

UC Libraries
Shared Print

JACS 7 & 8 Collections
Working Group

JACS 7 & 8 Collections Analysis Overview for the Shared Print Strategy Team
February 2022

Executive Summary

Between December of 2021 and February of 2022, the JACS 7 & 8 Collections Working Group (CWG) reviewed the University of California Libraries' print serials holdings and identified collections priorities and criteria for JACS 7 & 8.¹

Serials holdings from the following OCLC symbols were included in the analysis:

UC Berkeley (CUY)	UC San Diego (CUS)
UC Davis (CUV)	UC Los Angeles (CLU)
UC Davis Health Sciences (CUX)	UC Santa Barbara (CUT)
UC San Francisco (CUN)	UC Riverside (CRU)
UC Santa Cruz (CUZ)	UC Northern Regional Library Facility (ZAP)
UC Irvine (CUI)	UC Southern Regional Library Facility (ZAS)

The UC instance of the AGUA collections analysis tool was used to normalize UC's data with the Ulrich's XML data service and divide eligible journal backfiles into title categories.

- Title Category 1 (print titles with secure, digital surrogates -- e.g. Portico, CLOCKSS)
- Title Category 3 (print titles that are electronically indexed/abstracted with some electronic full-text availability)
- Title Category 4 (print titles that are electronically index/abstracted with no full-text availability)
- Title Category 5 (print only titles)
- Title Category 6 (JSTOR titles)

The resulting dataset identified 893,110 unique, eligible volumes for JACS 7 & 8. Beginning with JACS 7 & 8, the collections analysis will be performed biennially; the goal of this analysis is to identify approximately 500 titles for each RLF representing 40,000 total volumes for retention over the course of two years. In order to narrow down the list of high quality titles to meet the target 40,000 volumes to be archived in JACS 7 & 8, the Shared Print Strategy Team's Collections Working Group identified the following priorities for JACS 7 & 8:

- Consolidate duplicated titles and facilitate space reclamation.
- Identify title lists which, by virtue of persistent electronic availability or growing restrictions on electronic access, are optimal candidates for either the deduplication services or preservation protections available through JACS.
- WEST archived titles (with the exception of JSTOR) will continue to be excluded from candidacy for JACS.²
- There will be an opportunity for UC Libraries CKGs to make recommendations or nominations for the JACS 7 & 8 title lists.

The criteria outlined in this summary reflect JACS 7 & 8 priorities and are intended for use in JACS 7 & 8 only. Criteria for future JACS might reflect different priorities. The resulting JACS title list, totaling 40,001 volumes across 646 journal families, reflect a broad range of subject areas, and holdings for the selected titles are widely distributed among the UC campuses. The JACS 7 & 8 title list is evenly divided between the RLFs.

JACS 7 & 8 Collections Working Group

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¹ Beginning with JACS 7 & 8, the collections analysis will be performed biennially.

² The assumption being that we do not intend to prioritize storage capacity for titles already retained as part of UC's partnership in WEST. JSTOR, given UC's specific role as a JSTOR archiving institution, is a different question. Historically, UC has not participated in archiving JSTOR on behalf of WEST.

JACS 7 & 8 Collections Analysis Overview

The JACS 7 & 8 Collections Working Group (JACS 7 & 8 CWG) was charged with preparing a title list totaling approximately 40,000 volumes to be preserved during the 2022-2023 and 2023-2024 campaigns. The AGUA collections analysis tool identified 30,456 journal families with 893,110 unique, eligible volumes for JACS 7 & 8.

Journal Families	Estimated Volumes
30,456	893,110

Table 1. Unique candidate journal families for JACS 7 & 8 and estimated volumes

This is a significant increase from the number of eligible journal families and estimated volumes in the JACS 5 analysis (the last analysis to use a fresh dataset). This is likely due to major changes to the AGUA database and matching capabilities implemented in 2021 which improve the likelihood that a record matches to a journal family and is thus made eligible for the JACS analysis. A brief analysis of records ingested and journal families identified in the last three JACS analyses to use fresh data ingests highlights this trend:

