and the Japan Ministry for Education, Culture, Sports, Science and Technology. Visited Kyushu University to discuss areas of collaboration between the two university libraries. Also entertained a delegation of Japanese visitors, including the President of Kyushu University, to discuss the areas of collaboration.

Continued work National Science Foundation grant for development and deployment of the **NSF funded National Ethics Portal (the Ethics CORE Digital Library)** and National Center for Professional and Research Ethics. This grant funded a digital librarian, a research programmer, and two 50% graduate assistants.

Worked on **transfer of Grainger computing server infrastructure to the DCL server center. Retired the 65 Dell ODDS (On-Demand Desktop Streaming) thin client** workstations and replaced them with Library workstations requiring authentication. Set up custom monitor-only stations for students to use with laptops. Implemented Network Load Balance server for Easy Search.

Worked with COE on banner placement and new names placed in Grainger lobby for the second class of **Engineering Hall of Fame** members.

With Library Development Office, continued work **Bitzer Endowment for Emerging Information Technologies**, including meeting with Donald and Maryann Bitzer during induction of new members of College of Engineering Hall of Fame members.

Redesigned Grainger top-level web page to provide a portal to engineering materials. It is designed around identified user information seeking needs and methods and utilizes a portlet-based approach. See: <http://search.grainger.uiuc.edu/top/>. The Grainger Portal also contains a custom conference finder search system which utilizes metasearch capabilities that mimic the search behavior of an expert reference librarian. This system performs four different searches of the Online Catalog (conference name, author, keyword, keyword limited to serial) and a search of the EI Village database (over Compendex and INSPEC) to try to identify conference proceeding holdings and information.

## **Grants, Presentations, Articles**

Grainger faculty and GAs worked on several grants:

A National Science Foundation grant for development and deployment of the NSF funded **National Ethics Portal (the Ethics CORE Digital Library)** and National Center for Professional and Research Ethics, 2010-2012. \$1.5 million over 2 years. Grant PIs were Tina Gunsalus (Business/Law), Nick Burbules (Education), Michael Loui (Electrical and Computer Engineering), and myself.

**A National Science Foundation, Computer and Information Science Directorate** grant, 2011 --current. Research on Agile Full-Text Search Algorithms, with Kevin Chang, UIUC Computer Science Department. \$400K.

A Student IT fee award of \$65K for the CARE (Center for Academic Resources in Engineering), computer and presentation equipment and furnishings.

Grainger faculty made several presentations:

William Mischo, "[Not Everyone Wears a Size 2.0: A Panel Discussion Featuring Primo Customers Who've Made Customizations Based on Usability Testing.](#)" American Library Association Annual Meeting, Chicago, IL, June 29, 2013.

William H. Mischo and Mary C. Schlembach, "Productivity Tools for I2CNER Researchers, Kyushu University, February 1, 2013, Fukuoka, Japan.

Jim Hahn, William Mischo, Beth Sandore Namachchivya. "Library Innovation: Initiatives to Support Content Discovery and eResearch", Coalition for Network Innovation CNI Fall Meeting, Washington, DC, December 11, 2012.

William H. Mischo and Mary C. Schlembach, "User Searching Behavior Models: Implications for Web Scale Discovery", Internet Librarian International 2012. London, UK, October 31, 2012.

Mary C. Schlembach, William H. Mischo, and Joshua Bishoff. "The Use of Transaction Logs to Model User Searching Behaviors", 4th International Conference on Qualitative and Quantitative Methods in Libraries, Limerick, Ireland, May 22, 2012.

Two book chapters and one conference proceeding paper by Grainger librarians were published in the Annual Report time period.

### **Major Challenges**

The number of Grainger faculty has shrunk dramatically over the last several years, from a high of 5 librarians to 2 librarians, both with additional responsibility for IT activities and the Physics and Geology collections. This situation has been ameliorated with the addition of a Research and Data Services Librarian, a Biosciences Librarian, and the hiring of a Visiting Librarian.

Collection inflation remains as a former and future threat.

Development and fund raising efforts are challenging.

### **Changes**

Barbara Bolser left to take a position as a librarian in New Mexico and Mary Schlembach became Chemistry and Physical Sciences Librarian. Stan Mechling passed away and Joshua Hollingshead joined the staff as Library Specialist. Christie Wiley joined Grainger as Research and Data Services Librarian and Kelli Trei is Biosciences Librarian. Megan Mahoney, who was the Ethics CORE Librarian, is now a Visiting Public Services Librarian in Grainger. .

### **Contributions to library-wide programs.**

The Easy Search, Journal and Article Locator, and Primo custom tile systems are used library-wide by patrons in all subject disciplines. A number of other software systems, such as the OAI-PMH harvesting programs are being used in CAM and in DCC for a variety of purposes. Grainger librarians are involved in the depositing materials and metadata into the IDEALS Institutional Repository.

Grainger librarians are involved in the Research Data Services proposal and will play an important role in future data management activities.

And Grainger facilities continue to be utilized by the rest of the Library for meetings and workshops.

### **Goals for the Coming Year**

Continue fund raising activities and the work toward an endowed chair for the Head of the Grainger Library.

Continue work on CARE and additional undergraduate support initiatives involving both the COE and the Library.

Develop a close working relationship with the GEBI (Grainger Engineering Breakthrough Initiative) Big Data program.

Institute a Bioinformation Services Group comprised of various faculty in the Library.

Continue to foster data management and knowledge creation support initiatives with the COE and allied faculty.

Continue to enhance and expand Easy Search and other portal and search technologies.

Better integrate engineering, life science, and physical science collection decisions and collection development.

### **Graduate Assistants**

Grainger Library graduate assistants engage in a variety of pre-professional activities, including collection development, reference, instruction, library duty officer and supervision, special projects (including DMP analysis), information system design and implementation, liaison assignments, and grant-funded activities.

There were 9 GAs in FY13, including 3.25 on Library funds and 1.75 GAs on Grainger endowment and grant funds.

GA assignments:

Rachelle Ramer

- CARE Info lit sessions

- GRIPTS

- PBAP

- Referral and scheduling databases, updates as needed

Megan O'Donnell.

