



History and Acknowledgements

The PA Digital Metadata Team develops and maintains these guidelines, which were initially drafted in 2015 and first published in 2016. They are reviewed and updated regularly. We wish to thank the following current and past team members who have contributed:

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Questions or comments on these guidelines are welcome and may be sent to info@padigital.org.



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Table of Contents

History and Acknowledgements	1
Table of Contents	2
Introduction	4
Shareable Metadata	4
Wikimedia Commons Partnership	5
Quick Reference: PA Digital Metadata Mapping Recommendations for Dublin Core	6
Guidelines Key	8
Fields	9
Alternative Title	9
Collection Name	9
Contributing Institution	10
Contributor	11
Creator	12
Date	12
Description	14
Extent	15
File Format	16
Format	17
Identifier	18
IIIF Base URL	19
IIIF Manifest	19
Intermediate Provider	20
Language	21
Media Master	21
Place	22

Preview	23
Publisher	24
Relation	25
Replaced By	26
Replaces	26
Rights	27
Rights Holder	28
Rights URI	29
Source	30
Subject	31
Temporal Coverage	32
Title	33
Type	34
URL	35
Appendix A - Changes From Version 2.0	36
Appendix B - Resources Referenced	37
Appendix C - Standards and Controlled Vocabularies Referenced	38
Appendix D - PA Digital to DPLA Crosswalk	39

Introduction

These guidelines are meant to assist contributing institutions as they plan metadata creation for digital projects. They also serve as an assessment tool for legacy collections and remediation planning. We recognize that contributing shareable metadata takes time and resources. To support our partners, the PA Digital Metadata Team provides consultation services on description, remediation, and rights assessment during the onboarding process and beyond. To inquire about these services, please contact info@padigital.org.

Potential contributors should review PA Digital's [Readiness Checklist](#) in addition to these guidelines. Adhering to these guidelines makes the onboarding process much easier, but PA Digital is able to accommodate institutions whose metadata do not conform to the mapping recommendations outlined here as long as use is consistent.

Our aggregation software uses the [Open Archives Initiative's Protocol for Metadata Harvesting](#) (OAI-PMH). The following best practices apply to metadata contributed to PA Digital generally:

- We recommend the use of qualified Dublin Core elements whenever possible. If your repository does not support the use of qualified Dublin Core, use the matching simple Dublin Core element recommended in these guidelines.
- Unless otherwise specified, metadata should describe the **original resource**, not its digital representation.
- Common delimiting characters such as pipes (" | ") and semicolons (" ; ") should be avoided; unless otherwise specified, PA Digital uses semicolons to delimit fields with multiple values.
- A rights statement is required for each record aggregated. URIs that communicate rights held over the digitized resource, such as those from rightsstatements.org and creativecommons.org, are preferred; textual rights statements are acceptable.

We also accept metadata in MODS or MARC in XML, as well as in consistently structured, delimited text files (CSVs, TSVs, etc.).

Incoming metadata are normalized and mapped using Extensible Stylesheet Language Transformations (XSLT) scripts, which are maintained and located in our GitHub repository here: https://github.com/tulibraries/aggregator_mdx

Shareable Metadata

Contributors to PA Digital should strive to provide shareable, quality metadata. In [Best Practices for OAI Data Provider Implementations and Shareable Metadata](#) (2007), the authors provide recommendations to assure that aggregated records retain meaning within a shared portal. The characteristics they describe are useful for contributors to PA Digital and DPLA.



Context. Records within DPLA are removed from the context provided by local systems and users. Descriptions that make sense locally may not be ideal in a large, shared system such as DPLA. Quality, shareable metadata remain meaningful even in an aggregated environment removed from the originating repository.

Completeness. Records in a shared system are most discoverable and meaningful when they are complete and robust. They should make sense standing on their own and they should be rich enough to enable discovery in a system with roughly millions of records. Avoid the use of abbreviations or ambiguous references.

Consistency. Syntax, elements, and vocabularies should be used consistently. This allows PA Digital and DPLA to more easily assess, prepare, and aggregate your metadata and provide discovery platforms that increase access to your valuable, contributed resources.

Controlled vocabularies. The use of widely-adopted vocabularies helps to better integrate records from other contributing institutions.

In the spirit of shareable metadata, note that PA Digital and DPLA require that metadata (*but not digital content*) be licensed as [CC0](#) (“No rights reserved”). The following excerpt from [The Digital Public Library of America Policy Statement on Metadata](#) speaks to the importance of this policy in fulfilling DPLA’s mission and values:

“The DPLA aims to make the cultural and scientific record available, free of charge, to all through databases of metadata. The DPLA, for this purpose, has undertaken the task of ingesting, indexing, enriching, and making available descriptive metadata and wishes to make such metadata widely available for reuse.

The DPLA wishes to promote innovation in the development of applications and tools that use and rely on this metadata. In order to foster such innovation, the DPLA is committed to ensuring such metadata is unencumbered by legal restrictions. This policy and statement on metadata contained in the DPLA’s databases reflects that commitment. To that same end, the DPLA believes this policy is in accord with the letter and spirit of United States copyright law and would be fully respected in a court of law.

The DPLA hopes that the content and resources in the library will be put to creative uses that educate, inform, and empower current and future generations.”

Wikimedia Commons Partnership

In 2019, DPLA [announced a partnership with the Wikimedia Foundation](#), “to make artifacts from cultural heritage institutions more accessible to all.” The partnership created a pipeline to add public domain objects from DPLA into the Wikimedia Foundation’s various free knowledge services such as Wikipedia.

