Annotated Bibliography:
Studies Relevant to Alternative Transportation and Carrying Capacity Decision Making in Yosemite National Park

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*** The purpose of this annotated bibliography is to identify studies pertinent to alternative transportation and carrying capacity decision making in Yosemite National Park in order to identify useable data and data gaps. Moreover, this bibliography should help inform conceptual connections between visitor carrying capacity and transportation. The first two sections contain descriptions of studies and reports that may be most relevant to this workshop. The final section contains a list of other studies, most of which were conducted in Yosemite Valley, that also may be of some relevance to this workshop.**

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BRW. (2003, February). Yosemite National Park Traffic Information System Trip Table Summary Report. Denver, CO: David Evans and Associates p. 2

Co, S., Kurani, K.S., & Turrentine, T. (2000). *A Study of Visitor Bicycle Use in Yosemite Valley.* (ITS-Davis Pub #RR-00-1). Davis, California: University of California, Institute of Transportation Studies. p. 3

Dornbush & Company. (1998, May). *Yosemite Area Regional Transportation Strategy, Major Investment Study. Draft Working Paper #17. Economic Opportunites.* Berkely, CA: Author. p. 4

Dornbusch & Company, Inc. (1999, August). *Socioeconomic Report to the National Park Service, Yosemite National Park, California*. Prepared for the National Park Service. San Francisco, CA: Author. p. 5

EA Engineering, Science and Technology. (1996, September). *Air Quality Analysis of Transportation Scenarios for Yosemite National Park, CA.* Lafayette, CA: Author p. 6

Gramann, James H. (1992). *Visitors, Alternative futures, and Recreational Displacement at Yosemite National Park.* (CA 7029-0-0005). College Station, Texas: Department of Recreation, Park and Tourism Sciences, Department of Rural Sociology, Texas Agricultural Experiment Station, Texas A&M University p. 7

Leigh, Scott & Cleary, Inc. (1991, January). *Yosemite Transportation Study*, Final Report (LSC #8900730). Denver, CO: Author p. 8

Manning, R., B.Wang,W.Valliere, & Lawson, S. (1999). *Carrying Capacity Research for Yosemite Valley: Phase I Study.* Burlington, Vermont: University of Vermont, School of Natural Resources. p. 9

Manning, R.,W.Valliere, S. Lawson, B.Wang, & Newman, P. (2000). *Carrying Capacity Research for Yosemite Valley: Phase II Study.* Burlington, Vermont: University of Vermont, School of Natural Resources. p. 10

Manning, R. E., Valliere, W., Wang, B., Lawson, S., & Newman, P. (2003). Estimating Day Use Social Carrying Capacity in Yosemite National Park. *Leisure, 27*(1-2), 77-102. p. 11

National Park Service, U.S. Department of the Interior (1994). *Alternative Transportation Modes Feasibility Study, Volume IV.* Denver, CO: Denver Service Center, BRW Inc. p. 12

National Park Service, U.S. Department of the Interior (1996). *Yosemite Transportation Symposium: A Modes Analysis.* Yosemite National Park, CA: Author. p. 13

National Park Service, U.S. Department of the Interior. (1997, September). *Yosemite lodge construction staging traffic study.* Yosemite National Park, California: BRW, Inc. Denver Service Center. p. 14

National Park Service, U.S. Department of the Interior. (2000, April). *Transportation study south entrance*. Yosemite National Park, CA: BRW, Inc., Denver Service Center; Lee Engineering, TRA. p. 15

National Park Service, U.S. Department of the Interior. (2005). Code of Federal Regulations, Title 36, Chapter 1, Yosemite National Park, Compendium of Superintendents Orders. p. 16

Nelson\Nygaard Consulting Associates (1998, June). *Yosemite Area Regional Transportation Strategy, Major Investment Study- Working Paper #16. Initial Environmental Studies.* San Francisco, CA: Author. p. 17

Nelson\Nygaard Consulting Associates. (1998, July). *Yosemite Area Regional Transportation Strategy, Major Investment Study- Short and Long Range Plan.* San Francisco, CA: Author. p. 18

Nelson\Nygaard Consulting Associates. (1998, September). *Yosemite Area* Regional *Transportation Strategy, Major Investment Study, Draft Working Paper #3-1 (Excerpts) Demonstration Bus Stop Locations within Yosemite National Park.* San Francisco, CA: Author p. 19

Nelson\Nygaard Consulting Associates (1998, November). *Yosemite Area Regional Transportation Strategy, Draft Working Paper #3.3: Year Round Data Collection Summary Report.* San Francisco, CA: Author. p. 20

Newman, P., & Manning, R.E. (2002). *Integrating Ecological, Social, and Managerial Indicators of Quality into Carrying Capacity Decision Making in Yosemite National Park Wilderness*. National Park Service Study Report. p. 21

van Wagtendonk, Jan W. 1979. “A Conceptual Backcountry Carrying Capacity Model.” In *Proceedings of the First Conference on Scientific Research in the National Parks. Vol.2,*edited by Robert M.Linn, 1033-1038. Washington,D.C.: National Park Service. p. 22

Wilderness Society, The. 1992. *Yosemite Transportation Strategy.* Washington,D.C: Wildman, A. M. p. 23

Annotated Bibliography of Transportation / Capacity Studies Done Outside of YNP…….24-28

Daigle, J.J., & Zimmerman, C.A. (2003, February). *Acadia National Park ITS field operational test: Visitor survey.* Washington, DC: Battelle p. 24

Miller, C.A., & Wright R.G. (1999). An assessment of visitor satisfaction with public transportation services at Denali National Park and Preserve. *Park Science 19*(2). p. 25

PricewaterhouseCoopers LLP. (2003, November). *National Capital Parks Central: Washington, DC visitor transportation survey.* Boston MA: Author p. 26

Strong, C. (1999, June) National parks; Transportation alternatives and advanced technology for the 21st century. Conference proceedings: Hosted by Western Transportation Institute at Big Sky Ski Resort, Big Sky, Montana. p. 27

Transportation Research Board. (2004). *Integrating tourism and recreation travel with transportation planning and project delivery: A synthesis of highway practice.* (NCHRP Synthesis 329). Washington, D.C: Author. p. 28

Acronyms…….29

Bibliography of Relevant YNP Studies Not Included in Annotated Bibliography *(Could not locate copies)*…..……..….30