- DMP stuff

- Wright Brothers display (with Lillian)

- Just finished Geology Webpage redesign

Jenny Wong-Welch

- Facebook/Twitter for Grainger

- Digital signage

- Grainger Webpage FAQ + Handbooks

- CARE Info Lit Sessions

Hengyi Fu

- Ethics CORE most cited/disciplines pages

- Should also be working on editing metadata in splithtml, adding new XTF records for Ethics CORE, and GRIPTS, but these are not on her projects page in the wiki

Elias Lopez

Updating Blue Book content  
Editing splithtml for Ethics CORE

Sarina Sinick

Easy Search Transaction logs  
UTD on DMP records obtained prior to 12/12/12  
Adding XTF records to Ethics CORE

Pawel Szponar

Creating data capture page for Physics Alumni to grant permission for  
dissertations/theses to be open access

Meng Tao

Editing splithtml for Ethics CORE  
Digital signage  
Evaluating/weeding reference collection

Michael Flierl

CARE Info lit sessions  
Writing Two-Minute Challenges for Tina/Ethics CORE  
Scientific Integrity Statements analysis/chart for Ethics CORE  
Grainger Facebook/Twitter

## **Facilities**

Total user seating: 1486 (with all conference rooms full);

At tables: 707;

At carrels: 464;

At public workstation or index tables: 202;

In group study rooms included in tables;

Informal: 113.

Hours Open:

Fall: 24/5: Sunday – Friday, Saturday 10 AM- 10 PM.

Spring: 24/5: Sunday – Friday, Saturday 10 AM- 10 PM.

Finals Weeks: 24/7.

Summer I and Summer II: 8:30 – Midnight; Monday – Thursday; 8:30 – 6 Friday;

Saturday and Sunday 1 PM – 8 PM.

Other Summer Hours: 8:30 – 5.

## **Personnel**

Faculty:

William Mischo

Mary Schlembach (until June 2013)

Christie Wiley (May 2013 -)

Kelli Trei (July 2013 -)

Megan Mahoney (was grant funded until July 2013)

**Staff:**

Barbara Bolser (left April 2013)  
Elisandro Cabada  
Sharon McFarland  
Lyn Petrie  
Joshua Hollingsead  
Jamie Hansen (began October 2012)  
Sheila McGowan  
Magdalena Casper-Shipp (left September 2012)  
Ann Silcox

**Academic Professionals:**

Nikki Wright (on disability)  
Robert Ferrer (IT)  
Tom Habing (IT)  
Jay Heldreth (IT)

**Graduate Assistants:**

Paid on Grainger Library fund (we are allocated 3.25 FTE):

50% Jenny Wong-Welch (2nd year)  
50% Megan O'Donnell (2nd year)  
50% Elias Lopez (1st year)  
50% Sarina Sinick (1st year)  
50% Michael Flierl  
50% Meng Tao (1<sup>st</sup> year)

50% total – Pawel Szponar (1st year)  
Pawel is 25% on Grainger Library fund and  
25% on Grainger Library endowment fund

50% Hengyi Fu (2<sup>nd</sup> year) (thru December 31, 2012 on NSF Ethics Grant then Grainger endowment fund)

Paid on Railroad Engineering Association of American Railroads Technology Funds:

50% Rachelle Ramer (2nd year)

**Student Wage Budget:**

Base Budget: \$144,264  
Additional temporary: \$4,100  
Summer GA: \$13,785  
Student Assistant FE: 43

**User Services**

Gate Count: 901,592 patrons  
Circulation: Charges: 34,269; Renewals: 24,859; Discharges: 35,259  
Reference Transactions: 15,751