Through this partnership, PA Digital contributors may share their public domain objects with Wikimedia Commons as part of our routine, quarterly harvests. Shared objects are openly available to Wikimedia users for reuse. This opt-in service can be configured by contacting info@padigital.org.



Quick Reference: PA Digital Metadata Mapping Recommendations for Dublin Core

PA Digital Label	PA Digital Status	Qualified DC Element	Simple DC Element
Alternative Title	Optional	dcterms:alternative	
Contributor	Optional	dcterms:contributor	dc:contributor
Collection Name	Required or Derived**	dcterms:isPartOf	
Contributing Institution	Derived		
Creator	Recommended	dcterms:creator	dc:creator
Date	Recommended	dcterms:created	dc:date
Description	Recommended	dcterms:description	dc:description
Extent	Optional	dcterms:extent	
File Format	Optional	dcterms:format	dc:format
Format	Recommended	dcterms:type	dc:type
Identifier	Optional	dcterms:identifier	dc:identifier
IIIF Base URL	Optional or Derived**	dcterms:identifier	
IIIF Manifest	Optional or Derived**	dcterms:isReferencedBy	
Intermediate Provider	Derived		
URL	Required or Derived**	dcterms:identifier	dc:identifier
Language	Recommended for textual and spoken material	dcterms:language	dc:language
Media Master	Optional or Derived**		
Place	Recommended	dcterms:spatial	dc:coverage
Preview	Strongly recommended or Derived**	dcterms:identifier	dc:identifier
Publisher	Optional	dcterms:publisher	dc:publisher

Relation	Optional	dcterms:relation	dc:relation
Replaced By	Optional	dcterms:isReplacedBy	
Replaces	Optional	dcterms:replaces	
Rights	Required (or Rights URI)	dcterms:rights	dc:rights
Rights Holder	Optional	dcterms:rightsholder	
Source	Optional	dcterms:source	dc:source
Rights URI	Required (or Rights)	dcterms:rights	dc:rights
Subject	Recommended	dcterms:subject	dc:subject
Temporal Coverage	Optional	dcterms:temporal	dc:subject
Title	Required	dcterms:title	dc:title
Type	Recommended	dcterms:type	dc:type

***Values for some fields may be derived from metadata elsewhere in the record. For example, an object or thumbnail URL may be derived from a consistently formatted identifier present in the record, or a collection name may be derived from the setSpec value in the OAI-PMH output.*

Guidelines Key

Fields are arranged alphabetically by PA Digital label. Descriptors with no content are omitted.

PA Digital Label	Field label used by PA Digital
Status	Identifies whether a field is required, strongly recommended, recommended, optional, or derived
Description	A description of the field
Qualified DC Element	The qualified Dublin Core term to which a field should map
Simple DC Element	The simple Dublin Core element to which a field should map if qualified term is unavailable
CONTENTdm Mapping	The DC Map value in Field properties
CSV Header	Recommended header value for delimited text files
Repeatable	Whether a field may be repeated
CV/Syntax	Recommended controlled vocabularies or syntax
Notes and Best Practices	Recommendations for a field's content, application, and use of punctuation
Examples	Examples that illustrate best practices

Fields

[\[Back to Field Table\]](#)

PA Digital Label	Alternative Title
Status	Optional
Description	Any alternative title of the described resource including abbreviations and translations
Qualified DC Element	dcterms:alternative
CONTENTdm Mapping	Title-Alternative
CSV Header	Alternative_Title
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none">• Natural language
Notes and Best Practices	<ul style="list-style-type: none">• Comparable to MARC variations of titles (such as alternative spellings)• May also be used for translations of titles in foreign languages• Avoid use of explanatory or qualifying symbols (e.g., brackets)• Where there are multiple Title fields, any instance after the first will map to Alternative Title
Examples	<ul style="list-style-type: none">• Undergraduate course catalog, 1961-62

[\[Back to Field Table\]](#)

PA Digital Label	Collection Name
Status	Derived (or Required, <i>see below</i>)
Description	Collection or aggregation of which described resource is a part

Qualified DC Element	dcterms:isPartOf
CONTENTdm Mapping	Relation-Is Part Of
CSV Header	Collection_Name
Repeatable	Yes
Notes and Best Practices	<ul style="list-style-type: none"> • Whenever possible, PA Digital will use the setSpec, or collection identifier, value in the OAI-PMH output to generate a human-readable, normalized Collection Name • SetSpec values must be valid; see the pattern requirements under setSpecType in the OAI-PMH specifications • Institutions that wish to map collection names from their metadata rather than the setSpec should inform PA Digital during the onboarding process

[\[Back to Field Table\]](#)

PA Digital Label	Contributing Institution
Status	Derived or PA Digital supplied
Description	The organization that supplies metadata to PA Digital
CSV Header	Data_Provider
Repeatable	Yes
Notes and Best Practices	<ul style="list-style-type: none"> • Values for this field may be mapped from consistently formatted metadata elsewhere in a record; examples include identifiers and object URLs • Values may also be supplied by PA Digital during the ingestion process. Institutions should specify during onboarding the desired value(s) for this field • Under certain circumstances, Contributing Institution values may be mapped from metadata; names should be normalized, consistent, and identifiable

[\[Back to Field Table\]](#)