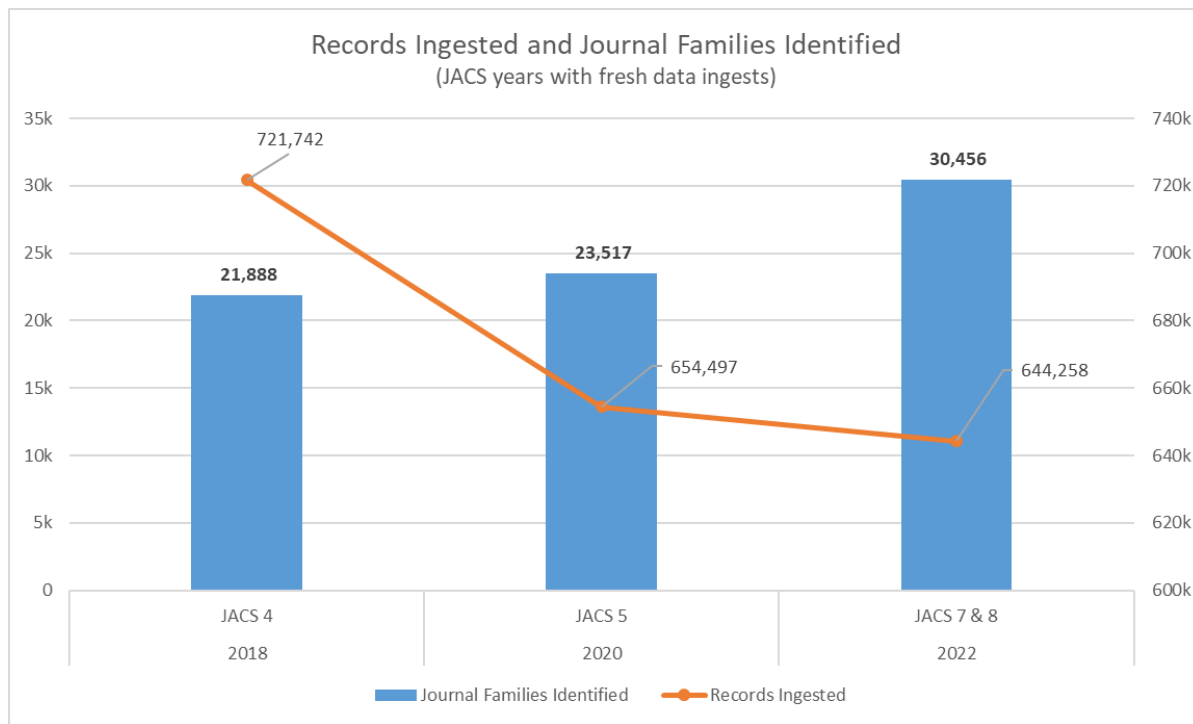


Figure 1. Brief analysis of the number of records ingested and the number of journal families identified in the last three JACS analyses where fresh data was ingested. The trend shows that even while the number of records ingested has decreased, the number of journal families eligible for JACS has increased.

Additional changes to the WEST collection model were also implemented in 2021 that changed the distribution of journal families across the title categories. The inclusion of the HathiTrust Digital Library (HTDL) as a comparator title list to identify titles for Title Category 1 has greatly expanded insights into the digital availability of journal and serial content. This change shifted a large number of journal families from the highest risk to the lowest risk title categories, providing UC new opportunities to deduplicate systemwide print collections for titles that have secure digital surrogates.

	JACS 5 Title Category					
JACS 7 & 8 TC	TC1	TC3	TC4	TC5	TC6	Grand Total
TC1	772	1,257	3,447	5,066	1	10,543
TC3	0	1,076	92	9		1,177
TC4	0	30	883	31		944
TC5	0	0	9	4,848		4,857
TC6	3	1	5	0	425	434
Grand Total	775	2,364	4,436	9,954	426	17,955

Table 2. Movement of journal families between title categories from JACS 5 to JACS 7 & 8. Over 9,700 journal families moved from higher risk title categories (TC3, TC4, and TC5) in JACS 5 to the low risk Title Category 1 in JACS 7 & 8.

A comparison of the title categories by overlap level shows that while Title Category 6 (JSTOR) shows the highest average overlap, the largest number of eligible journal families fall into Title Category 1 (Portico, CLOCKSS, HTDL), which saw a major increase in the number of eligible journal families since the last JACS analysis (1,446 eligible journal families in JACS 5 compared to 22,371 eligible journal families in JACS 7 & 8). With the success during JACS 6 targeting JSTOR titles for archiving, the overlap in Title Category 6 skews much lower and significantly fewer Title Category 6 journal families are eligible for archiving in JACS 7 & 8. While the overall average overlap for Title Category 1 is lower than the overall average overlap for Title Category 6, there are far more high-overlap journal families eligible for archiving in Title Category 1 than any other category.

Overlap Level	1	2	3	4	5	6	7	8	9	10	11	Grand Total	Avg. Overlap
Title Category 1	5,919	6,078	4,392	2,994	1,525	787	392	198	59	24	3	22,371	2.71
Title Category 3	819	343	95	41	18	6	1	1	1	--	--	1,325	1.59
Title Category 4	659	347	118	45	21	6	1	2	--	--	--	1,199	1.71
Title Category 5	3,018	1,421	398	178	47	25	6	2	--	--	--	5,095	1.61
Title Category 6	107	61	35	34	49	56	52	44	23	5	--	466	4.34
Grand Total	10,522	8,250	5,038	3,292	1,660	880	452	247	83	29	3	30,456	2.47

Table 3. Overlap levels of unique journal families per title category (color scale formatted by overlap level per title category)

Over 80% of the eligible journal families and 84% of the total estimated volumes held by the campuses are in Title Category 1, meaning that the vast majority of the materials eligible for JACS 7 & 8 have been digitally preserved in Portico, CLOCKSS, or the HathiTrust Digital Library.

