

Citation Evidence Report

EB-1B Petition — Outstanding Professor or Researcher

8 CFR § 204.5(i)(3) · Authorship + Original Contributions

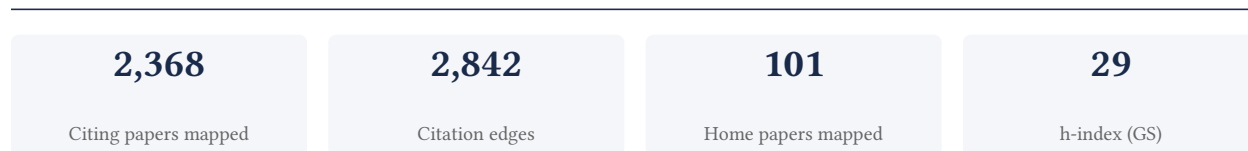
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[Google Scholar profile](#)

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to the 8 CFR § 204.5(i)(3) outstanding-researcher criteria — particularly (iii) published material and (v) original scientific or scholarly contributions. It is a drafting aid for the petitioner’s counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement



Filtering statement – methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper’s authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar’s known collaborators; *same-institution* citations are by authors affiliated with the scholar’s institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar’s own circle.

Known limitations – counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight – re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar’s own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

99.0% independent of 1,049 classified citing papers

Citation type	Count
Independent	1,038
Self-citation	0
Co-author	9
Same-institution	2

1,319 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total – the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing – how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner’s choice of comparison field.

Contribution 1

Claim – Contribution 1

The researcher established a foundational framework linking hydrological flow regimes to riparian vegetation dynamics in arid southwestern US rivers, significantly advancing ecological restoration science.

The researcher’s core contribution rests on the 2007 paper examining the importance of low-flow and high-flow characteristics for restoring riparian vegetation in the arid southwestern United States. This work serves as the anchor for a sustained line of inquiry into riverine ecology.

This line of work appears to address the critical need to understand how specific hydrological patterns influence plant communities in water-scarce regions. By progressing from restoration mechanics in 2007 to climate implications in 2010 and ecosystem resilience in 2013, the researcher systematically expanded the scope from local restoration to broader climatic sensitivity.

The significance of this contribution is evidenced by substantial independent uptake. With over 700 combined citations for this specific line of work, and nearly 100% of citing papers originating from independent researchers, the field has widely adopted these frameworks to understand dryland riparian ecosystems.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 252 · 20 flagged influential by Semantic Scholar

CORE PAPER

[Importance of low-flow and high-flow characteristics to restoration of riparian vegetation along rivers in arid south-western United States](#)

2007 · Freshwater Biology 52 (4), 651-679, 2007 · 457 citations (GS)

Field-normalised: 380 Semantic Scholar citations place it in the top 5% of Environmental Science papers from 2007 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Hydropower impacts on riverine biodiversity (2024)	Brazilian Agricultural Research Corporation, Eberhard Karls Universitaet Tuebingen, Northeast Institute of Geography and Agroecology, Chinese Academy of Sciences	Brazil, China, Germany	—
2	Managing riparian zones for river health improvement: an integrated approach	Banaras Hindu University	India	—
3	Vulnerability of riparian ecosystems to elevated CO₂ and climate change in arid and semi-arid western North America	Bureau of Reclamation, Colorado State University, U.S. Geological Survey	United States	Influential
4	Analysis of vegetation recovery surrounding a restored wetland using the normalized difference infrared index (NDII) and normalized difference vegetation index (NDVI)	U. S. Geological Survey	United States	—
5	Effects of climate-induced increases in summer drought on riparian plant species: a meta-analysis.	Utrecht University	Netherlands	Influential

No.	Citing paper	Citing institution(s)	Country	S2
6	Turquoise is the new green: Restoring and enhancing riparian function in the Anthropocene	Griffith University, University of Western Australia	Australia	—
7	Assessing the effectiveness of riparian restoration projects using Landsat and precipitation data from the cloud-computing application ClimateEngine.org	Desert Research Institute, United States Geological Survey, University of California, Merced	United States	—
8	Neural Machine Translation of Sign Language	Ghent University, Universitat Pompeu Fabra	Belgium, Spain	—
9	Inundation tolerance, rather than drought tolerance, predicts riparian plant distributions along a local hydrologic gradient	U.S. Geological Survey	United States	—
10	Five Year Analyses of Vegetation Response to Restoration using Rock Detention Structures in Southeastern Arizona, United States.	U.S. Geological Survey	United States	Influential
11	Environmental tolerance of an invasive riparian tree and its potential for continued spread in the southwestern US	Colorado State University	United States	—
12	Plant species richness in ephemeral and perennial reaches of a dryland river	Arizona State University	United States	—
13	Microclimate modification by riparian vegetation affects the structure and resource limitation of arthropod communities	Arizona State University	United States	—
14	Anastomosis and Low Flows Sustain Resilient Groundwater Dependent Riparian Floodplains in an Agricultural River Valley, New Mexico	Northern Arizona University, The Nature Conservancy	United States	—
15	Forest structure, flooding and grazing predict understorey composition of floodplain forests in southeastern Australia	Monash University	Australia	—
16	Hydroclimatic drivers of the growth of riparian cottonwoods at the prairie margin: River flows, river regulation and the Pacific Decadal Oscillation	University of Lethbridge	Canada	—
17	Riparian plant composition along hydrologic gradients in a dryland river basin and implications for a warming climate	Colorado State University, U.S. Geological Survey	United States	—
18	Riparian Ecosystems in the 21st Century: Hotspots for Climate Change Adaptation?	Australian Bureau of Meteorology, Griffith University, University of Canberra	Australia, United States	—
19	Plants as river system engineers (2013)	Queen Mary University of London	United Kingdom	—
20	Mechanistic effects of low-flow hydrology on riverine ecosystems: ecological principles and consequences of alteration (2012)	Griffith University	Australia	—