PA Digital Label	Contributor
Status	Optional
Description	An entity responsible for making secondary contributions to the described resource. Examples of a Contributor include a person, an organization, or a service
Qualified DC Element	dcterms:contributor
Simple DC Element	dc:contributor
CONTENTdm Mapping	Contributor
CSV Header	Contributor
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • Use standard vocabularies such as LCNAF, VIAF, or ULAN whenever possible; consistently applied local vocabularies are acceptable • If an authorized form is unavailable, use similar syntax (Lastname, Firstname, YYYY-YYYY)
Notes and Best Practices	<ul style="list-style-type: none"> • Use a semicolon to separate multiple values • Avoid use of placeholder values (e.g., “Unknown”) • For oral histories, Contributor is the interviewer • Use name only without indication of role except in cases where a person’s role is included in an authorized form. For example, prefer “Smith, John, 1880-1960” not “Smith, John, 1880-1960, publisher”
Examples	<ul style="list-style-type: none"> • Beck, James M. (James Montgomery), 1861-1936 • United States. Army Map Service

[\[Back to Field Table\]](#)

PA Digital Label	Creator
Status	Recommended
Description	An entity primarily responsible for making the described resource. Examples of a Creator include a person, an organization, or a service
Qualified DC Element	dcterms:creator
Simple DC Element	dc:creator
CONTENTdm Mapping	Creator
CSV Header	Creator
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • Use standard vocabularies such as LCNAF, VIAF, or ULAN whenever possible; consistently applied local vocabularies are acceptable • If an authorized form is unavailable, use similar syntax (Lastname, Firstname, YYYY-YYYY)
Notes and Best Practices	<ul style="list-style-type: none"> • Use a semicolon to separate multiple values • Avoid use of placeholder values (e.g., “Unknown”) • For oral histories, Creator is the interviewee • Use name only without indication of role except in cases where a person’s role is included in an authorized form. For example, prefer “Smith, John, 1880-1960” not “Smith, John, 1880-1960, publisher”
Examples	<ul style="list-style-type: none"> • Littell, Franklin H. (Franklin Hamlin), 1917-2009 • Catholic Church. Archdiocese of Philadelphia (Pa.)

[\[Back to Field Table\]](#)

PA Digital Label	Date
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Status	Recommended
Description	Date of creation of the described resource
Qualified DC Element	dcterms:date
Simple DC Element	dc:date
CONTENTdm Mapping	Date
CSV Header	Date
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • Prefer use of EDTF for both known and uncertain dates • DPLA can parse many types and formats of dates. Please refer to their Geographic and Temporal Guidelines for examples
Notes and Best Practices	<ul style="list-style-type: none"> • Avoid use of placeholder values (e.g., “Unknown”, “n.d.”). If a date is unknown, we encourage including an estimated date range or value compatible with EDTF. If an estimate cannot be made, leave the field blank • For guidance on dates or date ranges that reflect “aboutness” (for example, a memoir <i>about</i> the 1870s) please see Temporal Coverage • Except where appropriate for born-digital objects, do not map dates of digitization or digital publication (as opposed to the creation of the original) to dcterms:date or dc:date. Institutions with QDC support may use alternate mappings such as dcterms:issued or dcterms:available. Institutions without QDC support should map only the date the item was created to dc:date
Examples	<p>Known date</p> <ul style="list-style-type: none"> • 1999 • 1999-05 • 1999-05-01 <p>Uncertain date</p> <ul style="list-style-type: none"> • 1999? • 199u

	<ul style="list-style-type: none"> • 1999-05? • 1999-05-01? <p>Approximate date</p> <ul style="list-style-type: none"> • 1999~ • 1999-05~ • 1999-05-01~ <p>Date range</p> <ul style="list-style-type: none"> • 1992/1995 • 1990-02-08/2017-03-09 • 1984/2004-06~ <p>Acceptable non-EDTF values</p> <ul style="list-style-type: none"> • circa 1999 • ca. 1999 • approximately 1999 • 1992-1995
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[\[Back to Field Table\]](#)

PA Digital Label	Description
Status	Recommended
Description	A free text account of the described resource that succinctly captures its “aboutness”
Qualified DC Element	dcterms:description
Simple DC Element	dc:description
CONTENTdm Mapping	Description

CSV Header	Description
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> Natural language; semicolons may be used as punctuation
Notes and Best Practices	<ul style="list-style-type: none"> Description at the object-level is highly preferred Contributing institutions should consider the utility of the Description field in the DPLA portal as a rich source of keywords for discovery Do not map fields with OCR or full-text transcription into the Description field Library-supplied descriptions should be reviewed for potentially harmful content and/or bias
Examples	<ul style="list-style-type: none"> Program dated February 14, 1943 for a lecture titled "This Year of Our Lord," given by Fordham University President Robert I. Gannon, S.J. at the Hotel Casey in Scranton, Pennsylvania. Gannon's lecture was part of the University of Scranton Lecture series. The program also advertises the next lecture in the series, a talk on "Christendom and the Coming Peace" by Fordham University professor Gerald Groveland Walsh, S.J. scheduled for March 14, 1943. 4 pages. Mummer's Parade on New Year's Day. South Broad Street, South Philadelphia, PA. Oral history recorded December 23, 1981 and May 20, 1982 in Newark, N.J. and Rochester, N.Y.