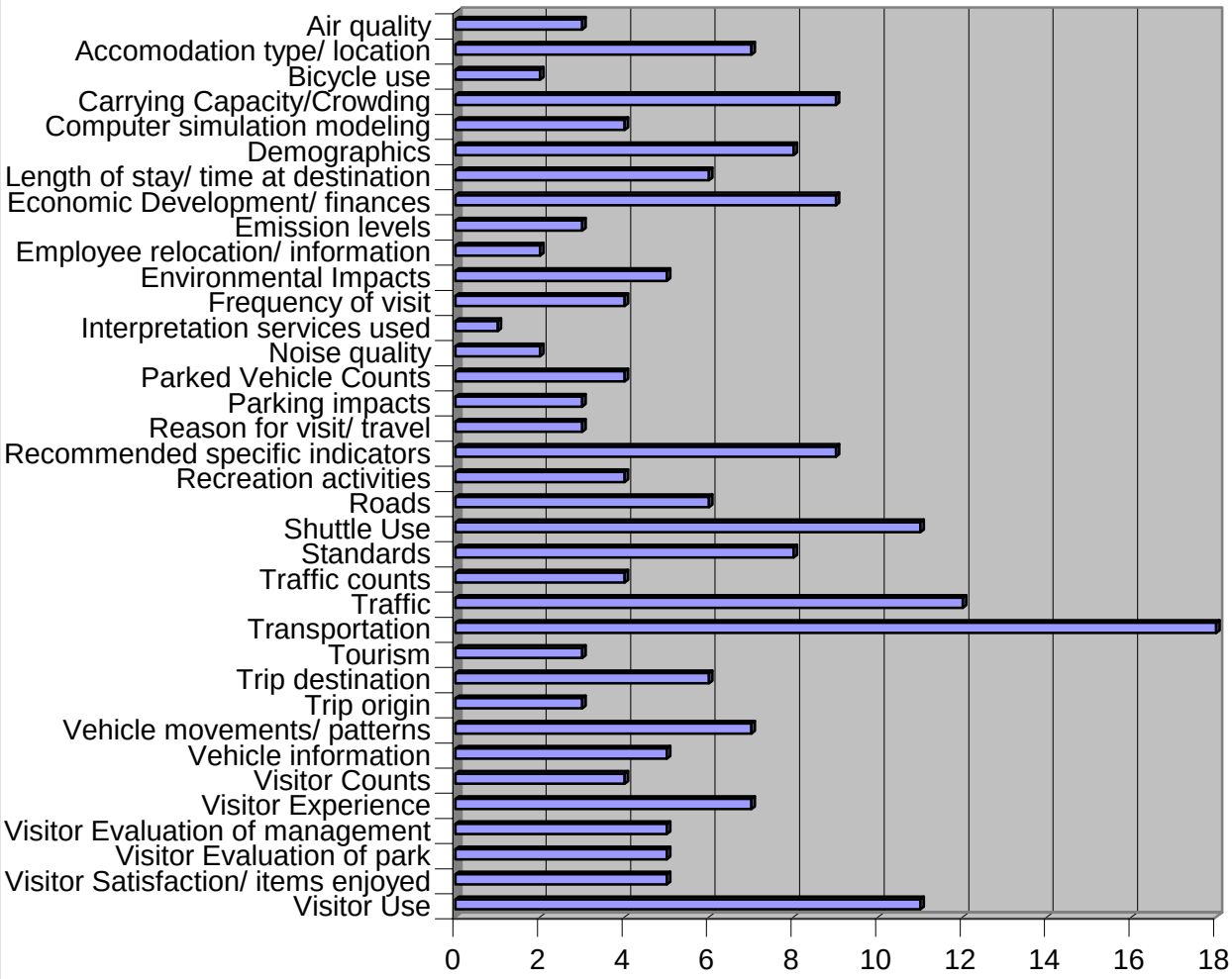
Bibliography of General YNP Studies and Documents That Might Be Relevant……..…..31-35

YNP *Studies Matrix*

	Total Number of Studies	BRW	Co et al.	Dornbush & Co.	EA Engineering...	Gramaan	Leigh et at.	Manning et al.	Newman & Manning	NPS	Nelson/Nygaard van Wagtendonk	Wilderness Society
Air quality	**3**				1		1				1		
Accommodation type/ location	**7**		1			1		2		2			1
Bicycle use	**2**		1							1		1	
Carrying Capacity/Crowding	**9**	1				1		3	1	2		1	1
Computer simulation modeling	**4**	1						3				1	
Demographics	**8**	1	1			1		3	1		1		1
Length of stay/ time at destination	**7**					1		2	1	2			1
Economic Development/ finances	**9**			2			1			3	2		1
Emission levels	**3**				1						2		
Employee relocation/ information	**2**						1				1		
Environmental Impacts	**5**						1			2	2		
Frequency of visit	**4**					1				2			1
Interpretation services used	**1**					1							
Noise quality	**2**						1				1		
Parked Vehicle Counts	**4**	1								2	1		
Parking impacts	**3**						1				2		
Reason for visit/ travel	**3**		1			1					1		
Recommended specific indicators	**9**			1	1		1	3		3			
Recreation activities	**4**		1			1				1	1		
Roads	**6**						1			3	2		
Shuttle Use	**11**		1			1		2		2	4		1
Standards	**8**				1		1	3		3			
Traffic counts	**4**	1								2	1		
Traffic	**12**	2			1		1			5	3		
Transportation	**18**	2	1	2	1	1	1			5	4		1
Tourism	**3**			2						1			
Trip destination	**6**	1	1			1		2		1			
Trip origin	**3**	1	1							1			
Vehicle movements/ patterns	**7**	1	1							2	3		
Vehicle information	**5**		1			1				2	1		
Visitor Counts	**4**	1				1		2					
Visitor Experience	**7**	1				1		3		2			
Visitor Evaluation of management	**5**					1		3		1			
Visitor Evaluation of park conditions/ suggestions for improvement	**6**		1			1		3	1				
Visitor Satisfaction/ items enjoyed	**5**					1		3			1		
Visitor Use	**11**	1	1			1		3		2	2		1

YNP *Studies Graph*

Number of Studies Addressing the Following Areas :



Bibliography of Transportation / Capacity Studies Done in YNP or Yosemite Valley

BRW. (2000). *Yosemite National Park Visitor Use Study August 1999.* (Contract # 1443CX2000-97-0017). Denver, CO: Author

Who:	Prepared by ORCA Consulting under contract with BRW. The study team for this effort included YNP, BRW, Lee Engineering, UVM and UC Davis
When:	August 1999
Where:	The study included the following major areas of Yosemite National Park: Yosemite Lodge, Curry Village, Ahwahnee Lodge, Yosemite Village & Camp 6, Mirror Lake, Happy Isles & Vernal Falls, Yosemite Falls, Bridalveil Falls, other smaller areas in Yosemite Valley, Glacier Point, Tuolumne, Mariposa Crove & Wawona
What was measured?	• Hourly counts of number of visitors at major public areas • Hourly counts of vehicles parked at major public areas • Traffic studies including hourly traffic counts and movement counts • Visitor surveys on demographics and visitor experience • Carrying capacity • Visitor Use
Special Considerations?	Social _x_ Natural Resource ___ Managerial _x_. This report was used to enhance management knowledge of visitor use trends.
Indicators identified:	Yes ___ No _x_. Not specifically listed in this report.
Standards recommended	Yes ___ No _x_. Not specifically listed in this report.
Outline of Contents:	Introduction, Yosemite Valley Areas: Yosemite Lodge, Curry Village, Ahwahnee Lodge, Yosemite Village, Camp 6, Yosemite Falls, Bridalveil Falls, Happy Isles & Vernal Falls, Mirror Lake, Bicycle Use at Mirror Lake (University of California at Davis), Stables, Other Valley Areas, Special Studies- River Areas and Climbing, Valley Shuttle, Roadway Traffic Volumes and Intersection Turning Movements, Vehicle Classification Study; Yosemite Out-of –Valley Areas: Glacier Point, Tunnel View, Mariposa Grove/Wawona, Tuolumne; Yosemite Parkwide Summaries: Vehicle Parking Counts for All Areas, Visitor Counts & Cyclists Counts for Major Area of Yosemite National Park; Surveys: Visitor Exit Survey, Tour Bus Driver Survey, Observational Worksheet Summaries
Summary: With the use of graphs and charts, this report summarizes results from several studies on visitor use characteristics (summer 1999). It does not include any detail on study methods.	