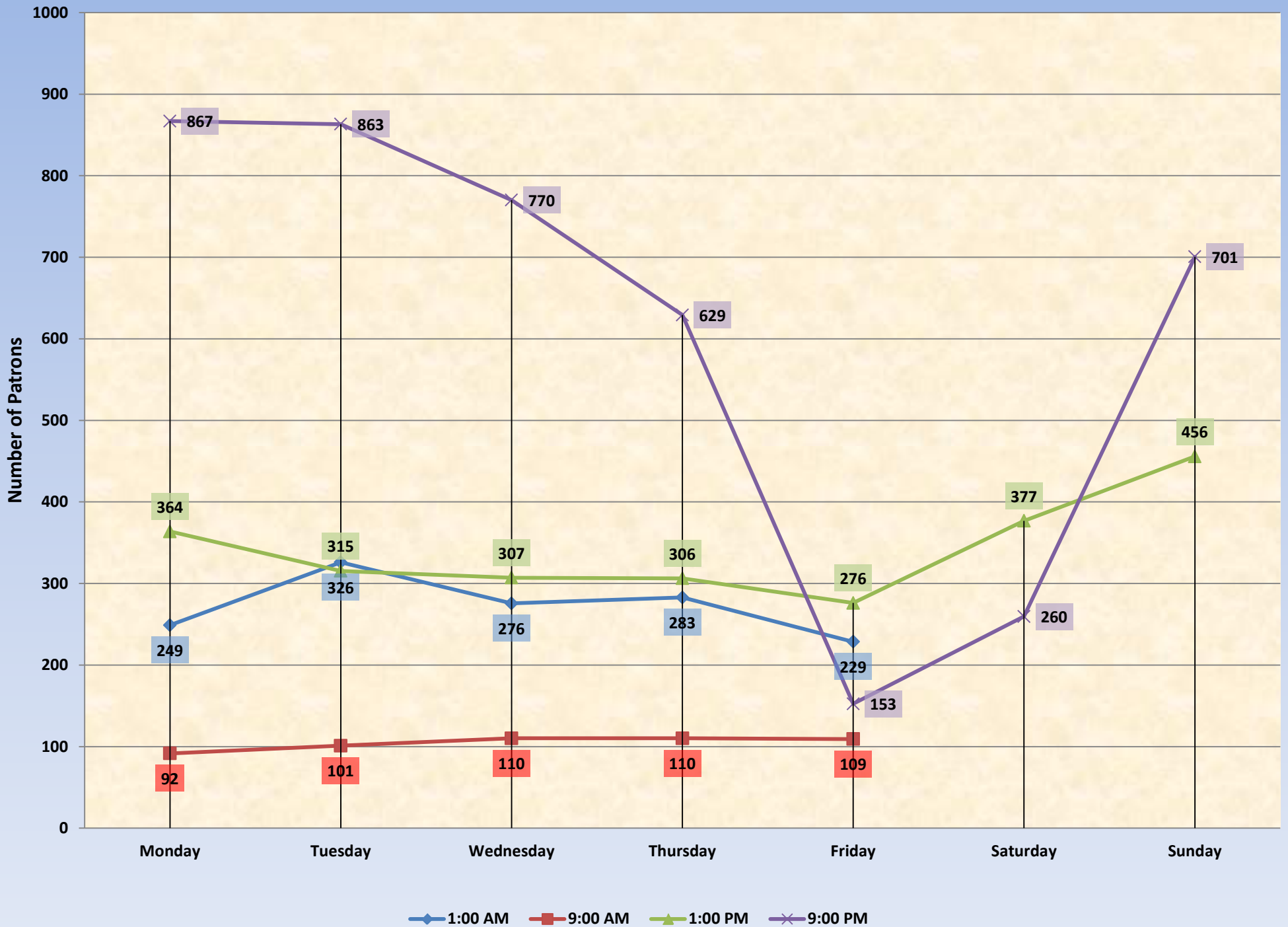


Presentations: 20 presentations, 975 attendees

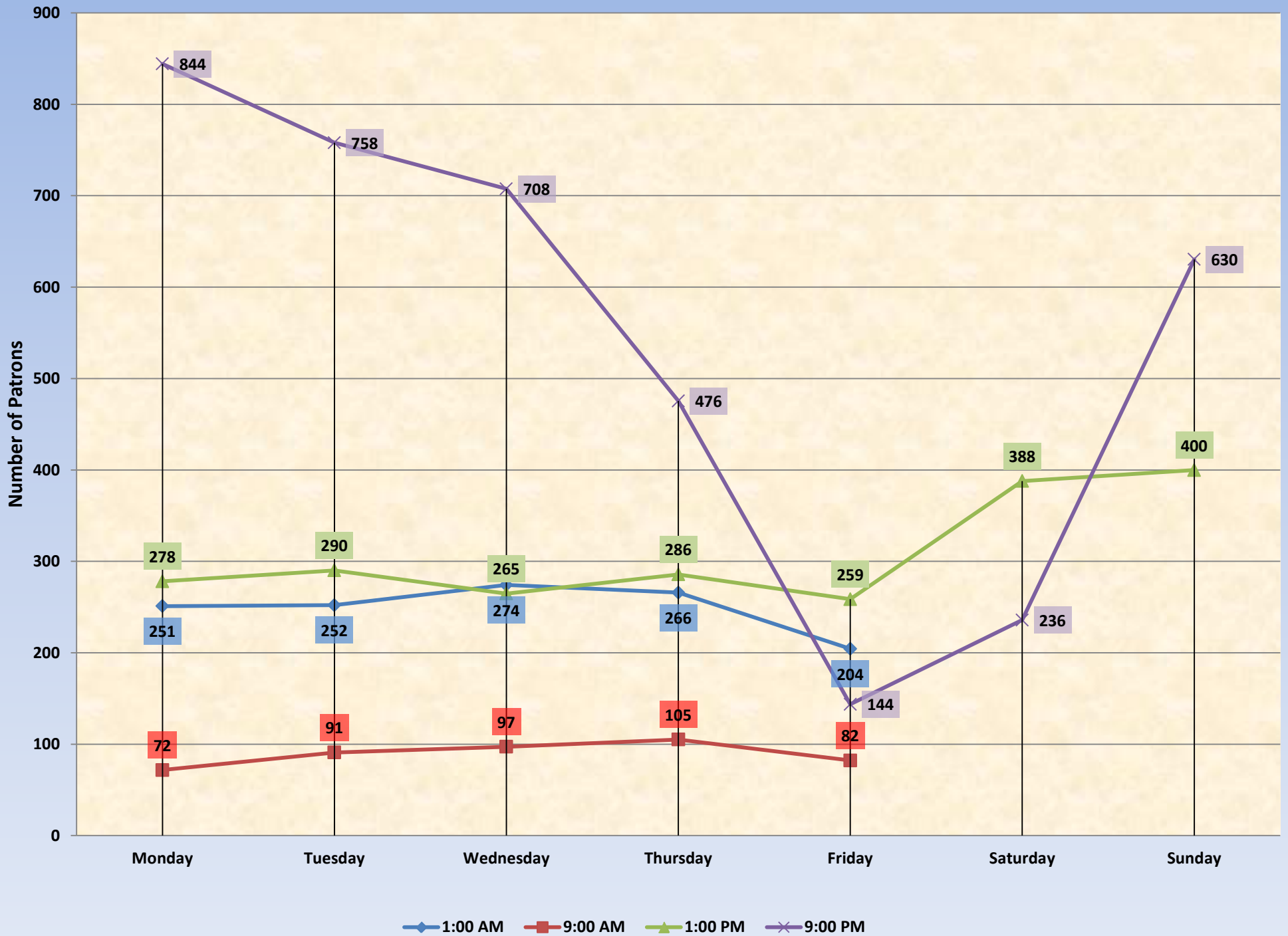
Appendices (separate word document, Graphs\_Grainger\_FY13.docx):

Gate counts, patron counts, Finals counts, sweep week counts, wireless counts.

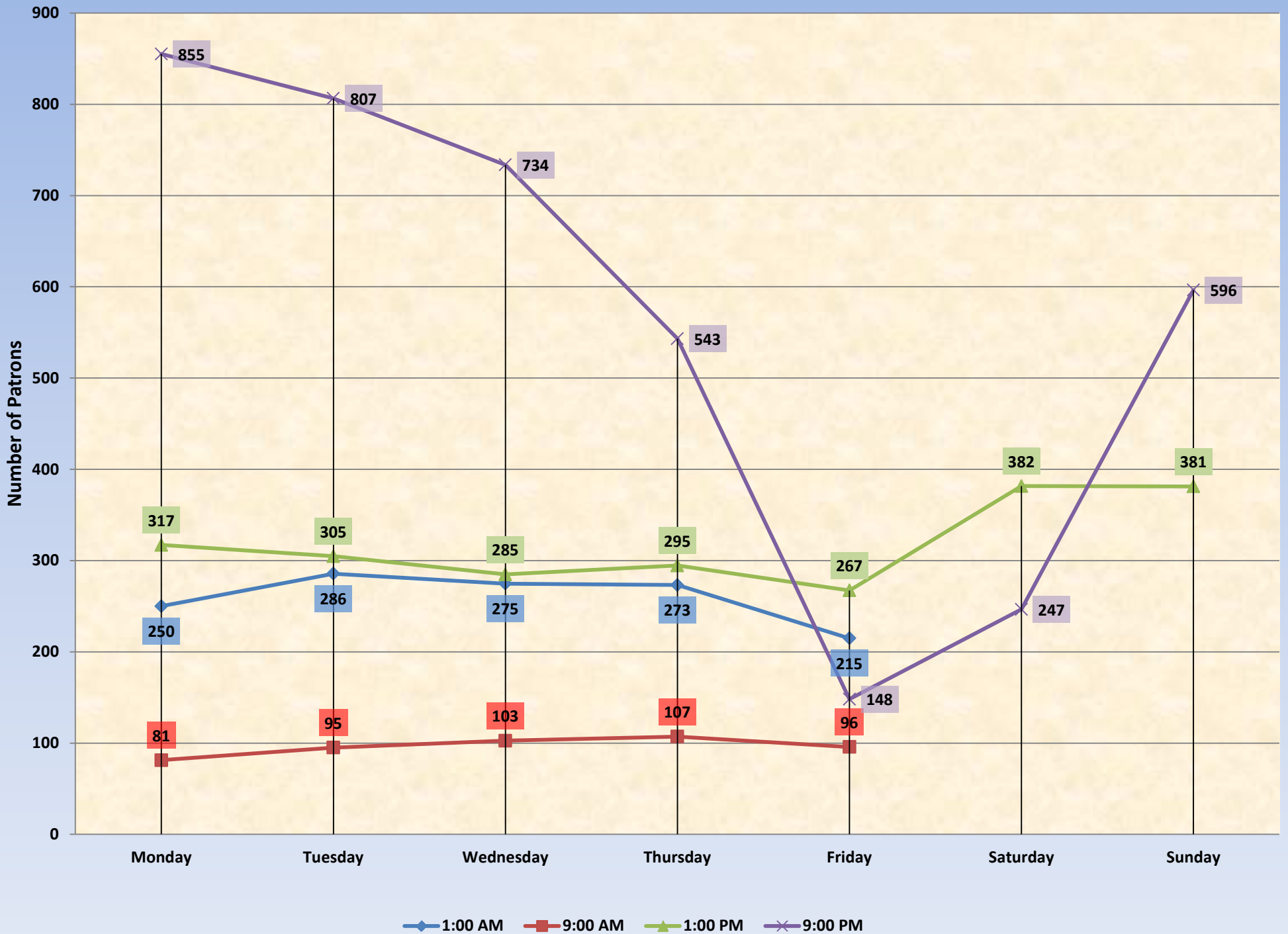
# Patron Count Averages Per Day of Week for Fall 2012 Semester