	Title Category 1		Title Category 3		Title Category 4		Title Category 5		Title Category 6		Total	
Summary by Campus	Eligible JFs Held	Estimated Volumes	Eligible JFs Held	Estimated Volumes	Eligible JFs Held	Estimated Volumes	Eligible JFs Held	Estimated Volumes	Eligible JFs Held	Estimated Volumes	Eligible JFs Held	Estimated Volumes
CLU (UC Los Angeles)	7,587	187,965	276	4,379	280	4,991	1,199	20,218	286	12,518	9,628	230,071
CRU (UC Riverside)	717	14,533	49	1,178	26	581	147	1,837	133	5,921	1,072	24,050
CUI (UC Irvine)	2,491	40,642	80	1,109	86	1,055	266	2,107	163	4,936	3,086	49,849
CUN (UC San Francisco)	431	8,375	21	369	36	703	60	576	5	47	553	10,070
CUS (UC San Diego)	3,273	75,206	67	962	72	1,457	171	2,615	115	2,555	3,698	82,795
CUT (UC Santa Barbara)	4,469	80,000	115	1,855	116	1,706	589	5,231	184	5,758	5,478	94,550
CUV (UC Davis)	3,356	77,995	152	3,696	115	2,431	604	8,925	162	6,405	4,398	99,452
CUX (UC Davis, Health)	802	15,046	31	670	63	1,368	172	1,536	12	560	1,080	19,180
CUY (UC Berkeley)	13,236	363,454	647	9,957	432	9,049	1,887	25,486	317	14,025	16,519	421,971
CUZ (UC Santa Cruz)	1,818	32,332	19	306	15	279	81	684	130	3,474	2,063	37,075
ZAP (UC NRLF)	12,355	261,279	336	5,351	352	5,538	1,572	15,175	252	9,367	14,867	296,710
ZAS (UC SRLF)	10,171	250,750	311	5,100	458	8,464	1,461	16,610	265	11,774	12,666	292,698
Grand Total	60,706	1,407,577	2,104	34,932	2,051	37,622	8,209	101,000	2,024	77,340	75,108	1,658,471

Table 4. Detail of Eligible Journal Families/Volumes per Title Category by Campus (color scale formatted by measure by campus).

Criteria, priorities, and recommendations

Since the last JACS analysis, a number of new criteria have been added to the AGUA-generated collections analysis reports. The CWG leveraged three new data points while crafting priorities for the JACS 7 & 8 title list:

- **% of published run held.** A calculated comparison of the depth of local holdings against the calculated depth of the full published run.
- **Rosemont Archived.** A flag indicating if the title has been disclosed as retained for one of the Rosemont Alliance partner programs.
- **Count of PAPR Institutions.** A count of the number of institutions disclosing retained holdings to PAPR of titles in the journal family (includes duplicate commitments to a single program).

CWG analysis and priorities

The JACS 7 & 8 CWG aimed to compile a list that offered significant and wide-spread opportunities for deduplication of campus collections with the goal of reclaiming space to be used for ongoing local collection development and other library and campus priorities. Additionally, UC Libraries' Common Knowledge Groups (CKG) were invited to nominate eligible titles in their domain area for consideration (see [CKG title nominations](#) section below for more information about this process).

To meet the goal of creating wide-spread opportunities for deduplication, the CWG prioritized the following criteria to create the final JACS 7 & 8 title list:

Criterion	Value
Duplication in UC	Held by 5 or more campuses
Rosemont Archived	no
Count of PAPR Institutions	Disclosed in PAPR by up to 2 institutions
Range across UC ³	At least 30 volumes to be archived per journal family
% of published run held	Backfile is at least 50% complete

Table 5. Criteria adopted by the CWG to build the JACS 7 & 8 title list

These criteria generated a list of 611 journal families with a total of 38,032 volumes preserved at the RLFs. These criteria also provided flexibility to incorporate CKG title nominations, allowing for adjustments to increase or decrease the number of journal families and volumes added through this mathematical approach to accommodate more or fewer nominations as needed.

CKG title nominations

Five CKGs expressed interest in nominating titles for the JACS 7 & 8 title list. Four of these CKGs provided the Collections Analyst criteria for titles they wished to review, which the Analyst used to create review lists to facilitate nomination selection. Three CKGs submitted nominations by the CWG's January 28, 2022 deadline. An initial analysis of the nominations show the following characteristics:

³ "Range across UC" provides an estimate of the number of volumes to be archived for that journal family.

Common Knowledge Group	Journal Families	Est. Volumes to Preserve	Avg. Duplication in UC	Avg. % of Published Run Held	Titles Archived by Rosemont Partners
English and American Literature	71	3,188	4.99	75.73%	49 (69%)
Government Information Libraries	136	3,470	2.17	71.91%	49 (36%)
Physical Sciences & Engineering	4	440	6.25	169.50% ⁴	4 (100%)
Overall	211	7,098	3.19	75.05%	102 (48%)

Table 6. Summary of Common Knowledge Group title nominations for JACS 7 & 8

Two of the journal families nominated by the CKGs were already included in the CWG list of titles: all other nominations did not meet one or more of the criteria prioritized by the CWG for the JACS 7 & 8 title list (for example, 102 [48%] of the nominated journal families have already been archived for at least one Rosemont Alliance partner program, and 162 [77%] of the nominated journal families are held by fewer than five campuses).