BRW. (2003, February). Yosemite National Park Traffic Information System Trip Table Summary Report. Denver, CO: David Evans and Associates

Who:	Prepared by: David Evan and Associates Prepared for: U.S. Department of Transportation Research and Special Programs Administration John A. Volpe National Transportation Systems Center Authors William Byrne, Joseph Hart, Inga Note
When:	February 2003
Where:	YNP (entire park)
What was measured?	• Origin of trip • Destination of Trip
Special Considerations?	Social ___ Natural Resource ___ Managerial _x_. This report could be used to identify methods to improve transportation in the park.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Introduction, Trip Table Development, Summary, Appendix A: Summer Trip Tables, Appendix B: Shoulder Season Trip Tables, Appendix C: Winter Season Trip Tables, Appendix D: Summer 2002 Trip Tables, Appendix E: References and Data Sources, Table of Figures
Summary: This report documents a set of vehicle trip tables for major traffic generators within YNP. Trip tables were prepared as input to traffic analysis and simulation tools that will be used to model vehicle travel.	

Co, S., Kurani, K.S., & Turrentine, T. (2000). *A Study of Visitor Bicycle Use in Yosemite Valley*. (ITS-Davis Pub #RR-00-1). Davis, California: University of California, Institute of Transportation Studies.

Who:	Sean Co, Kenneth S. Kurani, & Thomas Turrentine (Institute of Transportation Studies, University of California)
When:	Summer of 1999
Where:	Yosemite Valley Bikeway System: Curry Village, Camp 6/Yosemite Valley intersection, Mirror Lake, Valley Visitor Center, Sugarpine Bridge, Swinging Bridge
What was measured?	• Bike activity counts • Presence of children in group • Private vs. rented bicycles • Lodging locations of cyclist that stayed overnight • Income of cyclists and general visitor • Type of group • Group size • Household Categories • Country of origin • Trip start locations and locations visited on trip • Response to adequacy of bike trails • Additional bike trip locations • Response to Adequacy of bike locking locations • Locking locations • Comments about bike use • Sources of bicycling information • Ownership by previous bicycle rides • Reason to ride bikes • Shuttle use • Statement for vehicle travel • YCS monthly bike rentals • Bicycle movements
Special Considerations?	Social _x_ Natural Resource ___ Managerial _x_. This study was done as part of other traffic and travel studies done in YNP in 1999.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Executive Summary, Introduction, Survey Methodology, Results, Conclusions, References
Summary: This report represents the first comprehensive look at visitor bicycle use in Yosemite Valley.	

Dornbush & Company. (1998, May). ***Yosemite Area Regional Transportation Strategy, Major Investment Study. Draft Working Paper #17. Economic Opportunites.*** **San Francisco, CA: Author.**

Who:	Dornbush & Company
When:	May 1998
Where:	YNP and YARTS service of Yosemite visitation
What was measured?	This was not a study, but provided many suggestions for future economic development for YNP and surrounding areas.
Special Considerations?	Social _x_ Natural Resource ___ Managerial _x_. This paper provided the YARTS Board with information that would allow them to implement service in a way that maximizes tourism related economic development.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Introduction, Goals, Mechanisms for Economic Growth, Factors Affecting Future Regional Economic Development, Recommendations: Economic Development Approaches
Summary: This paper (1) provides a framework for structuring future economic development efforts, (2) identifies and discusses key factors influencing future tourism related economic development in the region, and (3) offers strategies and approaches for enhancing the region's tourism-related economy taking maximum advantage of visitation to YNP and the YARTS service of Yosemite Visitation.	

Dornbusch & Company, Inc. (1999, August). *Socioeconomic Report to the National Park Service, Yosemite National Park, California*. Prepared for the National Park Service. San Francisco, CA: Author

Who:	By Nik Carlson of Dornbusch & Company
When:	August 1999
Where:	YNP and bordering counties: Madera, Mariposa, Mono, and Tuolumne
What was measured?	• Average visitor spending for: visitors who spend the night in the park, visitors who spend the night near the park, visitors who are in the area for the day
Special Considerations?	Social _x_ Natural Resource ___ Managerial ___. Yosemite visitor spending is an important source of employment for many small communities nearby.
Indicators identified:	Yes _x_ No ___. Economic indicators such as output, income, and employment were identified for each county.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Socioeconomic Region, Identification of the Affected Region, Methodology, General Overview of Counties, Visitor Population, Local Government Finances and Services, County Output, VA, Emplyment
Summary: Economic and statistical profiles were developed for each county surrounding the park to assess the importance of tourism to the region.	

EA Engineering, Science and Technology. (1996, September). ***Air Quality Analysis of Transportation Scenarios for Yosemite National Park, CA.*** **Lafayette, CA: Author.**

Who:	Prepared by: EA Engineering, Science, and Technology, Inc. Prepared for: NPS U.S. Department of the Interior
When:	September 1996
Where:	YNP and surrounding area
What was measured?	Transportation scenarios were modeled using the California ARB EMFAC computer model that estimates calendar year specific on-road motor vehicle emission factors for the state's on-road cars, trucks, buses, and motorcycles driven in California. • Emissions estimated • Air quality considered
Special Considerations?	Social ___ Natural Resource _x_ Managerial ___. This study was concerned with air quality.
Indicators identified:	Yes _x_ No ___. Emission levels
Standards recommended	Yes _x_ No ___. Federal and California AAQS
Outline of Contents:	Figures, Tables, Abbreviations and Acronyms, Executive Summary, Introduction, Study Data and Assumptions, Transportation Scenarios, Mobile Source Emission Factors, Summary of Mobile Source Emissions, References, Appendix, List of Figures, List of Tables
Summary: The purpose of this air quality analysis is to characterize and quantify mobile source air emissions associated with ten transportation scenarios for YNP. This information was developed in support of the VIP SEIS. These transportation strategies are aimed at reducing traffic congestion in YV by eliminating day-use visitor vehicles from the east end of the Valley and providing shuttle bus transportation from staging areas within and outside the Park.	