No.	Citing paper	Citing institution(s)	Country	S2
21	Ecological research and management of intermittent rivers: an historical review and future directions (2015)	Irstea, James Madison University, University of New England	Australia, France, United States	—
22	Riparian plant community responses to increased flooding: a meta-analysis. (2015)	Utrecht University	Netherlands	—
23	Effects of Hydropower Generation and Opportunities for Environmental Flow Management in Swedish Riverine Ecosystems (2010)	Umeå University	Sweden	—
24	Groundwater-dependent ecosystems: recent insights from satellite and field-based studies (2015)	University of Technology Sydney	Australia	—
25	Riparian Zone Assessment and Management: an Integrated Review Using Geospatial Technology (2023)	Birla Institute of Technology, Chulalongkorn University	Thailand	—
26	Equids engineer desert water availability. (2021)	Arizona State University, Northern Arizona University, Roger Williams Park Museum of Natural History	Australia, United States	—
27	Groundwater dependence of riparian woodlands and the disrupting effect of anthropogenically altered streamflow. (2021)	Cardiff University, State University of New York College of Environmental Science and Forestry, University of California, Santa Barbara	United Kingdom, United States	—
28	Recovery and Degradation Drive Changes in the Dispersal Capacity of Stream Macroinvertebrate Communities. (2025)	Senckenberg Research Institute and Natural History Museum Frankfurt, Smithsonian's National Zoo and Conservation Biology Institute	Germany, United States	—
29	From pixels to riverscapes: How remote sensing and geospatial tools can prioritize riverscape restoration at multiple scales (2024)	Desert Research Institute, U.S. Geological Survey, Utah State University	United States	—
30	Immobilizing nitrogen to control plant invasion. (2010)	Colorado State University	United States	—

Showing the 30 most-cited of 164 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

FOLLOW-UP WORK

[Effects of stream flow patterns on riparian vegetation of a semiarid river: implications for a changing climate](#)

2010 · River Research and Applications 26 (6), 712-729, 2010 · 218 citations (GS)

