

BEACH AND INLET MANAGEMENT PLAN: LITERATURE REVIEW

Author (last, first)	Year	Journal/Source	Topic	Publication Type	Citation	Location	Summary/Relevance to BIMP	Keyword	Link
James, R.J.	2000	Ocean & Coastal Management	PROPOSED MGMT STRATEGIES	Peer-reviewed journal	James, R.J., 2000. From beaches to beach environments: linking the ecology, human-use and management of beaches in Australia. <i>Ocean & Coastal Management</i> 43: 495 - 514.	Australia	Beach mgmt in Australia has focused on mitigating geomorphic hazards and providing recreation ("hazards and playgrounds" approach). Author argues that this view needs to be expanded so that we think more holistically of the "beach environment".		
Turner, I.L.	2007	Coastal Engineering	TOOLS FOR BEACH MANAGEMENT	Peer-reviewed journal	Turner, I.L., and Anderson, D.J., 2007. Web-based and 'real-time' beach management system. <i>Coastal Engineering</i> 54: 555 - 565.	Australia	Image analysis tools have developed a lot in the last 5 years. Use Argus imaging in with a worldwide web interface for beach management.	Argus video; World wide web; Beach management	
James, R.J.	2000	Coastal Management	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	James, R.J., 2000. The first step for the environmental management of Australian beaches: establishing an effective policy framework. <i>Coastal Management</i> 28: 149 - 160.	Australia, New South Wales	Several policies dealing with coastal zone management in Australia and NSW that affect beach management, but they are relatively vague. No policy framework out there specifically for beach management and author thinks that this is important.	Australia; beach management policy; policy	
WBM Oceanics Australia	2003	Tweed Shire Council, AUS	MGMT PLAN or STRATEGY	Internat'l State/Local doc	WBM Oceanics, 2003. Final Duranbah Beach Dune Management Plan. Prepared for the Tweed Shire Council, New South Wales, Australia, 63 pp.	Australia, New South Wales (Duranbah Beach)	They recommend sand nourishment and dune reconstruction. Very detailed site specs., including stormwater management in the area.	beach management plan; Australia	http://www.tweed.nsw.gov.au/engweb/html/dba_h_dune_man_plan.pdf
Margerum, R.D.	1999	Land Use Policy	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Margerum, R.D., 1999. Integrated environmental management: lessons from the Trinity Inlet Management Program. <i>Land Use Policy</i> 16: 179 - 190.	Australia, Queensland	Author talks about how "integration" is a commonly used term in coastal mgmt but that it is difficult to achieve. Discusses the Trinity Inlet Mgmt Program; he used meeting minutes, interviews and documents for case study. The author argues that the TIMP is a good example of integrated mgmt project, though some stakeholder groups got marginalized during the process.	Australia; inlet management; case study	
Queensland Environmental Protection Agency	2007	Queensland Environmental Protection Agency	POLICY OR LEGISLATION	Internat'l State/Local doc	Queensland Environmental Protection Agency, 2007. Removing or interfering with coastal dunes in an erosion prone area on land other than State coastal land. Operation policy for coastal development, Government of Queensland, Australia, 5 pp.	Australia, Queensland	This is an operational policy that provides a framework for how they apply their laws. They are trying to limit the impact that developers can have on dune systems by making them apply for a special permit if their development is over 2000 sq meters and if they are going to make substantial modifications to the land.	policy; dune protection; Australia; regulation of development	
Queensland Environmental Protection Agency	2005	Queensland Environmental Protection Agency	PROPOSED MGMT STRATEGIES	Internat'l State/Local doc	Queensland Environmental Protection Agency, 2005. Coastal erosion investigation and management options for South Mission Beach, Cardwell Shire. Queensland Government, Australia, 31 pp.	Australia, Queensland (South Mission Beach)	Beach was identified in the coastal mgmt plan as a priority area for erosion control. The goal of this study is to research the problem and make recommendations to the Cardwell Shire Council as to how to address the problem. So this is an example of a state gov't simply providing recommendations to the local gov't entity. They present several options: retreat, nourishment, local sand relocation, revetments, and groins and artificial reefs. They make several specific recommendations: beach nourishment, revegetation, move infrastructure landward, make an existing wall stronger, avoid permanent development. They conclude that nourishment and reveg. projects may be eligible for 25% subsidy from gov't.	beach erosion; beach management; Australia	http://www.epa.qld.gov.au/register/p01741ad.pdf