The CWG considered two scenarios for incorporating title nominations into the final title list: treating all title nominations equally by applying a single set of criteria to all nominations, or employing an equitable treatment by applying different criteria to each CKG's nominations individually. Each approach had benefits and considerations:

Scenario	Short description	Benefits	Considerations
1. Equal treatment	Applies the same criteria to all title nominations	<ul style="list-style-type: none"> • Clear, simple, and easy to understand and explain • Meets target volume threshold for JACS 7 & 8 (40,000 volumes) with no need to add journals outside of CWG priorities 	<ul style="list-style-type: none"> • Not all CKGs have title nominations accepted for the final title list • Unbalanced impacts on the RLFs, requiring manual rebalancing
2. Equitable treatment	Applies different criteria to each CKG's title nominations	<ul style="list-style-type: none"> • Each CKG has some title nominations accepted for the final title list • Encourages ongoing engagement with the JACS nomination process • Greater systemwide benefits • Nearly evenly balanced archiving impacts on the RLFs 	<ul style="list-style-type: none"> • Does not meet the volume threshold for JACS 7 & 8 (40,000 volumes to archive), requiring manually adding journals outside of CWG priorities • More complicated to understand and explain

Table 7. Summary of scenarios for incorporating title nominations into CWG priorities for JACS 7 & 8, with benefits and considerations

⁴ The calculated completeness percentage is a comparison of the estimated number of volumes held against the estimated number of volumes in the full published journal run. This number may be greater than 100% if the estimated number of volumes held is greater than the estimated number of volumes published.

These two scenarios see the following outcomes:

RLF	Scenario 1 Journal Families	Scenario 1 Volumes to preserve
NRLF	15	571
SRLF	32	1,407
Total	47	1,978

Table 8. Archiving impacts of Scenario 1 on the RLFs

RLF	Scenario 2 Journal Families	Scenario 2 Volumes to preserve
NRLF	12	825
SRLF	11	801
Total	23	1,626

Table 9. Archiving impacts of Scenario 2 on the RLFs

After discussing these scenarios and weighing the benefits of each, the CWG endorsed a recommendation to move forward with the equitable treatment of CKG title nominations (title nomination scenario #2) to encourage continued engagement in the JACS nomination process by the CKGs, provide greater systemwide benefits and opportunities for local space reclamation, and minimize the need to rebalance archiving proposals between the two RLFs.

With this combination NRLF falls slightly short of the 20,000 volume threshold for archiving over two years. Additional journals were manually identified for archiving by expanding the criteria to include select journals with backfiles of 28-29 volumes (slightly under the priority threshold of 30 volumes to archive per journal) while retaining the other CWG priority criteria.

Final outcomes and impacts

Combined, the CWG priorities with the preferred scenario for treatment of the CKG title nominations and the manually-selected titles distributed archiving evenly between the RLFs. The JACS 7 & 8 analysis did not actively prioritize titles already held at either RLF.

The JACS 7 & 8 title list is evenly distributed between the RLFs.

RLF / JACS Year	Journal Families	Volumes to Preserve
NRLF total	325	20,000
JACS 7	154	10,000
JACS 8	171	10,000
SRLF total	321	20,001
JACS 7	148	10,002
JACS 8	173	9,999
Grand Total	646	40,001

Table 10. RLF archiving for each JACS year

Campuses with larger collections see greater impacts and potential benefits, but overall each campus has opportunities for space reclamation each year.

Campus Contributor	Est. Volumes (with duplicates)
UC Berkeley (CUY)	21,275
UC Davis (CUV)	9,775
UC Davis Health Sciences (CUX)	746
UC Irvine (CUI)	4,028
UC Los Angeles (CLU)	18,548
UC Riverside (CRU)	1,319
UC San Diego (CUS)	8,077
UC San Francisco (CUN)	995
UC Santa Barbara (CUT)	9,353
UC Santa Cruz (CUZ)	3,446
NRLF (ZAP)	14,504
SRLF (ZAS)	17,769
Grand Total	109,835

Table 11. Estimated volumes per campus contributor, including duplicates (in alphabetical order)