Gramann, James H. (1992). *Visitors, Alternative futures, and Recreational Displacement at Yosemite National Park.* (CA 7029-0-0005). College Station, Texas: Department of Recreation, Park and Tourism Sciences, Department of Rural Sociology, Texas Agricultural Experiment Station, Texas A&M University.

Who:	James H. Gramann of Texas A&M University
When:	January 1992 (1990-1991 visitor study)
Where:	Survey of visitors in YNP, mailback survey from visitors who were on buses in the park, and telephone survey of residents living in 18 central and southern California counties.
What was measured?	• Demographic Characteristics: age, gender, marital status, group size, impairments, residence, socioeconomic status, race and ethnicity • Trip Characteristics: reason for visit, frequency of visit, length of stay and accommodation type, use of reservation, major trip destination, vehicle type, pets, use of Yosemite Valley Shuttle, recreation activities, use and non-use of conducted interpretation • Visitors' Evaluations of Yosemite: perceptions of change over time, dissatisfaction with services, visitors' "best" experiences, visitors' "worst" experiences, satisfaction with park conditions, evaluations of Yosemite Valley conditions, crowding perceptions, overall satisfaction, opinion on management alternatives
Special Considerations?	Social _x_ Natural Resource ___ Managerial _x_. This study focused on visitor experience.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Executive Summary, Introduction, Methods, Demographic Characteristics of Visitor, Trip Characteristics, Visitor Evaluations of Yosemite, Recreational Displacement at Yosemite, Conclusions, References Cited
Summary: The purpose of this study was to provide the NPS with accurate information on visitors' expectations, experiences, attitudes, demographic characteristics, and behaviors.	

Leigh, Scott & Cleary, Inc. (1991, January). *Yosemite Transportation Study, Final Report.* (LSC #8900730). Denver, CO: Author

Who:	Prepared by: Leigh, Scott, & Clearly, Inc. Prepared for: NPS Denver Service Center
When:	January 1991
Where:	The road systems potentially affected by the relocation of employee housing consists of four major roads: The Valley Loop Road, South Entrance Road, El Portal Road, Big Oak Flat Road
What was measured? What was evaluated?	• Financial impacts • New road systems • Traffic • Air quality • Noise quality • Parking impacts • Employee relocation
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_. This study considered the social impact of relocating employees, the environmental impact that may be caused by increased traffic flow, and the managerial feasibility of creating transportation alternatives.
Indicators identified:	Yes _x_ No ___. speed, travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety
Standards recommended	Yes _x_ No ___. Current LOS standards of quality and conditions mentioned.
Outline of Contents:	Introduction, Existing Environment, Proposed Alternatives, Impact Analysis, Appendices, Tables, Illustrations
Summary: This study considered the feasibility of relocating a portion of the residential facilities for YPCC employees out of YV. One direct impact of this relocation would be to require these employees to commute longer distances. This study considered the environmental and financial impacts, as well as transportation alternatives to best accommodate and ameliorate the impacts of this increased travel.	

Manning, R., B.Wang,W.Valliere, & Lawson, S. (1999). ***Carrying Capacity Research for Yosemite Valley: Phase I Study.*** **Burlington, Vermont: University of Vermont, School of Natural Resources.**

Who:	Robert Manning, Ben Wang, William Valliere, and Steven Lawson
When:	Summer 1998
Where:	Yosemite Valley: Vernal Falls and the base of Yosemite Fall
What was measured?	Using visitor surveys, use and user characteristics were measured: • Size and type of group • Residency (country or state) • Spent last night in Yosemite Valley • Planning to spend tonight in Yosemite Valley • Type of visitor (day or overnight) • Distance hikes • Used shuttle bus system (and used it to get to trail) • Items enjoyed (and not enjoyed) about trip to YV. • Suggestions of what NPS can do to improve YV. • View of problem issues in YV • Mean and median acceptability rating of use levels along the trails- photographs • Perception of crowding For Use in computer simulation modeling, the following were measured or estimated: • Visitor counts • Time spent at destination • PPV and PAOT An exit survey was used to determine: • The percentage of users who visited the study
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_ . This study addressed the social impact of crowding.
Indicators identified:	Yes _x_ No ___. Number of visitors on trails.
Standards recommended	Yes _x_ No ___. Maximum acceptable number of visitors.
Outline of Contents:	Introduction and Study Objectives; Study Methods; Study Findings for Vernal Falls; Study Findings for Yosemite Falls; Study Findings for Computer Simulation Models; Study Findings for the Exit Survey, Summary, Conclusion, Recommendations, References, Appendices
Summary: The overall purpose of this study was to gather information to help determine and manage carrying capacity of Yosemite Valley. Three specific objectives of this study were: 1) determine indicators and standards of quality of the visitor experience, 2) use computer simulation models to estimate the maximum daily use levels, 3) estimate the percentage of day users who visited study sites.	

Manning, R.,W.Valliere, S. Lawson, B.Wang, & Newman, P. (2000). ***Carrying Capacity Research for Yosemite Valley: Phase II Study.*** **Burlington, Vermont: University of Vermont, School of Natural Resources.**

Who:	Robert Manning, William Valliere, Steve Lawson, Ben Wang, Peter Newman, UVM
When:	Summer 1998 and 1999
Where:	YV: Bridalveil Fall, Glacier Point, and Mirror Lake
What was measured?	Using visitor surveys, use and user characteristics were measured: • Size and type of group • Residency (country or state) • Spent last night in Yosemite Valley • Planning to spend tonight in Yosemite Valley • Type of visitor (day or overnight) • Distance hikes • Used shuttle bus system (and used it to get to trail) • Items enjoyed (and not enjoyed) about trip to YV. • Suggestions of what NPS can do to improve YV. • View of problem issues in YV • Mean and median acceptability rating of use levels along the trails- photographs • Crowding Norms • Perception of crowding For Use in computer simulation modeling, the following were measured or estimated: • Visitor counts • Time spent at destination • PPV and PAOT An exit survey was used to determine: • The percentage of users who visited the study sites
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_. This study addressed the social impact of crowding.
Indicators identified:	Yes _x_ No ___. Number of visitors on trails.
Standards recommended	Yes _x_ No ___. Maximum acceptable number of visitors.
Outline of Contents:	Introduction and Study Objectives; Study Methods; Study Findings for Bridalveil Fall Visitor Survey; Study Findings for Glacier Point Visitor Survey; Study Findings for Mirror Lake Survey, Study Findings for Computer Simulation Models, Study Findings for Park Exit Survey; Summary, Conclusion, Recommendations, References, Appendices
Summary: The overall purpose of this study was to gather information to help determine and manage carrying capacity of Yosemite Valley. Three specific objectives of this study were: 1) determine indicators and standards of quality of the visitor experience, 2) use computer simulation models to estimate the maximum daily use levels, 3) estimate the percentage of day users who visited study sites.	