[\[Back to Field Table\]](#)

PA Digital Label	Extent
Status	Optional
Description	The size or duration of the described resource. Examples for print materials include number of pages, a specification of length, width, and breadth, or for audio-visual materials, a time period of duration in hours, minutes, and seconds
Qualified DC Element	dcterms:extent
CONTENTdm Mapping	Format-Extent
CSV Header	Extent

Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> Natural language; semicolons may be used as punctuation
Notes and Best Practices	<ul style="list-style-type: none"> Recommend use of a content standard such as RDA, CCO, or DCRMS when applicable Use a semicolon to separate multiple values For dimensions, include units. Spell out abbreviations for maximum clarity For video or sound recording run times, use HH:MM:SS format with leading zeros when necessary
Examples	<ul style="list-style-type: none"> 4 7/8 x 8 3/16 inches 1 map on 13 sheets 00:14:21

[\[Back to Field Table\]](#)

PA Digital Label	File Format
Status	Optional
Description	The file format of the digital object
Qualified DC Element	dcterms:format
Simple DC Element	dc:format
CONTENTdm Mapping	Format
CSV Header	Format
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> Recommend use of IANA Media Types
Notes and Best	<ul style="list-style-type: none"> Entries include a media type and subtype, separated with a slash

Practices	<ul style="list-style-type: none"> • Use a semicolon to separate multiple values
Examples	<ul style="list-style-type: none"> • application/pdf • audio/mpeg • image/jpeg • image/jp2 • image/tiff • video/mpeg • video/mp4

[\[Back to Field Table\]](#)

PA Digital Label	Format
Status	Recommended
Description	Physical medium of the described resource
Qualified DC Element	dcterms:type
Simple DC Element	dc:type
CONTENTdm Mapping	Type
CSV Header	Type
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • Use standard vocabularies such as AAT or TGM; consistently applied local vocabularies are acceptable
Notes and Best Practices	<ul style="list-style-type: none"> • Format is a more granular description of an object's type than what is possible with the DCMI vocabulary used in the Type field

	<ul style="list-style-type: none"> • Values in an incoming Type field not found in the DCMI Type vocabulary will map to Format in PA Digital and DPLA. Please see Type for additional mappings from our Type field • Use a semicolon to separate multiple values
Examples	<ul style="list-style-type: none"> • Fire insurance maps • Zines

[\[Back to Field Table\]](#)

PA Digital Label	Identifier
Status	Derived. PA Digital does not map local record identifiers, but generates its own based on metadata elsewhere in the record. Best practices indicated here are offered as a resource
Description	An unambiguous reference to the described resource within a given context
Qualified DC Element	dcterms:identifier
Simple DC Element	dc:identifier
CONTENTdm Mapping	Identifier
CSV Header	ID
Repeatable	No
CV/Syntax	<ul style="list-style-type: none"> • Recommend alphanumeric strings only with no spaces or special characters such as “ @ “, “ # “, “ \$ “, “ % “, “ & “, “ * “, “ , “, “ . “
Notes and Best Practices	<ul style="list-style-type: none"> • Recommended best practice is to uniquely identify the resource within an institution’s collections by means of a string conforming to a formal identification system
Examples	<ul style="list-style-type: none"> • P441110B • HPHWPZ201404000165

	<ul style="list-style-type: none"> 1999-002_006
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[\[Back to Field Table\]](#)

PA Digital Label	IIIF Base URL
Status	Optional or Derived
Description	The base URL required to access a IIIF service for the digital resource
Qualified DC Element	dcterms:identifier
CSV Header	IIIF_Base
Repeatable	No
Notes and Best Practices	<ul style="list-style-type: none"> Must resolve to a IIIF service For institutions that do not supply IIIF information with their metadata, it may be derived from metadata elsewhere in the record. For example, a IIIF Base URL may be derived from the URL for the digital object With PA Digital guidance, institutions may supply URLs separately in a consistently formatted text file such as CSV
Examples	<ul style="list-style-type: none"> https://digital.library.temple.edu/digital/iiif/p245801coll0/4024/ https://media.philamuseum.org/image/JGJ_B008_F009_001_001/

[\[Back to Field Table\]](#)

PA Digital Label	IIIF Manifest
Status	Optional or Derived
Description	A URI for the manifest of a IIIF resource; may be used to support inclusion of objects in Wikimedia Commons

Qualified DC Element	dcterms:isReferencedBy
CSV Header	IIIF_Man
Repeatable	No
Notes and Best Practices	<ul style="list-style-type: none"> • Must resolve to a IIIF manifest • For institutions that do not supply IIIF information with their metadata, it may be derived from metadata elsewhere in the record. For example, a IIIF Manifest URI may be derived from the URL for the digital object • With PA Digital guidance, institutions may supply URLs separately in a consistently formatted text file such as CSV
Examples	<ul style="list-style-type: none"> • https://digital.library.temple.edu/iiif/info/p245801coll0/4024/manifest.json • https://digital.library.villanova.edu/Item/vudl:92879/Manifest

[\[Back to Field Table\]](#)

PA Digital Label	Intermediate Provider
Status	Derived or PA Digital supplied
Description	An intermediate organization that selects, collates, curates, or provides a repository for data from a contributing institution or institutions that is then aggregated from a single point by PA Digital
CSV Header	Intermediate_Provider
Repeatable	No
Notes and Best Practices	<ul style="list-style-type: none"> • Values for this field may be mapped from consistently formatted metadata elsewhere in the record; examples include identifiers and object URLs • Values may also be supplied by PA Digital during the ingestion process. Intermediate organizations should specify during onboarding the desired value for this field
Examples	<ul style="list-style-type: none"> • POWER Library as sponsor and HSLC as maintainer • Historic Pittsburgh

[\[Back to Field Table\]](#)

PA Digital Label	Language
Status	Recommended for textual and spoken material
Description	Language expressed in a resource that contains text or speech
Qualified DC Element	dcterms:language
Simple DC Element	dc:language
CONTENTdm Mapping	Language
CSV Header	Language
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none">• Use standard or consistently applied local vocabularies; ISO 639-3 is preferred
Notes and Best Practices	<ul style="list-style-type: none">• Use a semicolon to separate multiple values• Do not use for non-linguistic content such as images containing no text
Examples	<ul style="list-style-type: none">• eng• fre• afr ; afu ; eng