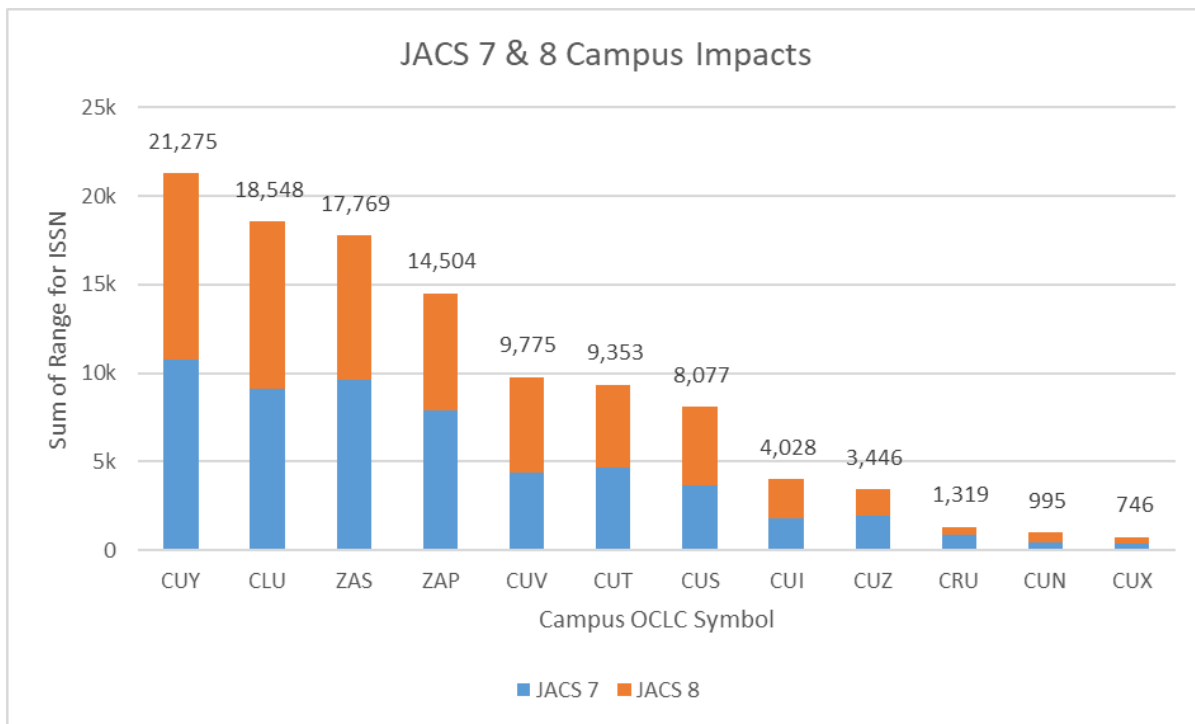


Figure 2. Estimated volumes per campus contributor, including duplicates (in descending order)

Considerations for future JACS analyses

What's left to archive for JACS

To date, each JACS analysis has strived to identify titles that are widely duplicated across the UC system in order to provide broad opportunities for deduplication of local collections for space reclamation. This mathematical approach has been highly successful; a brief analysis of the remaining journal families that will likely be eligible in future JACS analyses shows that this approach may be leveraged for several more JACS analyses.

Duplication in UC	Journal Families Remaining	Volumes to Preserve
1-4 campuses	27,092 (91%)	713,285 (84%)
5-11 campuses	2,718 (9%)	139,824 (16%)
Grand Total	29,810	853,109

Table 12. Overlap analysis of remaining journal families, with volumes to preserve

However, the CWG has noted that the number of highly duplicated titles that are not yet archived by any Rosemont program is rapidly diminishing. Titles with lower levels of duplication in UC are less likely to already be archived by Rosemont.

Duplication in UC	Journal Families Remaining	Journal Families Remaining Not Archived by Rosemont	% Not Archived by Rosemont
1-4 campuses	27,092	19,747	72.89%
5-11 campuses	2,718	520	19.13%
Grand Total	29,810	20,267	67.99%

Table 13. Remaining JACS-eligible journals with Rosemont retention comparison, by duplication level

Looking more closely at the remaining JACS-eligible journals that have not yet been archived by any Rosemont program, it is clear that the current JACS model that targets high-overlap titles and also attempts to avoid duplicating archiving work already accomplished by Rosemont has limited ongoing viability.

Duplication in UC	Journal Families Remaining (Not Archived by Rosemont)	Volumes Remaining to Preserve (Not Archived by Rosemont)
1-4 campuses	19,747	443,958
5-11 campuses	520	12,562
Grand Total	20,267	456,520

Table 14. Remaining JACS-eligible journals not archived by any Rosemont partner program, with volumes to preserve, by duplication level

- *Area for future consideration:* Consider the ongoing utility of the current JACS model, for UC as well as in the context of the larger shared print community. Balance the established space reclamation goals of the JACS program with the ongoing priority to reduce duplication of effort across the shared print community as well as the emerging emphasis on preserving scarcely held titles and last copies.

JACS in the context of SILS and SPCMS

In late 2020, the Council of University Librarians (CoUL) charged a working group to “evaluate and recommend systemwide, coordinated approaches to RLF deposits and managing the UC Libraries print collective collection.”⁵ The Shared Print Collection Management Strategy (SPCMS) Working Group has investigated the current state of shared print in the UC system, including formal consortial relationships and *de facto* shared print such as the RLF persistent collections. At the same time, the UC campuses migrated to a networked Alma environment in late July 2021. This new networked environment offers significant opportunities for new analyses of the systemwide collections via Network Zone (NZ) Analytics (and potentially other tools). These developments in the strategic and operational approaches to systemwide and shared collections offer new opportunities to consider how the JACS model might be leveraged or modified to meet emerging and expanded needs.

- *Area for future consideration:* Consider the ongoing role and value of a systemwide shared print program narrowly scoped to print journals, and the benefits and considerations of expanding the scope of the analysis to include other print materials (e.g., monographs, federal and international documents). Consider the comparative benefits of different tools used to conduct systemwide analyses (e.g., AGUA, NZ Analytics), and how strategic investments such as SILS can be leveraged to benefit preservation and space reclamation needs as well as the strategic goals outlined in the work of the SPCMS Working Group.

The role of CKG title nominations

Starting in JACS 5, the CWG has invited the UC CKGs to nominate titles for inclusion on the final JACS title list. This has injected a curatorial aspect into the JACS analysis, which can at times be at odds with SPST and CWG mathematical priorities for JACS; for example, over three-quarters of journal families nominated by CKGs in JACS 7 & 8 were held by fewer than five campuses.