Manning, R. E., Valliere, W., Wang, B., Lawson, S., & Newman, P. (2003). Estimating Day Use Social Carrying Capacity in Yosemite National Park. *Leisure, 27*(1-2), 77-102.

Who:	Robert Manning, William Valliere, Benjamin Wang, Steven Lawson, Peter Newman, UVM
When:	Questionnaires administered August and September 1998 & 1999.
Where:	Yosemite Valley: Trail to Vernal Fall, Trail to Yosemite Falls, Trail to Bridalveil Fall, Base of Bridalveil Fall, Glacier Point, Trail to Mirror Lake
What was measured?	• Normative Standards of Quality: Preference, Acceptability, Management Action, Tolerance • Maximum daily use levels using computer simulation modeling • Percentage of day users • Day use carrying capacity (maximum number of day use visitors that can be accommodated in Yosemite Valley without violating PPV or PAOT standards of quality.
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_. Manning points out that carrying capacity has two components: environmental and social. This study addressed the social impact of crowding.
Indicators identified:	Yes _x_ No ___. Indicators of quality were addressed through a series of open- and close-ended questions.
Standards recommended	Yes _x_ No ___. Standards of quality focused on crowding related issues, including the number of people on trails and attraction sites.
Outline of Contents:	Abstract, Carrying Capacity, Study Objectives, Study Methods, Computer Simulation Model, Percentage of Day Users, Study Findings, Discussion, Conclusion

Summary: (Abstract) Estimating Day Use Social Carrying Capacity in Yosemite National Park Carrying capacity has been a long-standing issue in management of parks and outdoor recreation. Contemporary carrying capacity frameworks rely on formulation of indicators and standards of quality of the recreation experience to define and manage carrying capacity to Yosemite Valley, the scenic heart of Yosemite National Park, USA. Research included (1) a series of visitor surveys at selected sites within Yosemite Valley to identify indicators and standards of quality, (2) development of computer simulation models of visitor use at study sites to estimate maximum daily use levels without violating standards of quality, and (3) a park exit survey to determine the percentage of day users at study sites. Study findings are used to estimate a range of day use carrying capacities at study sites and for Yosemite Valley as a whole.

National Park Service, U.S. Department of the Interior (1994). ***Alternative Transportation Modes Feasibility Study, Volume IV*****. Denver, CO: Denver Service Center, BRW Inc.**

Who:	Prepared by BRW, Inc. and Dames and Moore under the direction of the Branch of Transportation, Denver Service Center, National Park Service
When:	1994
Where:	Yosemite National Park (entire park)
What was measured?	Using data from several preceding studies, the following variables were considered: • Yosemite monthly and annual visitation • Visitor travel patterns • Tour bus trips into park • Traffic counts • Shuttle bus passenger counts • Parking occupancy • Road and visitor center parking durations • Hotel parking • Visitor day use for developed areas • Costs of transportation alternatives • Overnight accommodation units • Overnight visitor capacity • Staging area comparisons
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_. The evaluation summary charts list visitor transportation and management, visitor experience, and resource impact.
Indicators identified:	Yes ___ No _x_. Not specifically listed in this report
Standards recommended	Yes ___ No _x_. Not specifically listed in this report
Outline of Contents:	Purpose, Preface, Executive Summary, Problem Statement, Park Overview, Existing Conditions, Alternatives Development and Screening, Alternative Evaluations, Figures, Tables, Maps and Charts, Appendices
Summary: This study examined opportunities to improve visitor transportation system (VTS) service in each of the major activity areas within YNP. The study also evaluated alternative strategies to intercept private vehicle trips bound for Yosemite Valley at remote locations within the park and outside of park boundaries.	

National Park Service, U.S. Department of the Interior (1996). ***Yosemite Transportation Symposium: A Modes Analysis.*** **Yosemite National Park, CA: Author.**

Who:	NPS in conjunction with YARTS (experts, regional partners, and all interested parties were invited to attend)
When:	1996 (April- three day session)
Where:	Yosemite National Park
What was measured?	This was not a transportation study. It was a discussion.
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_. Panelists analyzed each mode of transportation while addressing considerations such as grade, radius curves, frequency and spacing of stops, climatic suitability, environmental effects, visitor experience, operational characteristics, and maintenance/operating/capital costs.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Mission Statement, Superintendents Message, Background, Status of Transportation in the Park, Corridors & Surrounding Regions, Primary Modes of Transportation, System Integration, Regional and Statewide Issues, Additional Issues, Panel Synthesis, Closing Comments, Glossary, Acknowledgements, Panelists Biographies, Symposium Participants.
Summary: During this three-day symposium, participants exchanged ideas regarding current transportation technologies and their applicability to YNP. Carefully selected panelists addressed technical feasibilities, resource and environmental impacts, visitor experience, cost, and intermodal linking. The panel characterized primary modes of transportation, secondary modes of transportation and addressed considerations for each.	

National Park Service, U.S. Department of the Interior. (1997, September). ***Yosemite lodge construction staging traffic study.*** **Yosemite National Park, California: BRW, Inc. Denver Service Center.**

Who:	Prepared by: BRW, Inc.
When:	September 1997
Where:	Yosemite Valley, Yosemite Lodge area
What was measured? What was evaluated?	• Traffic operations • Congestion • Visitor comprehension
Special Considerations?	Social ___ Natural Resource ___ Managerial _x_. This paper evaluates alternatives for the management of traffic in YV.
Indicators identified:	Yes _x_ No ___. Speed, travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety
Standards recommended	Yes _x_ No ___. LOS standardized measures of quality
Outline of Contents:	Introduction, Conditions, Existing Conditions, Analysis, Alternatives, Summary, Recommendations, Figures
Summary: This report documents an evaluation of alternatives for the management of traffic in Yosemite Valley during the planned reconstruction of the Yosemite Lodge area. In addition, traffic circulation alternatives are evaluated for the period after completion at the Lodge area reconstruction and prior to the implementation of a staging area and shuttle system for day-use visitors to the valley.	

National Park Service, U.S. Department of the Interior. (2000, April). ***Transportation study south entrance*****. Yosemite National Park, CA: BRW, Inc., Denver Service Center; Lee Engineering, TRA**.

Who:	NPS, U.S. Department of the Interior, Prepared by BRW Inc in association with Lee Engineering TRA
When:	April 2000 (study was done in the summer of 1999)
Where:	South Entrance roadways, YNP
What was measured?	• Traffic counts • Vehicle Classification and Length • Parking Occupancy, Duration and Turnover • Seasonal Use • Forecast of Future Traffic Volume • LOS considerations
Special Considerations?	Social _x_ Natural Resource ___ Managerial _x_. Because increased visitation can cause traffic congestion, management must look for ways to alleviate these situations.
Indicators identified:	Yes _x_ No ___. Speed, travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety
Standards recommended	Yes _x_ No ___. Current LOS standards of quality and conditions mentioned.
Outline of Contents:	Purpose, Background, Methodology, Transportation System Analysis, Existing Transit Service, Initial Roadway Improvement Alternatives, Tables, Figures, Appendices
Summary: This study of traffic conditions and shuttle operations was undertaken in the summer of 1999 to provide information for planning and design of improvements near the South Entrance Station of YNP. The study identified initial concepts for potential realignment of the roads and the tee intersection that is immediately north of the existing entrance station.	