Field-normalised: 152 Semantic Scholar citations place it in the top 5% of Environmental Science papers from 2010 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Tracing the scientific trajectory of riparian vegetation studies: Main topics, approaches and needs in a globally changing world	Universidade de Lisboa, Université Rennes 2	France, Portugal	—
2	Vulnerability of riparian ecosystems to elevated CO₂ and climate change in arid and semi-arid western North America	Bureau of Reclamation, Colorado State University, U.S. Geological Survey	United States	Influential
3	Effects of climate-induced increases in summer drought on riparian plant species: a meta-analysis.	Utrecht University	Netherlands	—
4	Dynamics of Murray-Darling floodplain forests under multiple stressors: The past, present, and future of an Australian icon	Monash University	Australia	—
5	Linking stream flow and groundwater to avian habitat in a desert riparian system.	Natural Resource Research Center	United States	—
6	Incorporating climate change projections into riparian restoration planning and design	Colorado State University, National Oceanic and Atmospheric Administration, U.S. Geological Survey	United States	Influential
7	Using Vegetation Guilds to Predict Bird Habitat Characteristics in Riparian Areas	Arizona State University, Colorado State University, USDA Forest Service	United States	—
8	Riparian vegetation of ephemeral streams	Idaho State University, University of Arizona	United States	—
9	Environment-driven changes in diversity of riparian plant communities along a mountain river.	El Colegio de la Frontera Sur, Universidad Nacional Autónoma de México	México	—
10	Riparian plant composition along hydrologic gradients in a dryland river basin and implications for a warming climate	Colorado State University, U.S. Geological Survey	United States	Influential
11	Using LiDAR to assess transitions in riparian vegetation structure along a rural-to-urban land use gradient in western North America	University of Utah	United States	—
12	Vegetation structure along urban ephemeral streams in southeastern Arizona	International Hellenic University	Greece	—
13	Patterns of water use by the riparian tree <i>Melaleuca argentea</i> in semi-arid northwest Australia	The University of Western Australia	Australia	—
14	Plants as river system engineers	Queen Mary University of London	United Kingdom	—
15	Groundwater-dependent ecosystems: recent insights from satellite and field-based studies	University of Technology Sydney	Australia	—
16	Livestock management, beaver, and climate influences on riparian vegetation in a semi-arid landscape.	Trout Unlimited, US Bureau of Land Management	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
17	Sensitivity of Intermittent Streams to Climate Variations in the USA	U.S. Geological Survey	United States	—
18	Riparian responses to extreme climate and land-use change scenarios	—	—	—
19	Modelling feedbacks between geomorphological and riparian vegetation responses under climate change in a Mediterranean context	Deltares, Universidad Politécnica de Madrid, University Utrecht	Netherlands, Spain	—
20	Effects of Groundwater Fluctuations on the Water Uptake of Saltcedar in Two Habitats in an Arid Oasis, Northwestern China	China University of Geosciences	China	—
21	Projected warming disrupts the synchrony of riparian seed release and snowmelt streamflow	Colorado State University, US Geological Survey, US Geological Survey Colorado Water Science Center	United States	—
22	The hydroclimate niche: A tool for predicting and managing riparian plant community responses to streamflow seasonality	Northern Arizona University, U.S. Geological Survey	United States	—
23	Urban runoff and stream channel incision interact to influence riparian soils and understory vegetation	University of California, Davis	United States	—
24	Banking carbon: a review of organic carbon storage and physical factors influencing retention in floodplains and riparian ecosystems	Colorado State University	United States	—
25	A conceptual model of vegetation–hydrogeomorphology interactions within river corridors	Queen Mary University of London	United Kingdom	—
26	Plants and river morphodynamics: the emergence of fluvial biogeomorphology	Queen Mary University of London, University of Trento	Italy, United Kingdom	—
27	Hydraulic traits that buffer deep-rooted plants from changes in hydrology and climate	—	—	—
28	Contrasting water-uptake and growth responses to drought in co-occurring riparian tree species	—	—	—
29	Riparian vegetation responses to altered flow regimes driven by climate change in Mediterranean rivers	Instituto Superior Técnico Technical University of Lisbon	Portugal	Influential
30	Solar energy development and aquatic ecosystems in the Southwestern United States: potential impacts, mitigation, and research needs	—	—	—

Showing the 30 most-cited of 66 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Dryland riparian ecosystems in the American Southwest: sensitivity and resilience to climatic extremes

2013 · Ecosystems 16 (3), 411-415, 2013 · 78 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Microclimate modification by riparian vegetation affects the structure and resource limitation of arthropod communities	Arizona State University	United States	—
2	Stakeholder-Informed Hydroclimate Scenario Modeling in the Lower Santa Cruz River Basin for Water Resource Management	Bureau of Reclamation, University of Arizona	United States	—
3	Riparian plant composition along hydrologic gradients in a dryland river basin and implications for a warming climate	Colorado State University, U.S. Geological Survey	United States	—
4	Chapter 4.6. The biota of intermittent and ephemeral rivers: amphibians, reptiles, birds, and mammals	Complutense University of Madrid, Miguel Hernández University of Elche, University of Girona	Spain	—
5	Recognizing the ephemeral stream floodplain: Identification and importance of flood zones in drylands	Colorado State University	United States	—
6	Spatial variation in leaf nutrient traits of dominant desert riparian plant species in an arid inland river basin of China	Chinese Academy of Sciences, Shanxi University of Finance and Economics, University of Chinese Academy of Sciences	China	—
7	Temporal and spatial variation in riparian vegetation and floodplain aquifers on the regulated Dolores River, Southwest Colorado, USA	Fort Lewis College, University of Arizona	United States	Influential
8	Banking carbon: a review of organic carbon storage and physical factors influencing retention in floodplains and riparian ecosystems	Colorado State University	United States	Influential
9	A tale of two rivers: Dam-induced hydrologic drought on the lower Dolores River and its impact on tamarisk establishment	—	—	—
10	A systematic review of ecological attributes that confer resilience to climate change in environmental restoration	—	—	—
11	Resistance and resilience of invertebrate communities to seasonal and suprasedonal drought in arid-land headwater streams	—	—	—
12	Environmental filtering and environmental stress shape regional patterns of riparian community assembly and functional diversity	—	—	—
13	Mammal use of riparian corridors in semi-arid Sonora, Mexico	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
14	Livestock grazing limits beaver restoration in northern New Mexico	—	—	—
15	Structure and composition of altered riparian forests in an agricultural Amazonian landscape	—	—	—
16	High-resolution riparian vegetation mapping to prioritize conservation and restoration in an impaired desert river	—	—	—
17	Strategies of shredders when feeding on low-quality leaf-litter: Local population adaptations or fixed species traits?	—	—	—
18	Decadal-scale trajectories of land cover change along the Colorado and San Juan Rivers in response to declining water storage in Lake Powell Reservoir	University of Utah	United States	—
19	Ground-dwelling arthropod communities of a sky island mountain range in Southeastern Arizona, USA: obtaining a baseline for assessing the effects of climate ...	Museum of Southwestern Biology, University of New Mexico	United States	—
20	Climate-driven changes of riparian plant functional types in permanent headwater streams. Implications for stream food webs	—	—	—
21	Floodplain Transition Zone Hydrodynamics: The Role of Riparian and Floodplain Vegetation in Compound Channel Flows	—	—	—
22	Self-affine fractal spatial and temporal variability of the San Pedro River, southern Arizona	—	—	—

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 2

Claim – Contribution 2

The researcher established a foundational framework for understanding how human-altered flood regimes, specifically levees, impact floodplain forest dynamics and wetland ecohydrology.