Duplication in UC	Journal Families	Volumes to Preserve
1-4 campuses	162 (77%)	4,377 (62%)
5-11 campuses	49 (23%)	2,721 (38%)
Grand Total	211	7,096

Table 15. Overlap analysis of all journal families nominated by CKGs for inclusion in JACS 7 & 8, with volumes to preserve

Though the sample size is small, this indicates curator interest in preserving titles with low levels of systemwide duplication.

- *Area for future consideration:* Consider how to balance the more curatorial CKG nominations in a program established to prioritize high levels of duplication over scarcely held titles. The CWG would value future SPST guidance on (1) what portion of the total JACS volumes should be drawn from title nominations; and/or (2) evaluation criteria for CKG title nominations.

CKG title nomination timeline

CKG engagement with the JACS title nomination process has increased each year since implementation. However, CKGs have provided feedback that the timeline for participation presents challenges for their members to fully engage with the process. In JACS 7 & 8, the following timeline was affirmed by SPST at its October 2021 meeting:

⁵ The full SPCMS Working Group charge is available on the California Digital Library website:

https://cdlib.org/wp-content/uploads/2020/11/0.FINALcharge_Working-Group-for-Systemwide-Collection-Strategy_2020.06.25.pdf

- Mid-November 2021: CKGs express interest in participating in the title nomination process
- Late November 2021: Interested CKGs provide criteria for creating review lists
- Mid-December 2021: Project Team distributes review lists
- Late January 2022: Deadline for submitting title nominations
- Mid-February: SPST review of final title list

One CKG that was interested in participating but was ultimately unable to submit nominations noted that the timing of this request coincided with several competing items in their members’ schedules, including winter holidays and the beginnings of new semesters and quarters. This timeline may have dissuaded other CKGs from participating as well.

JACS year	CKGs expressing interest	CKGs submitting nominations
JACS 5 (2020)	2	1
JACS 6 (2021)	3	3
JACS 7 & 8 (2022)	5	3

Table 16. Yearly CKG engagement with the JACS title nomination process

- *Area for future consideration:* Consider extending the timeline for CKG engagement by initiating engagement earlier (currently late October) and delaying the SPST review of the final title list (currently late February). This is a topic that should be discussed with SPOT to understand the impact of any delay to RLF processing timelines.