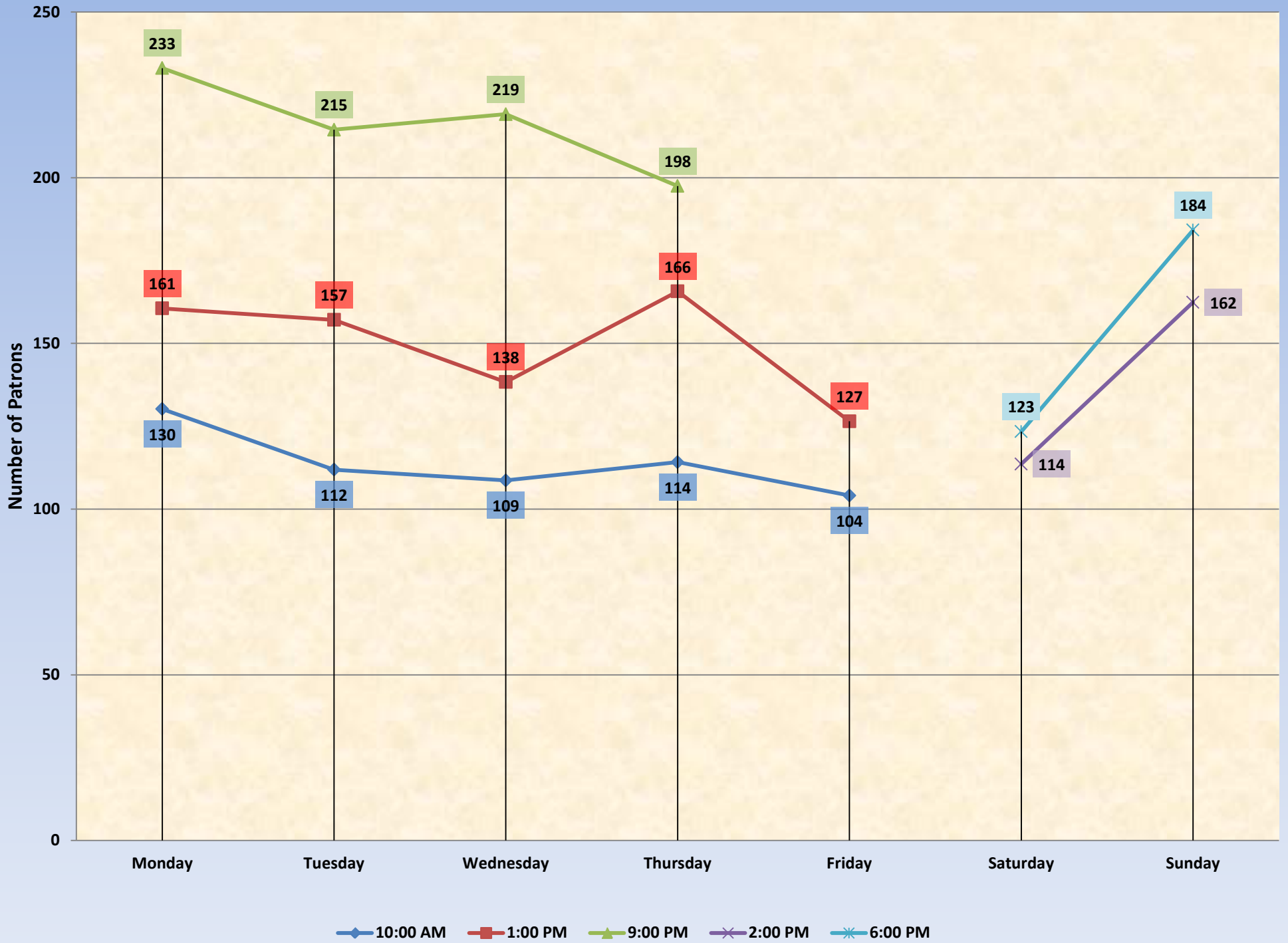
# Patron Count Averages Per Day of Week for Spring 2013 Semester