CLAIM: The researcher’s seminal 2002 paper, “Consequences of human-altered floods: levees, floods, and floodplain forests along the Wisconsin River,” serves as the cornerstone of this contribution, establishing a critical link between infrastructure-driven hydrological changes and ecological outcomes in riverine systems.

ORIGINALITY: This line of work appears to address the gap in understanding how specific anthropogenic interventions, such as levee construction, alter natural flood pulses and subsequently reshape forest composition. The chronology suggests an evolution from this core focus on altered floods to broader applications, including the dynamics of Plains Cottonwood forests in unchanneled segments (2012) and contemporary wetland ecohydrology (2025), indicating a sustained effort to refine these ecological models.

SIGNIFICANCE: The core paper has garnered 190 citations, while the 2012 follow-up has received 97 citations, demonstrating sustained academic engagement. Notably, 99.8% of the scholar’s total citations originate from independent researchers, suggesting that this framework has been widely adopted and validated by the broader scientific community rather than relying on self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 66 · 4 flagged influential by Semantic Scholar

CORE PAPER

Consequences of human-altered floods: levees, floods, and floodplain forests along the Wisconsin River

2002 · Ecological applications 12 (6), 1755-1770, 2002 · 190 citations (GS)

Field-normalised: 151 Semantic Scholar citations place it in the top 10% of Environmental Science papers from 2002 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Local increases in diversity accompany community homogenization in floodplain forest understories	Iowa State University, Northland College, University of Wisconsin-Madison	United States	—
2	Genetic diversity and stand structure of neighboring white willow (Salix alba L.) populations along fragmented riparian corridors: A case study	Università degli Studi di Padova	Italy	—
3	Recent changes in the riparian forest of a large regulated Mediterranean river: implications for management.	Pyrenean Institute of Ecology	Spain	—
4	Is rewetting enough to recover Sphagnum and associated peat-accumulating species in traditionally exploited bogs?	Colorado State University, The University of British Columbia, Université Laval	Canada, United States	—
5	Impacts of Hydraulic Engineering on Wetland Flood Inundation and Management Implications	China Institute of Water Resources and Hydropower Research, Maintenance and Administration Center of the Central Nenriver Diversion Project and Jiangdong Irrigated Area of Heilongjiang Province, Northwest University	China	—
6	Developing state and transition models of floodplain vegetation dynamics as a tool for conservation decision-making: a case study of the Macquarie Marshes Ramsar ...	—	—	—
7	A systematic review of ecological attributes that confer resilience to climate change in environmental restoration	—	—	—
8	Floods in future climates: a review	—	—	—
9	Spatiotemporal variations of riverine flood fatalities: 70 years global to regional perspective	—	—	—
10	Levee effects upon flood levels: an empirical assessment	—	—	—
11	Inundation dynamics in seasonally dry floodplain forests in southeastern Brazil	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
12	Infrastructure and the environment	—	—	—
13	Capturing flood-risk dynamics with a coupled agent-based and hydraulic modelling framework	—	—	—
14	The spatial organization of ecosystem services in river-floodplains	—	—	—
15	Disconnecting the floodplain: earthworks and their ecological effect on a dryland floodplain in the Murray–Darling Basin, Australia	—	—	—
16	Dynamics of Plains Cottonwood (<i>Populus deltoides</i>) Forests and Historical Landscape Change along Unchannelized Segments of the Missouri River, USA	—	—	—
17	Impact of floodplain and Stage 0 stream restoration on flood attenuation and floodplain exchange during small frequent storms	—	—	—
18	Historical foundations and future directions in macrosystems ecology	—	—	—
19	Effects of restoration and reflooding on soil denitrification in a leveed Midwestern floodplain	—	—	—
20	Large, connected floodplain forests prone to flooding best sustain plant diversity	—	—	—
21	Effects of a 'natural' flood event on the riparian ecosystem of a regulated large-river system: the 2011 flood on the Missouri River, USA	—	—	—
22	Managing floodplain-forest restoration in European river landscapes combining ecological and flood-protection issues	—	—	—
23	Implementing a dynamic riparian vegetation model in three European river systems	—	—	—
24	Assessing the effects of alternative setback channel constraint scenarios employing a river meander migration model	—	—	—
25	Nonstationary decision model for flood risk decision scaling	—	—	—
26	Waterbird communities and seed biomass in managed and reference-restored wetlands in the Mississippi Alluvial Valley	—	—	—
27	Influence of dam regulation on 55-year canopy shifts in riparian forests	—	—	—
28	Critical linkages among floodplain hydrology, geomorphology and ecology along a lowland meandering river, Illinois, USA	—	—	—
29	Spatial relationships of levees and wetland systems within floodplains of the Wabash Basin, USA	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
30	Multiscale control of flooding and riparian-forest composition in Lower Michigan, USA	—	—	—

Showing the 30 most-cited of 39 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

FOLLOW-UP WORK

[Wetland ecohydrology](#)

2025 · Routledge Handbook of Wetlands, 38-53, 2025 · 0 citations (GS)

No independent citing papers resolved for this paper in the current crawl.