[\[Back to Field Table\]](#)

PA Digital Label	Media Master
Status	Optional

Description	URL that points to a downloadable version of the digital object; used to support inclusion of non-IIIF media objects in Wikimedia Commons
Qualified DC Element	<i>See notes below</i>
CSV Header	Media_Master
Repeatable	Yes
Notes and Best Practices	<ul style="list-style-type: none"> • Please contact PA Digital metadata specialists before implementing this field • Must resolve to a downloadable version of the digital object; thumbnails that represent the digital object for the purposes of providing a preview are not acceptable • Records for compound, multipage objects such as books should include a URL to each file associated with the object. Where these are not available via the ingestion process, a CSV supplement may be supplied
Examples	<ul style="list-style-type: none"> • https://archives.philamuseum.org/jgj/JCC_B043_F001_001/cat-0003

[\[Back to Field Table\]](#)

PA Digital Label	Place
Status	Recommended
Description	Geographic location referenced or depicted by the described resource; captures its “aboutness”
Qualified DC Element	dcterms:spatial
Simple DC Element	dc:coverage
CONTENTdm Mapping	Coverage-Spatial
CSV Header	Place

Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> Use standard vocabularies such as LCNAF, TGN, GeoNames, or FAST whenever possible; consistently applied local vocabularies are acceptable
Notes and Best Practices	<ul style="list-style-type: none"> Use a semicolon to separate multiple values This field does not represent the physical location or address of the physical or digital repository where the original item or digital facsimile is held Consistency when using hierarchical values is recommended (e.g., "Pittsburgh, Pennsylvania, United States of America") Addresses, latitude/longitude, or other forms of location markers may also be mapped to this field for the purposes of geolocation and/or digital mapping For latitude/longitude, DPLA prefers latitude first, with the two coordinates separated by a comma, limited to whole numbers and decimals as opposed to degree-minutes-seconds (e.g., "6.703, 46.627"). If used, compass directions should appear after the number See DPLA's Geographic and Temporal Guidelines for more information
Examples	<ul style="list-style-type: none"> Pittsburgh (Pa.) Allegheny County (Pa.) Harrison (Allegheny County, Pa. : Township) 40.85N, 77.84W 40.85, -77.84

[\[Back to Field Table\]](#)

PA Digital Label	Preview
Status	Strongly recommended or Derived
Description	The URL of a thumbnail, extract, or other type of resource representing the digital object for the purposes of providing a preview
Qualified DC Element	dcterms:identifier



Simple DC Element	dc:identifier
CSV Header	Preview
Repeatable	No
Notes and Best Practices	<ul style="list-style-type: none"> • The URL must be identifiable and resolve to a preview of the digital object • Values for this field may be mapped from consistently formatted metadata elsewhere in the record

[\[Back to Field Table\]](#)

PA Digital Label	Publisher
Status	Optional
Description	An entity responsible for making the described, original resource available. Typically, this is a publishing house, corporate body, government agency, university, or other organization
Qualified DC Element	dcterms:publisher
Simple DC Element	dc:publisher
CONTENTdm Mapping	Publisher
CSV Header	Publisher
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • Use standard vocabularies such as LCNAF or VIAF whenever possible; consistently applied local vocabularies are acceptable • If an authorized form is unavailable, use similar syntax; semicolons may be used as punctuation
Notes and Best	<ul style="list-style-type: none"> • Use this field for published materials such as books, magazines, and journals

Practices	<ul style="list-style-type: none"> • Avoid use of placeholder values (e.g., “Unknown”, “s.n.”); leave the field blank if a publisher cannot be accurately determined or if there is no publisher • Avoid use of qualifying terms except in cases where a role is included in the authorized form. For example, prefer “Rand McNally and Company” not “Rand McNally and Company, publisher” • Not to be used for the entity responsible for digitizing or making the digital representation available
Examples	<ul style="list-style-type: none"> • Rand McNally and Company • Philadelphia Evening Bulletin

[\[Back to Field Table\]](#)

PA Digital Label	Relation
Status	Optional
Description	A related resource, such as the name of a collection, series, or group of thematic works. May be suitable for items that are part of an archival collection
Qualified DC Element	dcterms:relation
Simple DC Element	dc:relation
CONTENTdm Mapping	Relation
CSV Header	Relation
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • Natural language; semicolons may be used as punctuation
Examples	<ul style="list-style-type: none"> • George D. McDowell Philadelphia Evening Bulletin Collection • The Zaner-Bloser, Inc. / Sonya Bloser Monroe Collection

[\[Back to Field Table\]](#)

PA Digital Label	Replaced By
Status	Optional
Description	A related resource that supplants, displaces, or supersedes the described resource
Qualified DC Element	dcterms:isReplacedBy
CONTENTdm Mapping	Relation-Is Replaced By
CSV Header	Replaced_By
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none">• Natural language
Notes and Best Practices	<ul style="list-style-type: none">• This field is intended for series and title changes, for example government documents or serial publications and periodicals
Examples	<ul style="list-style-type: none">• Federal Highway Administration Office of Motor Carrier and Highway Safety Register• Grants for Foreign and International Programs

[\[Back to Field Table\]](#)

PA Digital Label	Replaces
Status	Optional
Description	A related resource that is supplanted, displaced, or superseded by the described resource
Qualified DC Element	dcterms:replaces