Davidson, M.	2007	Coastal Engineering	TOOLS FOR BEACH MANAGEMENT	Peer-reviewed journal	Davidson, M., Van Koningsvel, M., de Kruif, A., Rawson, J., Holman, R., Lamberti, A., Medina, R., Kroon, A., and Aarninkhof, S., 2007. The CoastView project: developing video-derived Coastal State Indicators in support of coastal zone management. <i>Coastal Engineering</i> 54: 463 - 475.	EU	Presents a methodology and project (CoastView) for using Argus video technology in order to average photographic images. Video-derived parameters chosen by managers (and called "Coastal State Indicators" can then be easily monitored by managers and used to make management decisions. The goal is to improve communication between scientists and managers and simplify coastal data for ease of use.	Video-derived Coastal State Indicators; Argus imaging; Coastal zone management	
Anfuso, G.	2005	Environmental Geology	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Anfuso, G., Martinez del Pozo, J.A., 2005. Towards management of coastal erosion problems and human structure impacts using GIS tools: case study in Ragusa Province, Southern Sicily, Italy. <i>Environmental Geology</i> 48: 646 - 659.	EU, Italy (Sicily)	Used a GIS to establish spatially defined "littoral cells" for use in developing coastal erosion strategies.	GIS; Italy; littoral cells	
Ledoux, L.	2005	Land Use Policy	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Ledoux, L., Cornell, S., O'Riordan, T., Harvey, R., and Banyard, L., 2005. Towards sustainable flood and coastsal management: identifying drivers of, and obstacles to, management realignment. <i>Land Use Policy</i> 22: 129 - 144.	EU, UK	Given sea level rise, hazards, "hold the line policy is no longer officially regarded as a realistic long-term option for coastal management in England and Wales". Now people are starting to look at "managed realignment", which is literally realigning existing river, estuary or coastal defences. Managed realignment hasn't really taken off yet, because issues with landowner compensation, technical expertise etc. Study was a stakeholder survey to see about attitudes toward managed realignment. Obstacles were clear: lack of compensation to landowners, loss of habitat, and lack of public support. Article mentions that, in the UK, "landowners have no general right to compensation where a decision is made no longer to defend their land."	UK; managed realignment; shoreline management plans; sea level rise	
Edwards, A.M.C.	2006	Marine Pollution Bulletin	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Edwards, A.M.C., and Winn, P.S.J., 2006. The Humber Estuary, Eastern England: strategic planning of flood defences and habitats. <i>Marine Pollution Bulletin</i> 53: 165 - 174.	EU, UK	Author addresses the possibility for managed realignment sites in Humber Estuary. Describes a case in which a wall was moved back 500 m and the sea was allowed to reclaim old ag land that was formerly being protected (dept of envi. purchased land from landowner). Author doesn't recommend managed realignment for every site, but says that it is beneficial.	UK; management realignment; shoreline management plan	
Fletcher, S.	2007	Ocean & Coastal Management	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Fletcher, S., 2007. Representing stakeholder interests in partnership approaches to coastal management: experiences from the United Kingdom. <i>Ocean & Coastal Management</i> 50: 606 - 622.	EU, UK	Currently, voluntary coastal partnerships (CPs) are a primary mechanism for coastal and marmie planning. Each stakeholder group gets a rep on the CP, who participates as a decision-maker. Author investigated through 4 case studies whether reps were really representing their stakeholders. Author found big differences in why statutory and non-statutory groups approached the table. Different reps were held accountable by their constituencies to different degrees. Many non-stat reps would not collect the views of their entire constituency but of just a few key players. Stat reps had more formal dissemination, but still superficial. Public reps had no real way of talking with their constituency. In many cases, it doesn't seem if reps really represent accurately.	UK; coastal partnerships; planning	