FOLLOW-UP WORK

[Dynamics of Plains Cottonwood \(*Populus deltoides*\) Forests and Historical Landscape Change along Unchannelized Segments of the Missouri River, USA](#)

2012 · Environmental management 49 (5), 990-1008, 2012 · 97 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Integrative conservation of riparian zones	Centro Italiano per la Riqualficazione Fluviale, Colorado State University, Federation University Australia	Australia, Canada, Germany	—
2	Strategies to restore floodplain vegetation after abandonment of human activities	Spanish National Research Council, Université de Toulouse, Université Laval	Canada, France, Spain	—
3	ABANDONED FLOODPLAIN PLANT COMMUNITIES ALONG A REGULATED DRY-LAND RIVER	Colorado State University, U. S. Geological Survey	United States	—
4	Tree mortality in mature riparian forest: implications for Fremont cottonwood conservation in the American Southwest	USGS	United States	—
5	Regeneration of Salicaceae riparian forests in the Northern Hemisphere: A new framework and management tool	Universidad Politécnica de Madrid, Université Clermont Auvergne, University of Denver	France, Spain, United States	—
6	Riparian vegetation, Colorado River, and climate: Five decades of spatiotemporal dynamics in the Grand Canyon with river regulation	U.S. Geological Survey	United States	—
7	Riparian Vegetated Area in Pre-Dam, Post-Dam, and Environmental Flow Periods in Canyonlands National Park From 1940 to 2022	National Park Service, Northern Colorado Plateau Network National Park Service, United States Geological Survey	United States	—
8	Evidence of increase in woody vegetation in a river corridor, Northwest England, 1984–2007	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
9	Effects of a 'natural' flood event on the riparian ecosystem of a regulated large-river system: the 2011 flood on the Missouri River, USA	—	—	—
10	Analysing the influence of a large flood on eastern redcedar (<i>Juniperus virginiana</i>) distribution along the Missouri River using remote-sensing techniques	—	—	—
11	Emerging reservoir delta-backwaters: bio-physical dynamics and riparian biodiversity	—	—	Influential
12	Effects of dams and geomorphic context on riparian forests of the Elwha River, Washington	—	—	—
13	The dammed Missouri: prospects for recovering Lewis and Clark's river	—	—	—
14	Effects of a large flood on woody vegetation along the regulated Missouri River, USA	—	—	—
15	Expansion of woody vegetation on a Missouri River reservoir delta-backwater	—	—	Influential
16	Large wood distribution, mobility, and recruitment in an inter-dam river reach: A comparison with geomorphic process on the Garrison Reach of the Missouri River pre ...	—	—	—
17	Autumn stopover hotspots and multiscale habitat associations of migratory landbirds in the eastern United States	Princeton University	United States	—
18	Demographic responses of Piping Plovers to habitat creation on the Missouri River	—	—	—
19	Vegetation response to invasive <i>Tamarix</i> control in southwestern US rivers: a collaborative study including 416 sites	—	—	—
20	Assessing the relationship between river mobility and habitat	—	—	—
21	Metapopulation viability of an endangered shorebird depends on dispersal and human-created habitats: piping plovers (<i>Charadrius melodus</i>) and prairie rivers	—	—	—
22	Stopover duration, movement patterns and temporary home ranges of fall migrant yellow-rumped warblers <i>Setophaga coronata</i> in native and anthropogenic ...	—	—	—
23	Going with the flow: Intraspecific variation may act as a natural ally to counterbalance the impacts of global change for the riparian species <i>Populus deltoides</i>	—	—	—
24	Physiological evidence that anthropogenic woodlots can substitute for native riparian	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
	woodlands as stopover habitat for migrant birds			
25	Flood effects provide evidence of an alternate stable state from dam management on the upper Missouri River	—	—	Influential
26	Long-term cottonwood forest dynamics along the upper Missouri River, USA	—	—	—
27	Predictability of cottonwood recruitment along a dynamic, regulated river	—	—	—

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* – ones that substantively build on the work (S2’s isInfluential signal, Valenzuela et al. 2015) – the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 3

Claim – Contribution 3

The researcher established a multi-scale framework for understanding riparian tree seedling distribution and recruitment dynamics on river sandbars, significantly advancing fluvial ecology.