Appendix 1: JACS 7 & 8 Title List Characteristics

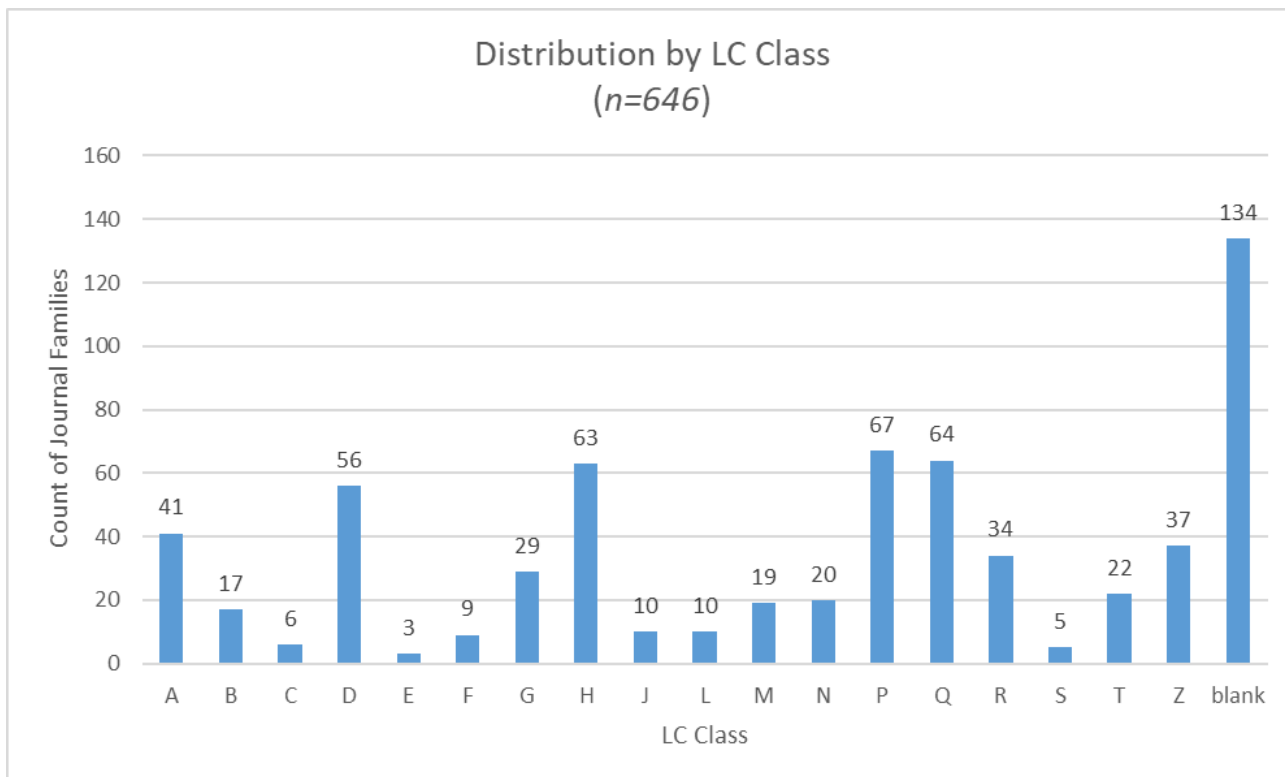


Figure 3. Unique journal families by LC Class

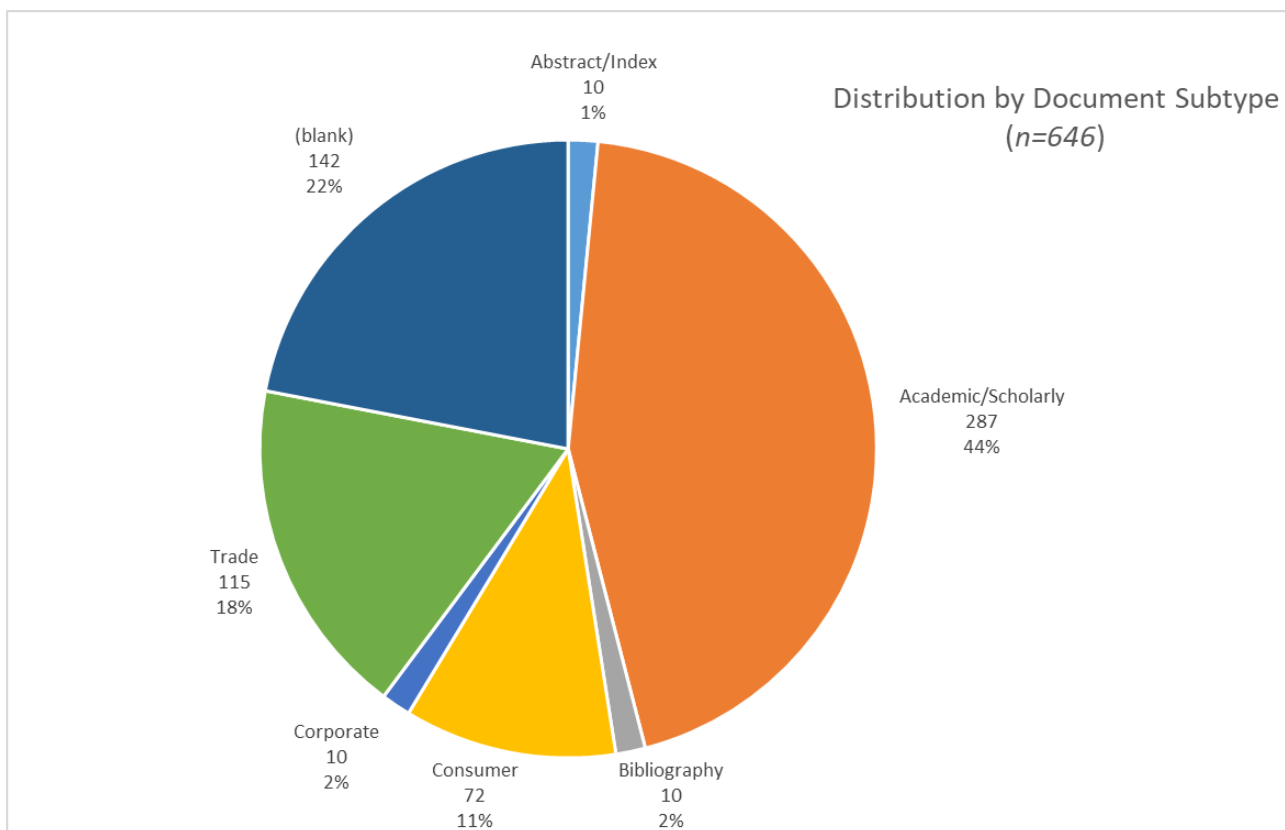


Figure 4. Journal families by Document Subtype