National Park Service, U.S. Department of the Interior. (2005). Code of Federal Regulations, Title 36, Chapter 1, Yosemite National Park, Compendium of Superintendents Orders.

Who:	NPS, U.S. Department of the Interior, Approved by Michael Tollefson, Superintendent
When:	2005
Where:	YNP (entire park)
What was measured? What was important in reference to transportation and capacity?	• Public use limits • Physical capacity of parking lots • Special lane restrictions when parking lots are full • Park entrance restrictions due to backed up traffic • Park entrance restrictions due to 18,000 person capacity
Special Considerations?	Social __x__ Natural Resource __x__ Managerial __x__. The provisions in this document are established for the proper management of both social and natural resources.
Indicators identified:	Yes __x__ No ___. Rules being followed
Standards recommended	Yes __x__ No ___. Standard park regulations
Outline of Contents:	Visiting Hours, Public Use Limits, Closures, Area Designations for Specific Use or Activities, Activities That Require a Permit, General Regulations,
Summary: This document is the Superintendents Compendium of Designations, Closures, Permit Requirements, and Other Restrictions Imposed Under Discretionary Authority.	

Nelson\Nygaard Consulting Associates (1998, June). ***Yosemite Area Regional Transportation Strategy, Major Investment Study- Working Paper #16. Initial Environmental Studies.*** **San Francisco, CA: Author.**

Who:	Donaldson Associates and Nelson/Nygaard Consulting Associates
When:	June 1998
Where:	Highway 120 in Stanislaus, Mariposa and Mono Counties; Highway 140 in Merced and Mariposa Counties; Highway 41 in Fresno, Madera and Mariposa Counties.
What was measured? What else was considered?	• Environmental Factors Potentially Affected/ Determination • Land Use Planning • Population and Housing • Geologic Problems • Water • Air Quality • Transportation/ Circulation • Biological Resources • Energy and Mineral Resources • Hazards • Noise • Public Services • Utilities and Service Systems • Aesthetics • Cultural Resources • Recreation • Mandatory Findings of Significance
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_. The document contains Environmental Initial Studies.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Introduction/Summary, Demonstration Project/Phase 0 Initial Study, Demonstration Services/Phase) Initial Study Checklist, Initial Environmental Study- Phases 1 through 3, Phases 1-3 Initial Study Checklist, Figures
Summary: This report contains two separate Environmental Initial Studies completed for the YARTS preferred alternative. The first section contains a completed IS for the initial demonstration service and Phase 0 of the Phased Transit Alternative. The final section of this paper presents a very brief IS for Phases 1-3 of the Phased Transit Alternative.	

Nelson\Nygaard Consulting Associates. (1998, July). ***Yosemite Area Regional Transportation Strategy, Major Investment Study- Short and Long Range Plan.*** **San Francisco, CA: Author.**

Who:	Nelson/Nygaard Consulting Associates
When:	July 1998
Where:	Yosemite National Park, its four gateways, and the surrounding areas
What was measured? What else was studied?	This planning document is part of the major investment study, which provides a series of alternatives for providing regional transit to Yosemite access corridors. Much of the information in this document is discussed in greater detail in the Working Papers listed: • # 1: Review of Local Planning Efforts • # 2: Data Collection Methodology • # 3: Supportive Policies • # 4: Funding Opportunities • # 5: Cost and Phasing Issues • # 6: Stakeholder Interviews • # 7: Intercept Parking Design Guidelines and Inventory • # 8: Employee Transportation Demand Management • # 9: Demonstration Project Potential • # 10: Economic Background Information • # 11: Incentives Promoting YARTS • # 12: Refined Options • # 13: Winter Data Collection • # 14: Public Workshop Summary • # 15: Evaluation of Alternatives • # 16: Initial Environmental Studies • # 17: Economic Opportunities
Special Considerations?	Social ___ Natural Resource ___ Managerial _x_. This report focused on the YARTS planning process.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Introduction, The YARTS Planning, Alternatives Considered, Evaluation Process, The Locally Preferred Alternative, Policies Critical to YARTS' Success, YARTS Short Range Action Plan, Long Range Plan, Capital Plan, Incentives and Marketing Plan, Financial Plan, Organizational Plan, Appendices, Figures
Summary: This plan provides a blueprint for implementing a Phased Transit Alternative, selected by the YARTS Management Board as its preferred alternative. The Phased Transit Alternative is a voluntary system based on providing incentives to encourage transit ridership.	

Nelson\Nygaard Consulting Associates. (1998, September). ***Yosemite Area Regional Transportation Strategy, Major Investment Study, Draft Working Paper #3-1 (Excerpts) Demonstration Bus Stop Locations within Yosemite National Park.*** **San Francisco, CA: Author**

Who:	Nelson/Nygaard Consulting Associates
When:	1998
Where:	Bus stop locations within YNP
What was measured?	This paper made recommendation for bus stops.
Special Considerations?	Social ___ Natural Resource ___ Managerial _x_. This preliminary paper was provided for internal review by NPS staff only.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Stop Standards, Bus Stop Amenities, Primary Bus Stops, Field Notes, Highway 120 West YARTS Bus Stop Evaluation, Highway 120 East YARTS Bus Stop Evaluation, Highway 140 YARTS Bus Stop Evaluation, Highway 41 Bus Stop Evaluation, Valley Bus Stops: Curry Village, Ahwahnee Hotel, Visitor Center, Yosemite Lodge, Bridalveil Lodge, Bridalveil Falls, Four Mile Trail
Summary: This paper was intended to provide guidance to local jurisdictions that must approve bus stop locations.	

Nelson\Nygaard Consulting Associates (1998, November). ***Yosemite Area Regional Transportation Strategy, Draft Working Paper #3.3: Year Round Data Collection Summary Report.*** **San Francisco, CA: Author.**

Who:	Nelson/Nygaard Consulting Associates
When:	The year-round YARTA Data Collection concluded in September, 1998, with the fall data collection
Where:	YNP all four gates
What was measured? What else was considered?	• Demographics • Yosemite visitor profile • Visitor travel behavior • Visitor spending patterns • Visitor opinion about parking and transit amenities • Survey comments • Implications for YARTS
Special Considerations?	Social _x_ Natural Resource ___ Managerial ___. The YARTS Data Collection was designed to build a picture, or profile, of the "typical" Yosemite visitor.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Executive Summary, Introduction, Survey Results and Data Analysis, Technical Appendix, Figures,
Summary: In total, over 7,000 surveys were collected from visitors at all entrance gates in all travel seasons. The database compiled from these surveys represents the richest set of information collected from Yosemite visitors, providing for a statistical confidence of 95% + or – 1% for the full year. This collection was not intended to serve as a referendum on potential transit service; rather, it was designed to gather demographics, travel patterns, and preferences of the Yosemite visitor.	