CONTENTdm Mapping	Relation-Replaces
CSV Header	Replaces
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> Natural language
Notes and Best Practices	<ul style="list-style-type: none"> This field is intended for series and title changes, for example government documents or serial publications and periodicals
Examples	<ul style="list-style-type: none"> Federal Highway Administration Office of Motor Carriers Register Grants for International and Foreign Programs

[\[Back to Field Table\]](#)

PA Digital Label	Rights
Status	A rights statement is required. This can be a uniform resource identifier (URI) from RightsStatements.org/Creative Commons or a natural language statement
Description	Information about rights held in and over the digitized resource. Typically, rights information includes a statement about various property rights associated with the resource, including intellectual property rights
Qualified DC Element	dcterms:rights
Simple DC Element	dc:rights
CONTENTdm Mapping	Rights
CSV Header	Rights
Repeatable	Yes

CV/Syntax	<ul style="list-style-type: none"> Natural language; semicolons may be used as punctuation
Notes and Best Practices	<ul style="list-style-type: none"> Values that are not URIs will map to PA Digital's Rights field; URIs will map to Rights URI Use of a URI is preferred over natural language or textual statements If supplying both a URI and a natural language statement, use separate fields. Both may be mapped to dcterms:rights or dc:rights If using natural language, use clear, standardized statements; statements that provide only contact or reproduction information are insufficient Natural language statements should not contradict, or merely reiterate, the rights statement from RightsStatements.org or Creative Commons; URIs will resolve to a textual statement in the DPLA portal See Rights URI for guidance on using and mapping rights statement URIs
Examples	<ul style="list-style-type: none"> Copyright status of the resource is unknown. In the public domain and may be used without copyright restriction.

[\[Back to Field Table\]](#)

PA Digital Label	Rights Holder
Status	Optional
Description	A person or organization owning or managing rights over the described resource
Qualified DC Element	dcterms:rightsholder
CONTENTdm Mapping	Rights-RightsHolder
CSV Header	Rights_Holder
Repeatable	No
CV/Syntax	<ul style="list-style-type: none"> Use standard vocabularies such as LCNAF or VIAF whenever possible; consistently applied local vocabularies are acceptable If an authorized form is unavailable, use similar syntax (Lastname, Firstname, YYYY-YYYY)

Notes and Best Practices	<ul style="list-style-type: none"> • If using simple Dublin Core, do not map this information to dc:rights
Examples	<ul style="list-style-type: none"> • University of Scranton

[\[Back to Field Table\]](#)

PA Digital Label	Rights URI
Status	A rights statement is required. This can be a uniform resource identifier (URI) from RightsStatements.org/Creative Commons or a natural language statement
Description	A standardized rights statement URI from RightsStatements.org or Creative Commons that conveys information about rights held in and over the digitized resource
Qualified DC Element	dcterms:rights
Simple DC Element	dc:rights
CONTENTdm Mapping	Rights
CSV Header	Rights_URI
Repeatable	No
CV/Syntax	<ul style="list-style-type: none"> • Must use URIs from RightsStatements.org or Creative Commons
Notes and Best Practices	<ul style="list-style-type: none"> • Use this field for persistent URIs from RightsStatements.org or Creative Commons. These URIs will enable machine-readable and machine-actionable rights statements. URIs will point to web pages that provide more information on each rights statement and will resolve to a textual statement in the DPLA portal • The value must be the URI and not the URL for the web page describing the statement <ul style="list-style-type: none"> ○ Correct: http://rightsstatements.org/vocab/NoC-US/1.0/ ○ Incorrect: https://rightsstatements.org/page/NoC-US/1.0/?language=en • Fields with URIs should contain no other text

	<ul style="list-style-type: none"> • If supplying both a URI and a natural language statement, use separate fields. Both may be mapped to dcterms:rights or dc:rights • See Rights for guidance on using and mapping natural language rights statements
Examples	<ul style="list-style-type: none"> • http://rightsstatements.org/vocab/InC-RUU/1.0/ • http://rightsstatements.org/vocab/NoC-US/1.0/ • https://creativecommons.org/publicdomain/zero/1.0/

[\[Back to Field Table\]](#)

PA Digital Label	Source
Status	Optional
Description	A resource from which the described resource is derived. May include information the user would need to locate the original item in a physical archives
Qualified DC Element	dcterms:source
Simple DC Element	dc:source
CONTENTdm Mapping	Source
CSV Header	Source
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • Use a consistently applied, standardized syntax
Notes and Best Practices	<ul style="list-style-type: none"> • Use a semicolon to separate multiple values
Examples	<ul style="list-style-type: none"> • Collection, Box 1, Folder 1 • File A93-25 Folder 1

[\[Back to Field Table\]](#)

PA Digital Label	Subject
Status	Recommended
Description	The topic of the described resource
Qualified DC Element	dcterms:subject
Simple DC Element	dc:subject
CONTENTdm Mapping	Subject
CSV Header	Subject
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • Use standard vocabularies such as LCSH, MeSH, FAST, or LCNAF whenever possible; consistently applied local vocabularies are acceptable
Notes and Best Practices	<ul style="list-style-type: none"> • Use a semicolon to separate multiple values • Use uncoordinated subject headings when possible and enter geographic and format information in separate fields. See Place and Format • When subdividing a subject term, prefer one space between LCSH subjects and dashes (Term -- Term) • If using a geographic or form subdivision, provide a corresponding value in Place or Format respectively
Examples	<ul style="list-style-type: none"> • Coal miners -- Social conditions • <code><dc:subject>Civil rights movements</dc:subject> AND</code> <code><dc:coverage>Philadelphia (Pa.)</dc:coverage></code> Instead of: <code><dc:subject>Civil rights movements -- Pennsylvania -- Philadelphia</dc:subject></code> • <code><dc:subject>Harlem Renaissance</dc:subject> AND</code>