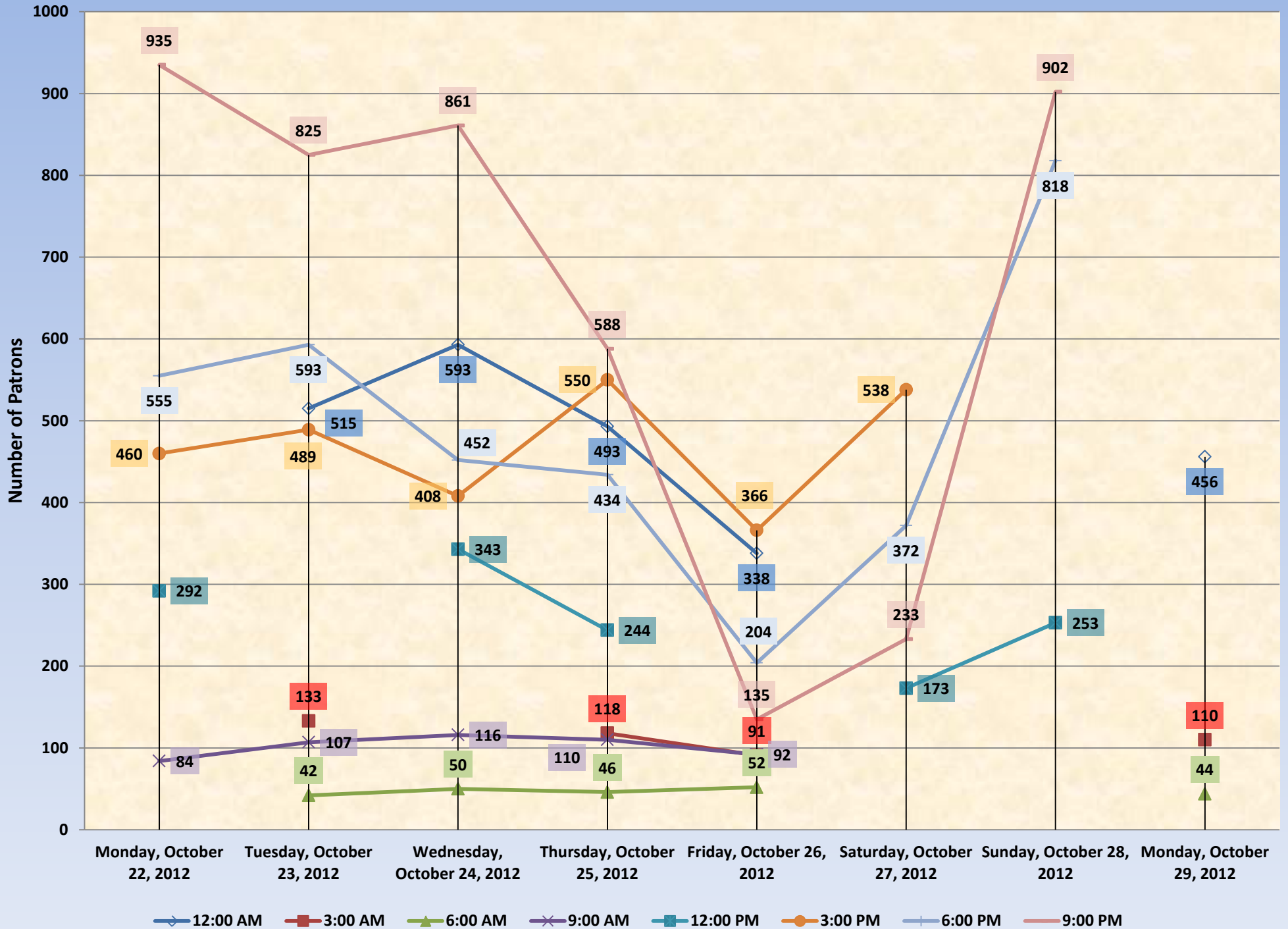
# Patron Count Averages Per Day of Week for Fall 2012 & Spring 2013 Semester



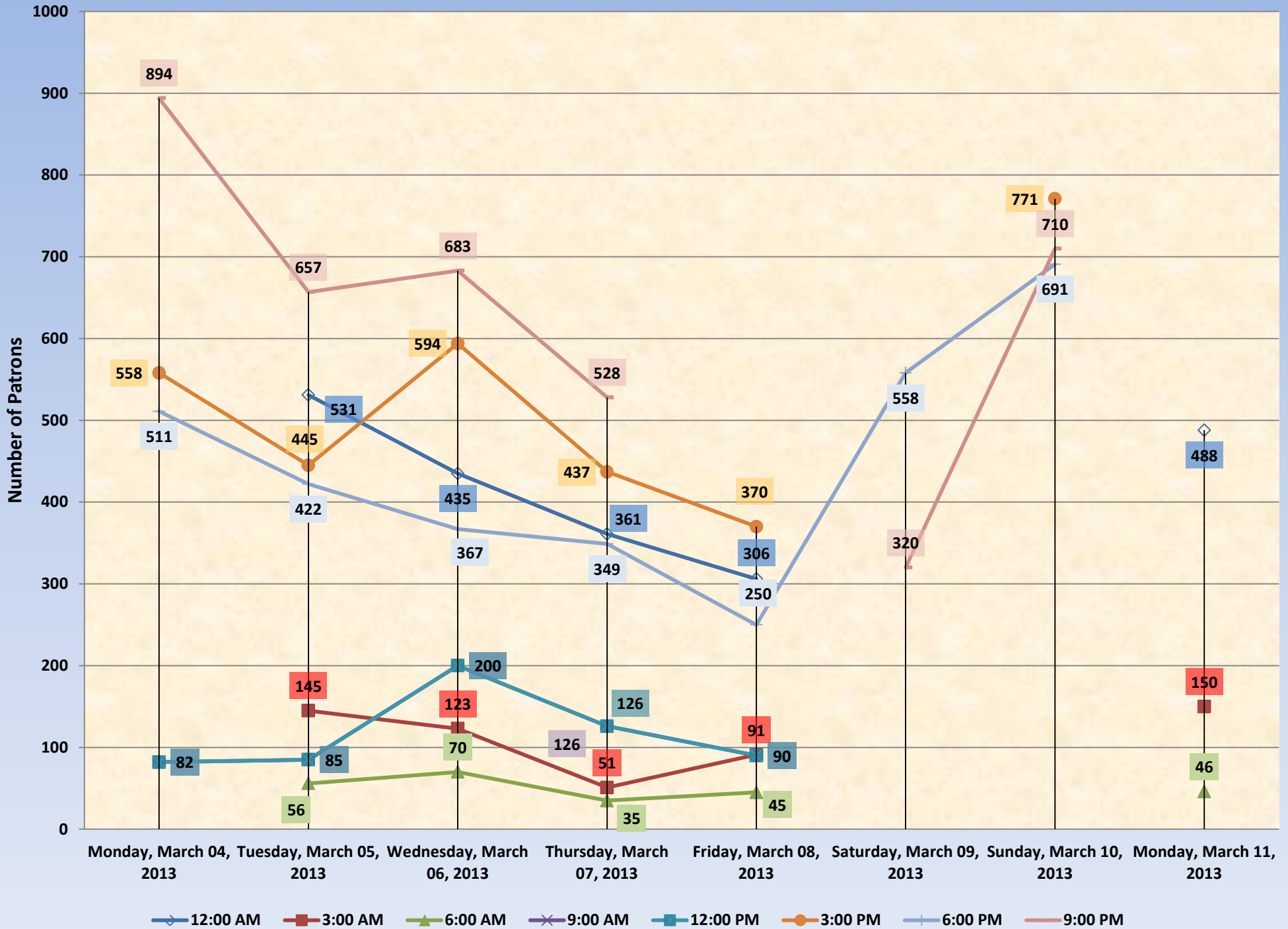
# Patron Count Averages Per Day of Week for Summer Sessions 2013