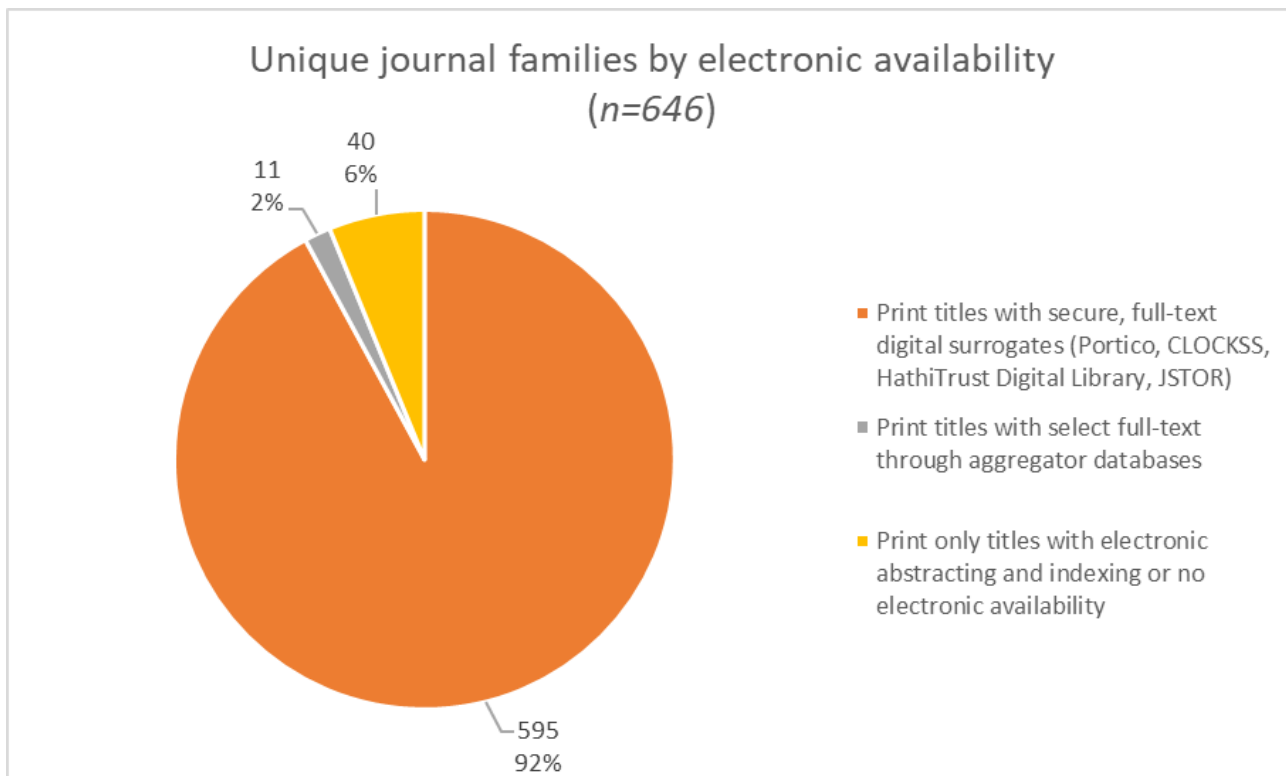


Figure 5. Journal families by electronic availability

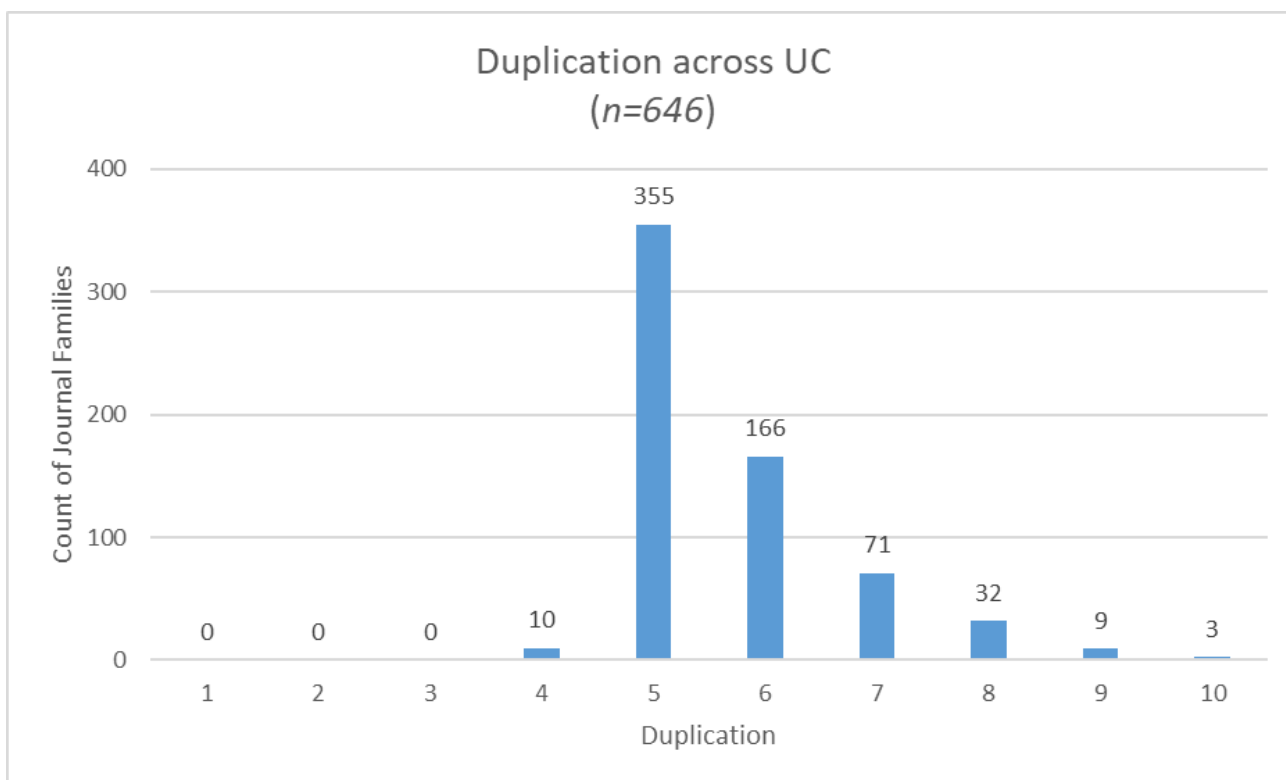


Figure 6. JACS 7 & 8 title list distribution by duplication level