	<pre><dc:type>Maps</dc:type></pre> <p>Instead of:</p> <pre><dc:subject>Harlem Renaissance -- Maps</dc:subject></pre>
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[\[Back to Field Table\]](#)

PA Digital Label	Temporal Coverage
Status	Optional
Description	Temporal characteristics of the described resource
Qualified DC Element	dcterms:temporal
Simple DC Element	dc:subject
CONTENTdm Mapping	Coverage-Temporal
CSV Header	Temporal
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • If using a named period, use standard vocabularies such as LCSH or FAST whenever possible; consistently applied local vocabularies are acceptable • For dates or date ranges, prefer use of EDTE
Notes and Best Practices	<ul style="list-style-type: none"> • If qualified Dublin Core is not supported, map to dc:subject (see Subject); use dc:coverage only for geographic information • The field should describe the time period covered or represented by the resource's content, not the date when the resource was created or published. See Date for guidance on describing the date or date range of a resource • Temporal topics may be a named period, date, or date range • Use a semicolon to separate multiple values

Examples	<ul style="list-style-type: none"> Dust Bowl Era, 1931-1939 1958-07/1959-06
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[\[Back to Field Table\]](#)

PA Digital Label	Title
Status	Required
Description	A name given to the described resource. Typically, a title will be a name by which the described resource is formally known
Qualified DC Element	dcterms:title
Simple DC Element	dc:title
CONTENTdm Mapping	Title
CSV Header	Title
Repeatable	No
CV/Syntax	<ul style="list-style-type: none"> Natural language; semicolons may be used as punctuation
Notes and Best Practices	<ul style="list-style-type: none"> Keep the title descriptive yet brief. The Description field may be used to provide more detail Avoid use of explanatory or qualifying symbols (e.g., brackets) Descriptive and informative titles are preferred whenever possible (as opposed to things like "unknown" or an id number). Not all materials can or should be titled uniquely If a formal title does not exist, create a contrived title that succinctly describes the item. Refer to content standards such as DACS and RDA for guidance
Examples	<ul style="list-style-type: none"> 1025 South Fairhill Street Swimsuit parade at Stanley Green's Senator J. William Fulbright awarded honorary degree, 1983

[\[Back to Field Table\]](#)

PA Digital Label	Type
Status	Recommended
Description	The nature or genre of the described resource
Qualified DC Element	dcterms:type
Simple DC Element	dc:type
CONTENTdm Mapping	Type
CSV Header	Type
Repeatable	Yes
CV/Syntax	<ul style="list-style-type: none"> • Values from the DCMI Type Vocabulary map to PA Digital's Type field
Notes and Best Practices	<ul style="list-style-type: none"> • Assign the type Text to images of textual materials • Please see Format for additional mappings from our Type field • Use a semicolon to separate multiple values
Examples	<ul style="list-style-type: none"> • Text • Image • Physical Object • Sound • Moving Image

[\[Back to Field Table\]](#)

PA Digital Label	URL
Status	Required or Derived
Description	Unambiguous URL reference to the digital object in its local repository
Qualified DC Element	dcterms:identifier
Simple DC Element	dc:identifier
CSV Header	URL
Repeatable	No
Notes and Best Practices	<ul style="list-style-type: none">• The URL must resolve to a digital object and its associated metadata record• Values for this field may be mapped from consistently formatted metadata elsewhere in the record

Appendix A - Changes From Version 2.0

- Added a link to PA Digital's GitHub repository in Introduction
- Standardized and updated language and punctuation throughout
- Updated field mappings and recommendations
 - Added recommended header value for delimited text files
 - Updated recommendations for the following fields to reflect updated Hub preference for derived values: Identifier, Collection Name, and Contribution Institution
 - Updated mapping guidelines for IIIF and Media Master fields to support requirements for Wikimedia Commons Partnership
- Added section "Wikimedia Commons Partnership" to Introduction

Appendix B - Resources Referenced

The Guidelines were greatly informed and influenced by the following documents, prepared by DPLA and their hubs, service providers, and other information professionals:

- DPLA [Metadata Resources](#), particularly
 - [DPLA Metadata Application Profile](#) (v5.0, December 2017)
 - [DPLA Geographic and Temporal Guidelines](#) (December 2015)
 - [DPLA Metadata Quality Guidelines](#) (December 2016)
 - [DPLA Standardized Rights Statements Implementation Guidelines](#) (December 2017)
- [DCMI Metadata Terms](#)
- [Dublin Core Metadata Element Set](#) (v1.1, 2012)
- [South Carolina Digital Library Metadata Schema and Guidelines](#) (July 2016)
- [South Carolina Digital Library Dublin Core Mapping for CONTENTdm Administrators](#) (June 2013)
- [Metadata Requirements for DPLA Participation through the North Carolina Service Hub](#) (April 2014)
- [Mountain West Digital Library Dublin Core Application Profile](#) (v2.0, July 2011)
- [Empire State Digital Network Metadata Requirements](#)
- [Best Practices for CONTENTdm and other OAI-PMH Compliant Repositories: Creating Sharable Metadata](#) (v3.1, June 2013)
- [Digital Library Federation \(DLF\) Best Practices for Shareable Metadata](#)
- [Recommendations for Standardized International Rights Statements](#) (January 2016)
- [PA Digital Rights Resources](#), particularly
 - [PA Digital Rights Statement Selection Tool](#)
- [Library of Congress MARC to Qualified Dublin Core crosswalk](#)
- [MARC 21 to MODS 3.6 Mapping](#)