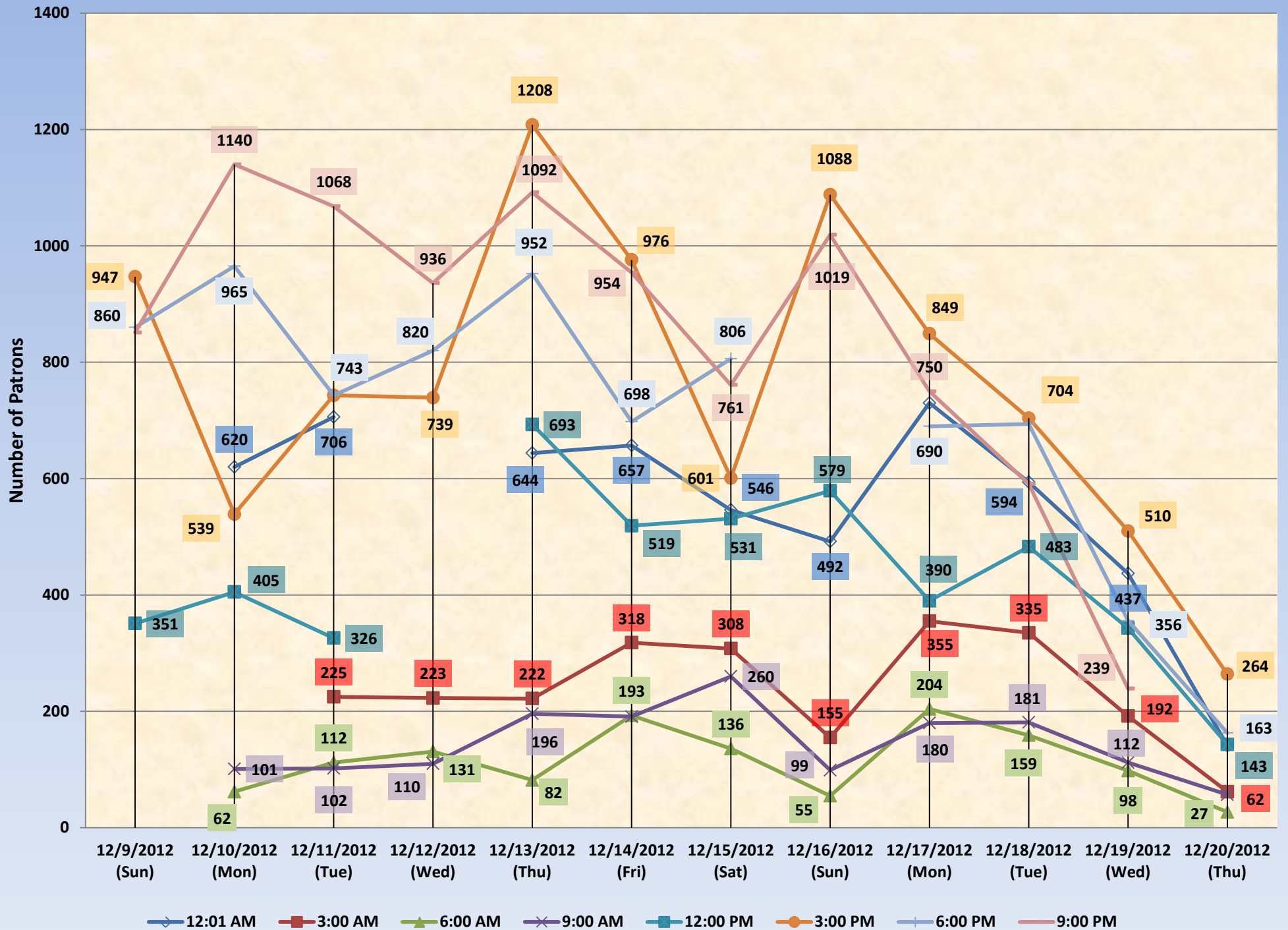
# Sweeps Week Patron Counts, Fall 2012



# Sweeps Week Patron Counts, Spring 2013

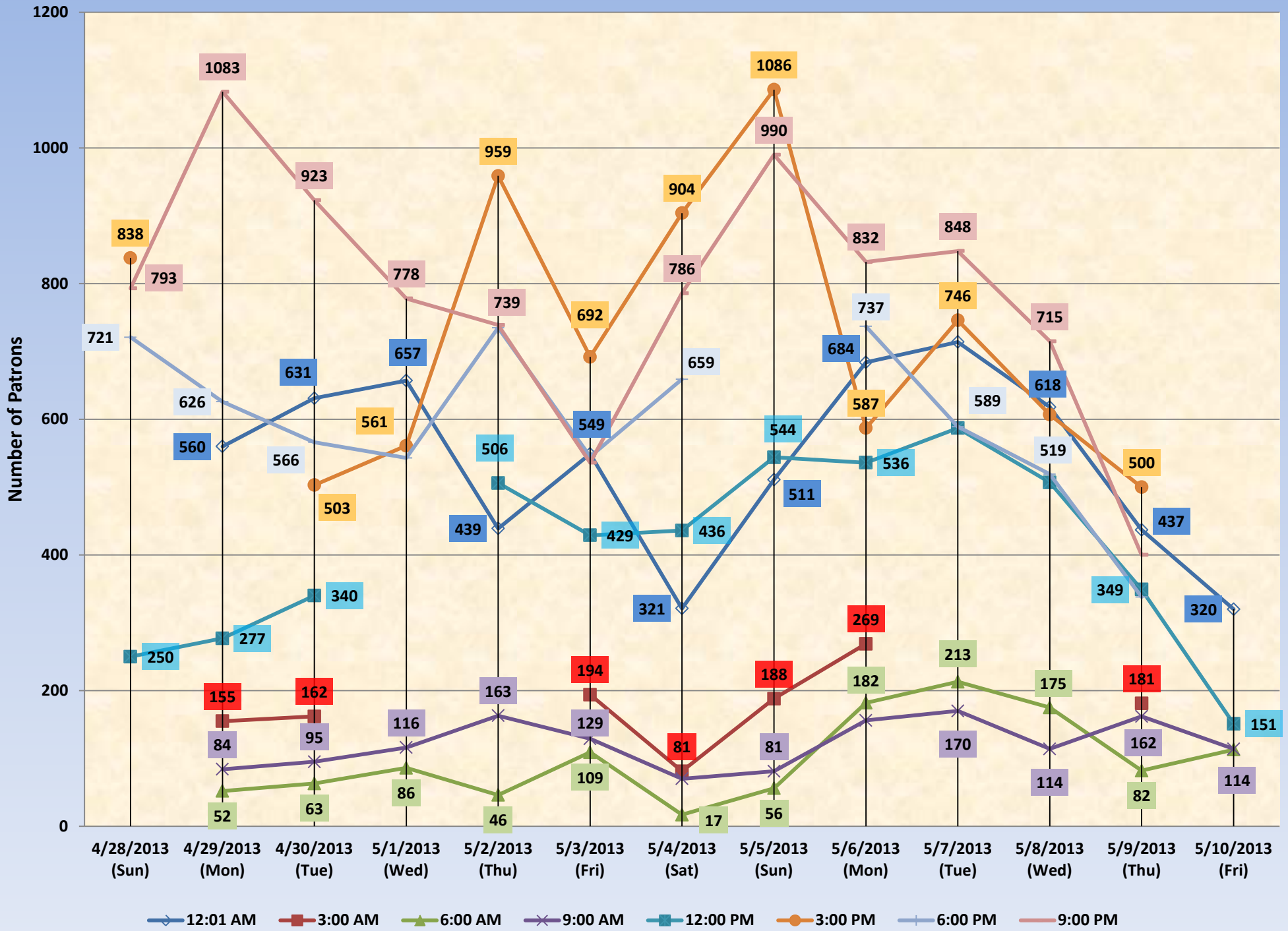


# Finals Patron Counts, Fall 2012

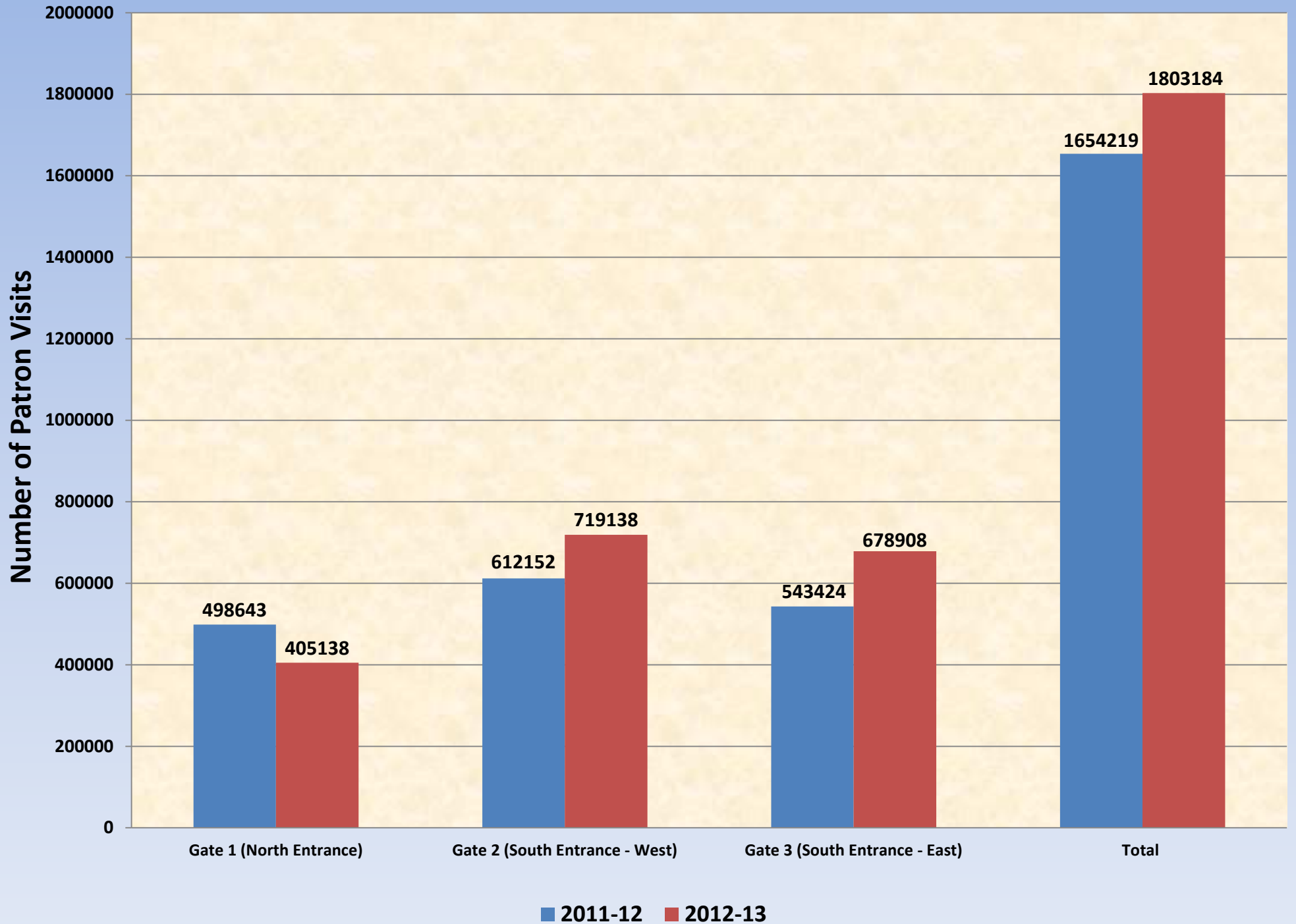