CLAIM: The researcher’s foundational contribution lies in elucidating the controls on riparian tree seedling distribution across different spatial scales, anchored by the seminal 2002 paper on Wisconsin River sandbars. This work provides a critical baseline for understanding how environmental factors influence forest regeneration in dynamic fluvial systems.

ORIGINALITY: By sequentially examining flow patterns (2003) and broader floodplain environmental influences (2004), this line of work appears to address the complex, scale-dependent mechanisms governing seedling recruitment. The progression from specific sandbar controls to wider floodplain abundance suggests a novel, integrated approach to disentangling hydrological and ecological drivers in riparian zones.

SIGNIFICANCE: The impact of this research is evidenced by substantial citation counts, with the follow-up papers accumulating 135 and 119 citations respectively. Furthermore, the near-total independence of citing researchers (99.8%) indicates that this framework has been widely adopted and validated by the broader scientific community, rather than relying on self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 78 · 7 flagged influential by Semantic Scholar

CORE PAPER

[Riparian tree seedling distribution on Wisconsin River sandbars: controls at different spatial scales](#)

2002 · Ecological Monographs 72 (4), 465-485, 2002 · 89 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Landscape Ecology in Theory and Practice: Pattern and Process	Oak Ridge National Laboratory, University of Maryland Center for Environmental Science, University of Wisconsin-Madison	United States	—
2	Multiscale controls on woody plant diversity in western Oregon riparian forests	Oregon State University	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
3	Plants as river system engineers	Queen Mary University of London	United Kingdom	—
4	Global sensitivity analysis for complex ecological models: a case study of riparian cottonwood population dynamics.	SUNY College of Environmental Science and Forestry	United States	—
5	The Role of Abandoned Channels as Refugia for Sustaining Pioneer Riparian Forest Ecosystems	Centre National de la Recherche Scientifique (CNRS), State University of New York College of Environmental Science and Forestry, Université de Montréal	Canada, France, United States	—
6	Plants and river morphodynamics: the emergence of fluvial biogeomorphology	Queen Mary University of London, University of Trento	Italy, United Kingdom	—
7	Multiscale control of flooding and riparian-forest composition in Lower Michigan, USA	—	—	—
8	Sand and sandbar willow: a feedback loop amplifies environmental sensitivity at the riparian interface	—	—	—
9	Riparian recruitment persists after damming: Environmental flows and coupled colonization of cottonwoods and willows following floods along a dryland river	—	—	—
10	Modeling the interactions between river morphodynamics and riparian vegetation	—	—	—
11	Effects of natural resource development on the terrestrial biodiversity of Canadian boreal forests	—	—	—
12	Interactions between river flows and colonizing vegetation on a braided river: exploring spatial and temporal dynamics in riparian vegetation cover using satellite data	Queen Mary University of London	United Kingdom	—
13	Ecogeomorphic feedbacks and flood loss of riparian tree seedlings in meandering channel experiments	—	—	—
14	Coupled hydrogeomorphic and woody-seedling responses to controlled flood releases in a dryland river	—	—	—
15	Influences of watershed geomorphology on extent and composition of riparian vegetation	—	—	—
16	Scale-dependent relationships between the spatial distribution of a limiting resource and plant species diversity in an African grassland ecosystem	—	—	—
17	Floodplain characteristics affect woody vegetation regeneration on point bars of a coastal plain river recovering from anthropogenic disturbances	—	—	Influential

No.	Citing paper	Citing institution(s)	Country	S2
18	Environmental determinants of vegetation in the drawdown zones of a Columbia River Treaty reservoir: a template for ecosystem enhancement	—	—	—
19	Temporal variability in hydrology modifies the influence of geomorphology on wetland distribution along a desert stream	—	—	—
20	Can environmental flows moderate riparian invasions? The influence of seedling morphology and density on scour losses in experimental floods	—	—	—
21	Does stream flow structure woody riparian vegetation in subtropical catchments?	Griffith University	Australia	—
22	Contemplating the assessment of great river ecosystems	—	—	—
23	Empirical evaluation of two-dimensional unsteady hydraulic models for applications in floodplain forest ecology	—	—	—

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

FOLLOW-UP WORK

[Effects of flow pattern on riparian seedling recruitment on sandbars in the Wisconsin River, Wisconsin, USA](#)