Appendix C - Standards and Controlled Vocabularies Referenced

Abbreviation	Full name	URL
AAT	Getty Art & Architecture Thesaurus	http://www.getty.edu/research/tools/vocabularies/aat
CCO	Cataloging Cultural Objects	http://vraweb.org/resources/cataloging-cultural-objects/
DCMI	DCMI Type Vocabulary	https://www.dublincore.org/specifications/dublin-core/dcmi-type-vocabulary/
DCRM(S)	Descriptive Cataloging of Rare Materials (Serials)	http://rbms.info/dcrm/dcrms/
EDTF	Extended Date/Time Format	https://www.loc.gov/standards/datetime/
FAST	Faceted Application of Subject Terminology	http://fast.oclc.org/searchfast/
GeoNames	GeoNames	http://www.geonames.org/
IANA	IANA Media Types	https://www.iana.org/assignments/media-types/media-types.xhtml
ISO 639-3	Codes for the Representation of Names of Languages	https://iso639-3.sil.org/code_tables/639/data
LCNAF	Library of Congress Name Authority File	http://id.loc.gov/authorities/names
LCSH	Library of Congress Subject Headings	http://id.loc.gov/authorities/subjects.html
RDA	Resource Description & Access	https://www.rdatoolkit.org/
RightsStatements	RightsStatements.org	http://rightsstatements.org/
TGM	Library of Congress Thesaurus for Graphic Materials	http://id.loc.gov/vocabulary/graphicMaterials
TGN	Getty Thesaurus of Geographic Names	http://www.getty.edu/vow/TGNSearchPage.jsp
ULAN	Getty Union List of Artist Names	http://www.getty.edu/research/tools/vocabularies/ulan/index.html
VIAF	Virtual International Authority File	https://viaf.org/

Appendix D - PA Digital to DPLA Crosswalk

PA Digital Label	PA Digital inbound property	PA Digital outbound property	DPLA label	DPLA DC class	DPLA DC property
Alternative Title	dcterms:alternative	dcterms:alternative	Alternative Title	dpla:SourceResource	dcterms:alternative
Collection Name	dcterms:isPartOf	dcterms:isPartOf	Collection	dpla:SourceResource	dcterms:isPartOf
Contributing Institution	derived	edm:dataProvider	Data Provider	ore:Aggregation	edm:dataProvider
Contributor	dcterms:contributor	dcterms:contributor	Contributor	dpla:SourceResource	dc:contributor
Place	dcterms:coverage	dcterms:spatial	Place	dpla:SourceResource	dcterms:spatial
Place	dcterms:spatial	dcterms:spatial	Place	dpla:SourceResource	dcterms:spatial
Creator	dcterms:creator	dcterms:creator	Creator	dpla:SourceResource	dcterms:creator
Date	dcterms:date	dcterms:date	Date	dpla:SourceResource	dc:date
Description	dcterms:description	dcterms:description	Description	dpla:SourceResource	dc:description
Extent	dcterms:extent	dcterms:extent	Extent	dpla:SourceResource	dcterms:extent
File Format	dcterms:format	schema:fileFormat	File Format	edm:WebResource	dc:format
IIIF Base URL	dcterms:identifier	svcs:hasService	IIIF Base URL	edm:WebResource	svcs:hasService
IIIF Manifest	dcterms:isReferencedBy	dcterms:isReferencedBy	IIIF Manifest	edm:WebResource	dcterms:isReferencedBy
URL	dcterms:identifier	edm:isShownAt	Is Shown At	ore:Aggregation	edm:isShownAt
Preview	dcterms:identifier	edm:preview	Preview	ore:Aggregation	edm:preview
Intermediate Provider	derived	dpla:intermediateProvider	Intermediate Provider	ore:Aggregation	dpla:intermediateProvider
Language	dcterms:language	dcterms:language	Language	dpla:SourceResource	dc:language
Publisher	dcterms:publisher	dcterms:publisher	Publisher	dpla:SourceResource	dc:publisher

Relation	dcterms:relation	dcterms:relation	Relation	dpla:SourceResource	dc:relation
Replaced By	dcterms:isReplacedBy	dcterms:isReplacedBy	Replaced By	dpla:SourceResource	dpla:isReplacedBy
Replaces	dcterms:replaces	dcterms:replaces	Replaces	dpla:SourceResource	dpla:replaces
Rights	dcterms:rights	dcterms:relation	Rights	dpla:SourceResource	dc:rights
Rights URI	dcterms:rights	edm:rights	Rights Statement	edm:WebResource	edm:rights
Rights Holder	dcterms:rightsholder	dcterms:rightsholder	Rights Holder	dpla:SourceResource	dcterms:rightsholder
Source	dcterms:source	dcterms:source	Not mapped		
Subject	dcterms:subject	dcterms:subject	Subject	dpla:SourceResource	dc:subject
Temporal Coverage	dcterms:temporal	dcterms:temporal	Temporal Coverage	dpla:SourceResource	dcterms:temporal
Title	dcterms:title	dcterms:title	Title	dpla:SourceResource	dc:title
Type	dcterms:type	dcterms:type	Type	dpla:SourceResource	dc:type (where value = DCMI Type)
Format	dcterms:type	dcterms:format	Format	dpla:SourceResource	dc:format