Newman, P. & Manning, R.E., (2001). ***Integrating Ecological, Social and Managerial Indicators of Quality into Carrying Capacity Decision-making in Yosemite National Park Wilderness.*** **National Park Service Study Report.**

Who:	Peter Newman and Robert Manning, UVM
When:	Summer 2001
Where:	The study included the Yosemite National Park Designated Wilderness
What was measured?	• Inventoried and mapped selected ecological, social, and managerial setting attributes that define the quality of wilderness experiences in Yosemite National Park. • Evaluated relative tradeoffs among wilderness setting attributes. Visitor-based evaluations of these tradeoffs were analyzed.
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_.
Indicators identified:	Yes _x_ No __.
Standards identified:	Yes _x_ No __..
Outline of Contents:	Introduction, Study Methods, Wilderness Visitor Characteristics, Results: Daily Experience Diary, Results: Stated Choice Model, Management Implications, Study Conclusions, Literature Cited, Appendices.

Summary: The study was conducted in the summer of 2001. Principal study methods included two surveys of a representative sample of overnight wilderness visitors in Yosemite National Park. The first survey employed a diary in which respondents traced their route of travel and reported the current condition of six wilderness setting attributes, as well as the condition of these six attributes they preferred, found "tolerable" and thought the National Park Service should manage for. The second survey employed a stated choice model questionnaire in which respondents reported their preferences between alternative wilderness settings. Study findings can be used to help formulate standards of quality and define a spectrum of visitor opportunities or zones for the wilderness portion of the park.

van Wagtendonk, Jan W. 1979. "A Conceptual Backcountry Carrying Capacity Model." In *Proceedings of the First Conference on Scientific Research in the National Parks. Vol.2*,edited by Robert M.Linn, 1033-1038. Washington,D.C.: National Park Service.

Who:	Jan van Wagtendonk, USGS, Yosemite Field Station
When:	1978-1979
Where:	YNP Wilderness trails
What was measured?	• Travel times of parties on 1-mile segments • Travel use patterns • Party size • Party type (backpacker, horse)
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_. This study gathered data as input to a Wilderness Simulation Model
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Do not have original report
Summary: This study gathered data as input for a Wilderness Simulation Model. The out put of the model informed the development of the trailhead quota system for Yosemite National Park Wilderness.	

Wilderness Society, The. (1992). *Yosemite Transportation Strategy*. Washington, D.C.: Wildman, A. M.

Who:	Prepared by the Wilderness Society
When:	June 1992
Where:	YNP and surrounding counties
What was measured?	• Monthly visitor trends • Visitor growth • Tour bus use • Lodging growth outside of park • Visitor demographics • Parking capacity • Regional growth • Regional economy related to travel • Time spent in park by average visitor
Special Considerations?	Social _x_ Natural Resource _x_ Managerial _x_. The Wilderness Society was concerned with the conflict between visitor use and preservation of natural resources.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Acknowledgements, Glossary, Executive Summary, Introduction, Background, Findings, Objectives, Improvement Program, Cost and Financing, Action Plan, Figures, Tables, Maps
Summary: The Yosemite Transportation Strategy recognizes regional linkages and recommends a course of action that is based upon a collaborative and coordinated effort among government and non-government communities surrounding Yosemite National Park. It provides a recommended set of improvements and an action plan to be taken into consideration by the NPS, concessionaires, and other agencies.	

Annotated Bibliography of Transportation / Capacity Studies Done Outside of YNP

Daigle, J.J., & Zimmerman, C.A. (2003, February). ***Acadia National Park ITS field operational test: Visitor survey.*** **Washington, DC: Battelle**

Who:	Prepared by: John J. Daigle of the University of Maine, and Carol A Zimmeramn of Battelle. Prepared for: U.S. Department of Transportation
When:	Surveys performed in July 2002 and September 2002
Where:	Acadia National Park and Mount Desert Island
What was measured? What was considered?	The visitor survey was designed to obtain specific information on four of the six central objectives: • Customer satisfaction • Mobility • Productivity and economic vitality • Energy and environment
Special Considerations?	Social _x_ Natural Resource ___ Managerial _x_. An important goal of the Field Operational Test of ITS at Acadia National Park is to reduce vehicle congestion in the park.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	List of Figures, List of Tables, Acknowledgements, Executive Summary, Introduction and Background, Overview of Study Design and Methods, Recruitment Results and Field Experiences, Summary of Survey Responses, Discussion, Appendix A: On-site Interview, Appendix B: Mail-back Questionnaire, Appendix C. Sampling Schedule
Summary: In 2002, as part of the Acadia National Park Field Operational Test, ITS components were deployed to help visitors travel around Mount Desert Island and Acadia National Park. Real time travel information was collected and integrated with Island Explore buses and disseminated to visitors via an automated annunciator that transmitted an audio message and displayed the next bus stop on an electric sign within the bus…etc. Using data from surveys of visitors, this report describes visit and visitor characteristics and their experiences using the traveler information. Information was collected from visitors (actually tourists and a small number of local residents) using two different survey instruments: an on-site interview and more extensive mail-back questionnaire.	

Miller, C.A., & Wright R.G. (1999). An assessment of visitor satisfaction with public transportation services at Denali National Park and Preserve. *Park Science 19*(2).

Who:	Craig Miller and Gerald Wright
When:	Survey was conducted in 1996.
Where:	Denali National Park
What was measured?	• Visitor attitudes towards VTS • Quality of bus as means of viewing the park • Satisfaction with wildlife viewing • Perception of crowding on roads • Visited park before • demographic information
Special Considerations?	Social _x_ Natural Resource ___ Managerial ___. Examined visitor attitude and satisfaction towards VTS
Indicators identified:	Yes ___ No _x_. Not specifically stated
Standards recommended	Yes ___ No _x_. Not specifically stated.
Outline of Contents:	Introduction, Study Design, Results
Summary: Although Denali's transportation service had been in place for over 25 years, the park has had, until present day, little definitive knowledge regarding visitor attitude toward satisfaction with the transportation system. This survey provided an opportunity to examine visitor satisfaction with three VTS trips.	