2003 · Wetlands 23 (1), 125-139, 2003 · 135 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Contemporary and future distribution patterns of fluvial vegetation under different climate change scenarios and implications for integrated water resource management	University of Porto, University of Salamanca, University of Trás-os-Montes and Alto Douro	Portugal, Spain	—
2	Patterns of water use by the riparian tree <i>Melaleuca argentea</i> in semi-arid northwest Australia	The University of Western Australia	Australia	—
3	Plants as river system engineers	Queen Mary University of London	United Kingdom	—
4	Morphodynamics of alternate bars in the presence of riparian vegetation	ARTELIA, École des Ponts Paris Tech, Électricité de France, Électricité de France	France	—
5	MORE EXOTIC AND FEWER NATIVE PLANT SPECIES: RIVERINE VEGETATION PATTERNS ASSOCIATED WITH ALTERED SEASONAL FLOW PATTERNS	The University of Melbourne	Australia	—
6	Projected warming disrupts the synchrony of riparian seed release and snowmelt stream-flow	Colorado State University, US Geological Survey, US Geolog-	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
		ical Survey Colorado Water Science Center		
7	Mechanisms linking river flow regime and riparian hardwood establishment	—	—	—
8	Plants and river morphodynamics: the emergence of fluvial biogeomorphology	Queen Mary University of London, University of Trento	Italy, United Kingdom	—
9	Functional flows: an environmental flow regime benefits riparian cottonwoods along the Waterton River, Alberta	—	—	—
10	Influence of dam regulation on 55-year canopy shifts in riparian forests	—	—	—
11	Hydropeaking affects germination and establishment of riverbank vegetation	Umeå University	Sweden	—
12	Floods, fire, and ice: disturbance ecology of riparian cottonwoods	—	—	—
13	Ecohydrology 2.0	Accademia Nazionale dei Lincei	Italy	—
14	A note on the role of seasonal expansions and contractions of the flowing fluvial network on metapopulation persistence	—	—	—
15	Sand and sandbar willow: a feedback loop amplifies environmental sensitivity at the riparian interface	—	—	Influential
16	Floods reduce the prevalence of exotic plant species within the riparian zone: evidence from natural floods	—	—	—
17	Recruitment and successional dynamics diversify the shifting habitat mosaic of an Alaskan floodplain	—	—	—
18	A discrete-time model for population persistence in habitats with time-varying sizes	—	—	—
19	Effects of the seasonal flooding on riparian soil seed bank in the Three Gorges Reservoir Region: a case study in Shanmu River	—	—	—
20	Local flooding history affects plant recruitment in riparian zones	—	—	—
21	Environmental flows drive sediment and seed supply in regulated rivers	—	—	—
22	Evaluating the response of biological assemblages as potential indicators for restoration measures in an intermittent Mediterranean river	—	—	—
23	Hydrologic connectivity of floodplains, northern Missouri—Implications for management and restoration of floodplain forest communities in disturbed landscapes	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
24	A twofold strategy for riparian restoration: Combining a functional flow regime and direct seeding to re-establish cottonwoods	—	—	—
25	Deposition potential and flow-response dynamics of emergent sandbars in a braided river	University of Wyoming	United States	—
26	Riparian recruitment persists after damming: Environmental flows and coupled colonization of cottonwoods and willows following floods along a dryland river	—	—	Influential
27	Secondary seed dispersal in hydro-fluctuation belts and its influence on the soil seed bank	—	—	—
28	Flows for floodplain forests: Conversion from an intermittent to continuous flow regime enabled riparian woodland development along a prairie river	—	—	Influential
29	Flood flow attenuation diminishes cottonwood colonization sites: an experimental test along the Boise River, USA	—	—	Influential
30	Effects of flooding on seed viability and nutrient composition in three riparian shrubs and implications for restoration	—	—	—

Showing the 30 most-cited of 33 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

FOLLOW-UP WORK

[Distribution and abundance of trees in floodplain forests of the Wisconsin River: environmental influences at different scales](#)

2004 · Journal of vegetation science 15 (6), 729-738, 2004 · 119 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Landscape Ecology in Theory and Practice: Pattern and Process	Oak Ridge National Laboratory, University of Maryland Center for Environmental Science, University of Wisconsin-Madison	United States	—
2	Edge Effects of Linear Canopy Openings on Tropical Rain Forest Understory Microclimate	James Cook University, Wet Tropics Management Authority	Australia	—
3	Reptile	—	—	—
4	Multiscale controls on woody plant diversity in western Oregon riparian forests	Oregon State University	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
5	Order and disorder in the river continuum. Continuity and connectivity contribution to biodiversity in floodplain meadows	OVAM - Flemish Agency for Sustainable Management of Material and Soils	Belgium	—
6	Internal fragmentation in the rainforest: edge effects of highways, powerlines and water-courses on tropical rainforest understorey microclimate, vegetation structure and composition, physical disturbance and seedling regeneration	James Cook University	Australia	—
7	Plants as river system engineers	Queen Mary University of London	United Kingdom	—
8	Influence of dam regulation on 55-year canopy shifts in riparian forests	—	—	—
9	Multiscale control of flooding and riparian-forest composition in Lower Michigan, USA	—	—	—
10	Recruitment and successional dynamics diversify the shifting habitat mosaic of an Alaskan floodplain	—	—	—
11	Modeling the interactions between river morphodynamics and riparian vegetation	—	—	—
12	River-valley morphology, basin size, and flow-event magnitude interact to produce wide variation in flooding dynamics	—	—	—
13	Flood regimes alter the role of landform and topographic constraint on functional diversity of floodplain forests	—	—	—
14	Which spatial heterogeneity framework? Consequences for conclusions about patchy population distributions	—	—	—
15	Exploring the key drivers of riparian woodland successional pathways across three European river reaches	—	—	Influential
16	Floodplain Forests—Key Forest Ecosystems for Maintaining and Sustainable Management of Water Resources in Alluvial Landscape	Kingston and St George's University, Sheffield Emergency Care Forum, University of Bath	United Kingdom	—
17	Including riparian vegetation in the definition of morphologic reference conditions for large rivers: a case study for Europe's Western Plains	—	—	—
18	Shoreline vegetation in the Danjiangkou Reservoir: characteristics, related factors, and differences with adjacent riverine wetlands	—	—	—
19	Evaluation of tree mortality and parasitoid recoveries on the contiguous western invasion front of emerald ash borer	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
20	Hydrological and land use determinants of Eucalyptus camaldulensis occurrence in floodplain wetlands	—	—	—
21	The effects of flood defences on riparian vegetation species richness and abundance	—	—	—
22	Using a Bayesian network model to assess ecological responses to hydrological factor interactions	—	—	—