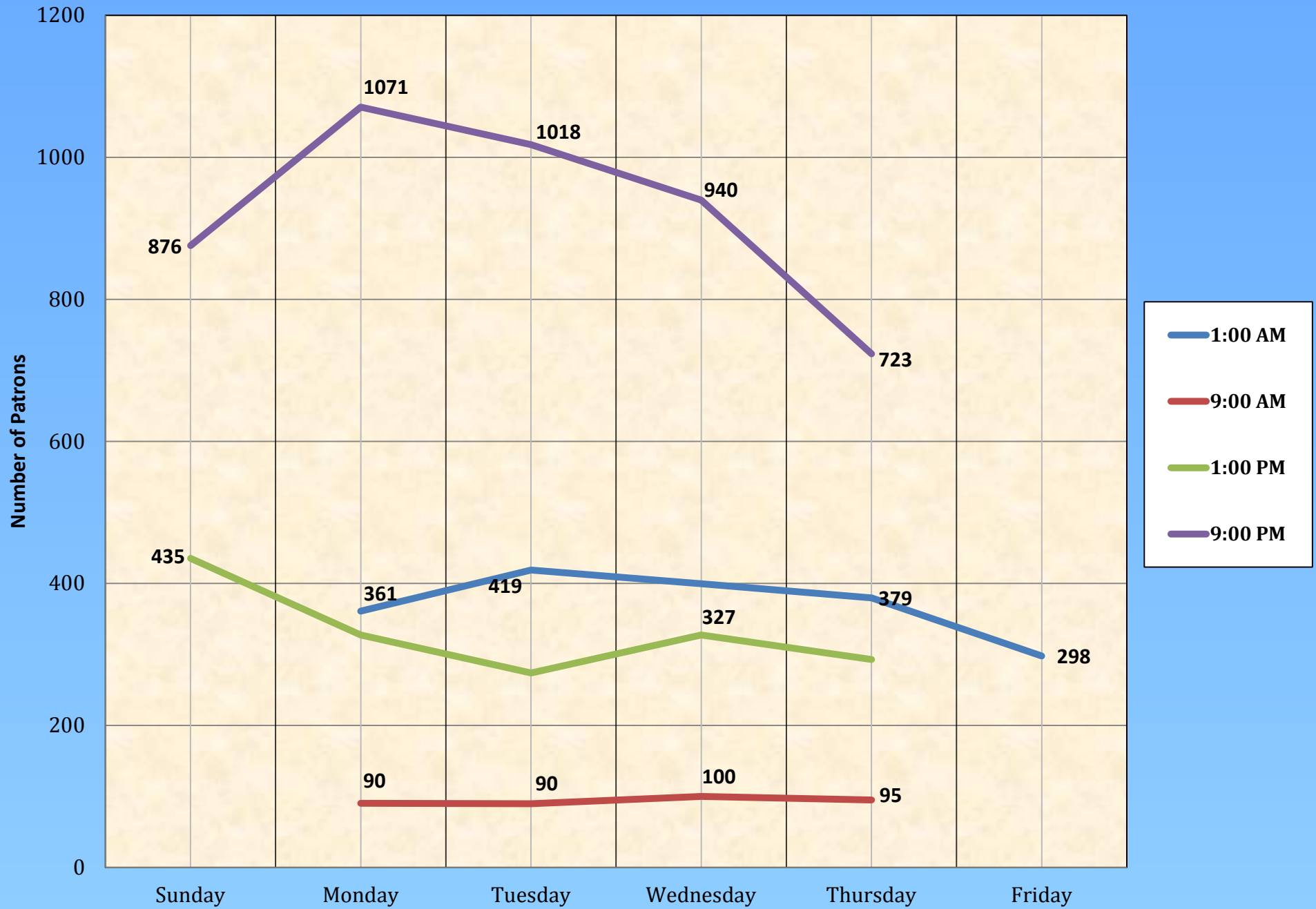
# Finals Patron Counts, Spring 2013



## Gate Count Patron Visit Totals - Comparison Chart



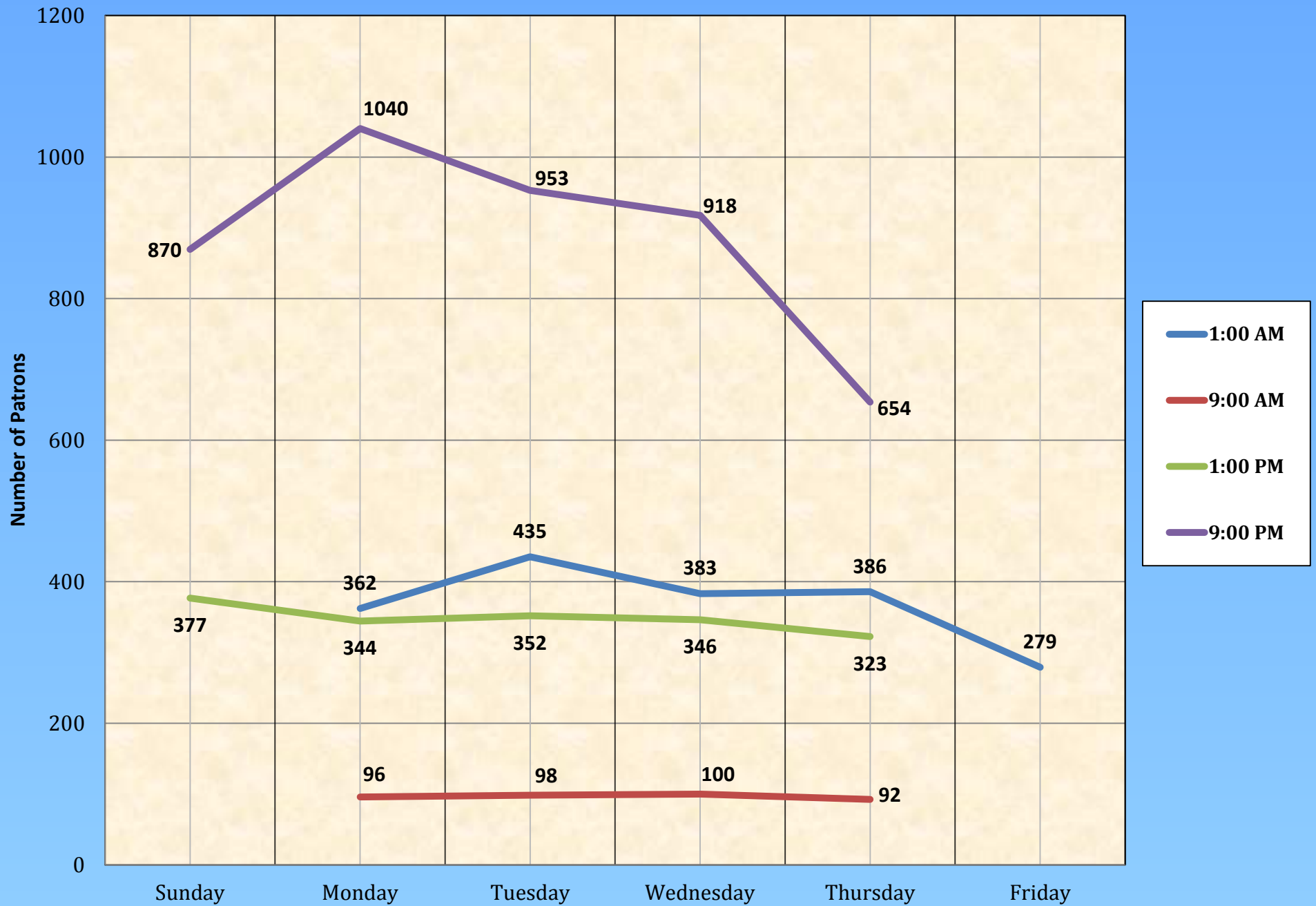
# Fall 2012 Daily Wireless Users Averages by Time of Day



## Fall 2012 Daily Wireless Users Highest Value by Time of Day



# Spring 2013 Daily Wireless Users Averages by Time of Day



# Spring 2013 Daily Wireless Users Highest Value by Time of Day