PricewaterhouseCoopers LLP. (2003, November). ***National Capital Parks Central: Washington, DC visitor transportation survey.*** **Boston MA: Author**

Who:	PricewaterhouseCoopers and its subcontractors ETC Institute and KA Associates were commissioned by the NPS and NACC to conduct this visitor survey
When:	Survey conducted spring and summer 2003
Where:	Washington, D.C. area, National Capitol Parks Central, particularly in the Central/Memorial Core
What was measured?	• Visitor Profile: type of personal travel group, age distribution of travel groups, education and employment, geographic profile • Profile Trip Characteristics: frequency of visits to the area, primary purpose of visits to the area, length of stay in the area, where visitors are staying during the visit, percentage of visitors who sought information about the area before they arrived, how visitors learned about travel information after they arrived • Perceptions of Existing Transportation Services: driven or parked a car on this trip, use of non-automobile transportation by visitors, amount spent on transportation in the area, use of sightseeing services in the area, sightseeing service used, satisfaction with sightseeing services, how visitors learned about sightseeing services in the area • Preferences for Future Expanded or New Transportation Services: willingness to use a remote parking area and shuttle service, desirability of four types of frequent transportation services, willingness of visitors to wait to use transportation services, pricing methods and preference, various characteristics of transportation services, • Travel Diary Survey Findings: modes of travel used by visitors to travel between major attractions, number and types of attractions visited, sequence that visitors visit major attractions
Special Considerations?	Social _x_ Natural Resource ___ Managerial _x_. Survey was important to identify visitor need for transportation services.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Introduction, Executive Summary, Methods, Survey Results, Charts and Graphs, On Site Survey Banner Crosstabs, Travel Diary Banner Crosstabs, Survey Instruments
Summary: The survey was split into two parts. Part I was designed to gather information about visitor profiles and to identify visitor needs for various transportation services. Part II was designed to gather more detailed travel information. Visitors were identified by a screening question that requested individuals stipulate whether they were in visiting the area for pleasure or non-pleasure/work.	

Strong, C. (1999, June) National parks; Transportation alternatives and advanced technology for the 21st century. Conference proceedings: Hosted by Western Transportation Institute at Big Sky Ski Resort, Big Sky, Montana.

Who:	The Western Transportation Institute at Montana State University- Bozeman (WTI), in conjunction with several other organizations, hosted a conference
When:	June 3-5, 1999
Where:	Conference held at Big Sky Ski Resort, Big Ski, Montana
What was measured? What was the focus?	Discussion was focused on: • Regional Transportation Planning and Coordination • Traffic and Demand Management Alternatives • Transit Alternatives: Shuttles to Light Rail Service • Traveler and Visitor Information Needs • Alternative Fuels Panel
Special Considerations?	Social ___ Natural Resource ___ Managerial _x_. Planning for transportation systems in national parks.
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Conference Overview, Opening Session, Overview of NPS Challenges, Overview and Applications of ITS, Regional and NPS transportation Planning and coordination, Traffic and Demand Management Alternatives for National Parks, Transit Alternatives: Shuttles to Light Rail Service, Traveler and Visitor Information Needs, Department of Energy Session, Alternative Fuels Panel, Closing Session, Conference Registrants
Summary: The purpose of the conference was to exchange ideas between potential partners on the use of advanced transportation technologies that might address the transportation challenges that face the increasingly popular National Parks. The intent was that through the issues and opportunities presented by stakeholders present at the conference that a vision for the future would be developed.	

Transportation Research Board. (2004). ***Integrating tourism and recreation travel with transportation planning and project delivery: A synthesis of highway practice.*** **(NCHRP Synthesis 329). Washington, D.C: Author.**

Who:	Transportation Research Board; Research sponsored by the American Association of State Highway and Transportation Officials in Cooperation with the Federal Highway Administration
When:	2004
Where:	Lisa Petraglia and Glen Weisbrod, Economic Development Research Group, Boston, MA, were responsible for collection of the data and preparation of the report.
What was measured? What was considered?	-Planning activities from many DOTs fall into the following three main categories: • Working relationships for interagency cooperation and public-private, nonprofit- sector partnerships • Tourism-related travel demand analysis and evaluation • Project solution to address special needs of tourism-related travel -Projects related to tourism travel reflect a variety of needs and motivation. As revealed in this study, projects were defined to address the following: • Alleviating traffic congestion and air quality concerns near visitor attractions • Creating better access and mobility to meet the special needs of different traveler segments • Investing in tourism as a means of economic development • Improving traveler information resources • Preserving valued historic, cultural, and environmental assets • Linking existing but currently separate tourism attractions • Competing travel demand needs of area residents and visitors -The various projects emerging as a result of integrating tourism travel needs into the activities of state-level and regional transportation agencies spanned the following categories: • Attractions • Access • Traveler Information • Facility operation and related improvements
Special Considerations?	Social ___ Natural Resource ___ Managerial _x_. Transportation planning and project delivery
Indicators identified:	Yes ___ No _x_.
Standards recommended	Yes ___ No _x_.
Outline of Contents:	Summary, Introduction, Literature Review, Current State of Practice: Survey Results, Conclusion, Appendix A: Survey Questionnaire, Appendix B: Survey Respondents and Responses
Summary: The TRB Task Force on Transportation Needs for National Parks and Public Lands originally conceived this synthesis study. It is based on the recognition that there is a need to gauge how well and how often tourism and recreation travel needs and objectives are included in transportation planning and decision-making. To accomplish this, the synthesis study included a review of the literature of research reports and agency studies, as well as a survey of current practice that was distributed to state departments of transportation and other agencies with an interest in the topic, including selected state tourism offices, parks and recreation offices, metropolitan planning organizations, and federal land agencies.	

Acronyms

AAQS- ambient air quality standards
ARB- Air Resource Board
ATP- Alternative Transportation Plan
CLOS- Composite Level of Service
CTIP- Coordinated Federal Lands Highway Technology Implementation Program
DEA- Dave Evens Associates
DOT- Department of Transportation
EA- Environmental Assessment
EIS- Environmental Impact Statement
EMFAC Emission Factors
FEIS- Final Environmental Impact Statement
FHWA- Federal Highway Administration
FONSI- Findings of No Significant Impact
IS- Initial Study
ITS- Intelligent Transportation Systems
JPA- Joint Powers Agreement
LOS- Level of Service
MCAG- Merced County Association of Governments
NACC- National Capital Parks Central
NCHRP- National Cooperative Highway Research Program
NPS- National Park Service
ORCA- Operation Research Consulting Associates
PAOT- Persons at one time
PPV- Person per viewpoint
RAP- Restricted Access Plan
ROD- Record of Decision
SEIS- Supplemental Environmental Impact Statement
TCRP- Transit Cooperative Research Program
TRB- Transportation Research Board
UC Davis- University of California, Davis
UVM- University of Vermont
VERP- Visitor Experience and Resource Protection
VTS- Visitor Transportation System
VTS- Visitor Transportation Service
WASO- Washington Office
YARTS- Yosemite Area Regional Transportation Strategy
YCS- Yosemite Concessions Services
YNP- Yosemite National Park
YP & CC- Yosemite Park & Curry Company
*YV- Yosemite Valley (created)
VIP- (Yosemite) Valley Implementation Plan

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1998 *Yosemite Area Regional Transportation Strategy, Draft Working Paper #3-2: Summer Data Collection, September*.

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