Independent citing papers only; self- and co-author citations excluded. The S2 column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the “built on / relied upon” pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
U.S. Geological Survey	United States	—	37
Colorado State University	United States	QS =458	32
Arizona State University	United States	SCImago #357 · THE 201–250 · QS =173	26
University of Arizona	United States	SCImago #408 · THE =138 · QS =287	15
University of British Columbia	Canada	SCImago #144 · THE 45 · QS 40	13
Umeå University	Sweden	SCImago #1412 · THE 401–500 · QS =401	13
Queen Mary University of London	United Kingdom	SCImago #416 · THE =134 · QS =110	11
Oregon State University	United States	SCImago #1028 · QS =624	11
Utah State University	United States	SCImago #2176 · QS 1001-1200	10
Northern Arizona University	United States	SCImago #3335 · QS 1001-1200	10
Instituto Nacional de Pesquisas da Amazônia	Brazil	SCImago #2290	10
USDA Forest Service	United States	—	9
University of New Mexico	United States	SCImago #1282 · QS 751-760	9
Griffith University	Australia	SCImago #869 · THE 251–300 · QS 268	8
United States Geological Survey	United States	SCImago #983	8

Geographic distribution of citing authors

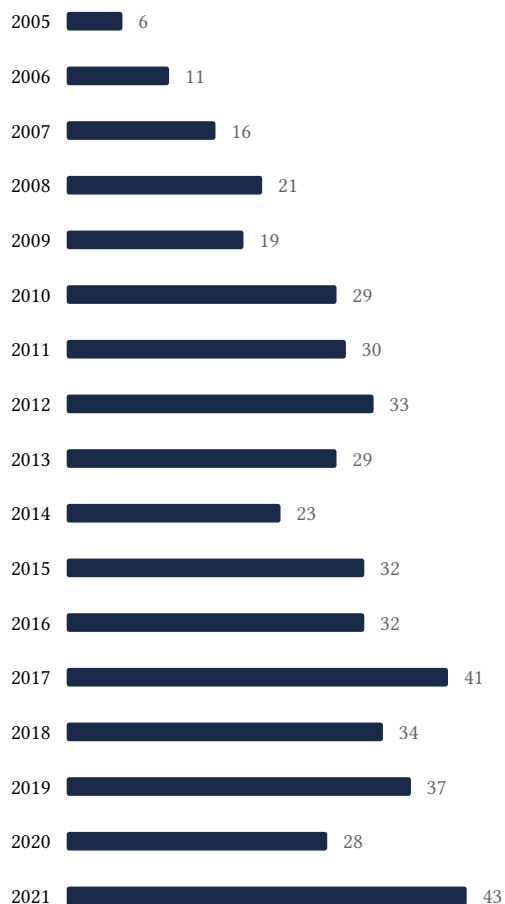
Country	Citing papers
United States	287
Australia	64

Country	Citing papers
Canada	42
Brazil	38
United Kingdom	35
Spain	32
China	30
Germany	29
France	27
Sweden	26
Italy	18
Switzerland	15

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** – the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.





F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- Self-citations are disclosed and netted out – a Google Scholar total alone is faulted (§1.1).
- Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- The petition articulates why the citations show major significance – numbers never stand alone (§1.5).
- For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- Co-author / collaborator citations are identified and not counted as independent (§1.7).
- Recognition is shown beyond the scholar's own institution and circle (§1.8).
- Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- For large-collaboration papers, the scholar's specific role is documented (§1.13).
- Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** – persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Importance of low-flow and high-flow characteristics to restoration of riparian vegetation along rivers in arid south-western United States	252	8 CFR 204.5(i)(3) – Outstanding Researcher

Contribution	Core paper	Indep. cites	Supports
Contribution 2	Consequences of human-altered floods: levees, floods, and floodplain forests along the Wisconsin River	66	8 CFR 204.5(i)(3) – Outstanding Researcher
Contribution 3	Riparian tree seedling distribution on Wisconsin River sandbars: controls at different spatial scales	78	8 CFR 204.5(i)(3) – Outstanding Researcher