Leaf, R.	1998	The Geographical Journal	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Leaf, R., Pethick, J., and Townend, I., 1998. Realizing the benefits of shoreline management. <i>The Geographical Journal</i> 164(3): 282 - 290.	EU, UK	Discusses and analyzes the Shoreline Management Strategy implemented so widely in the U.K.	Shoreline management plans; UK	
Anglian Coastal Authorities Group	2006	Anglian Coastal Authorities Group	MGMT PLAN or STRATEGY	Internat'l State/Local doc	Anglian Coastal Authorities Group, 2006. Kelling to Lowestoft Ness Shoreline Management Plan.	EU, UK, Anglia Coast	The UK and Ireland begun doing these shoreline mgmt plans a few years ago. They are long-range planning documents (100 years), and involve building regional partnerships. The entire british coast has been divided up into cells and for each cell, the mgmt plan states which of their four policies will be used: "hold the line"; "advance the line"; "managed realignment"; and "no active intervention". They have an unbelievable amount of hard armouring on their coastline. There are many, many more of these shoreline mgmt plans. This was just a good example.	shoreline management plan; UK	http://www.northnorfolk.org/acag/default_smp.asp
Gore, S.	2007	Ocean & Coastal Management	PROPOSED MGMT STRATEGIES	Peer-reviewed journal	Gore, S., 2007. Framework development for beach management in the British Virgin Islands. <i>Ocean & Coastal Management</i> 50: 732 - 753.	EU, UK, British Virgin Islands	Very in-depth. Author proposes a thorough framework to answer questions relevant to establishing a beach management plan for BVI. States that a beach management plan needs to include entire coastal zone, not just a strip along the beach. Also provides an outline of all of the components at the end.	Beach management plan; british virgin islands; planning	

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Lizarraga-Arciniega, R.	2001	Journal of Coastal Research	PROPOSED MGMT STRATEGIES	Peer-reviewed journal	Lizarraga-Arciniega, R., Appendini-Albretchen, C.M., and Fischer, D.W., 2001. Planning for beach erosion: a case study, Playas de Rosarito, B.C. Mexico. Journal of Coastal Research 17(3): 636 - 644.	Mexico (Baja)	Community completely dependent upon tourism, suffering from major beach erosion and with no mgmt plan as of publish date. Authors propose a beach mgmt plan. Their plan encompasses nourishment, protection of inland sand sources, seawalls in some places, gov't leasing of beach property, establishment of setback lines, as well as other things. Apparently, in Mexico, erosion addressed on individual scale, there are no broad beach, shoreline mgmt plans. Authors suggest that planning is key.	Mexico; nourishment; planning	
Nordstrom, K.F.	2005	Restoration Ecology	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Nordstrom, K.F., 2005. Beach nourishment and coastal habitats: research needs to improve compatibility. Restoration Ecology 13 (1): 215 - 222.	n/a	Interesting paper on improvements that could be made to beach nourishment designs.	beach nourishment	
Micallef, A.	2002	Ocean & Coastal Management	PROPOSED MGMT STRATEGIES	Peer-reviewed journal	Micallef, A., and Williams, A.T., 2002. Theoretical strategy considerations for beach management. Ocean & Coastal Management 45: 261 - 275.	n/a			
Jimenez, J.A.	2007	Coastal Engineering	TOOLS FOR BEACH MANAGEMENT	Peer-reviewed journal	Jimenez, J.A., Osorio, A., Marino-Tapia, I., Davidson, M., Medina, R., Kroon, A., Archetti, R., Ciavola, P., and Aarnikhof, S.G.J., 2007. Beach recreation planning using video-derived coastal state indicators. Coastal Engineering 54: 507 - 521.	n/a	Authors recommend using Argus video cameras in order to identify beach hazard areas, determine beach user trends, and set beach management policies, such as beach user carrying capacity.	Video-derived Coastal State Indicators; Argus imaging; Beach Management	
Kroon, A.	2007	Coastal Engineering	TOOLS FOR BEACH MANAGEMENT	Peer-reviewed journal	Kroon, A., Davidson, M.A., Aarnikhof, S.G.J., Archetti, R., Armaroli, C., Gonzalez, M., Medri, S., Osorio, A., Aagaard, T., Holman, R.A., and Spanhoff, R., 2007. Application of remote sensing video systems to coastline management problems. Coastal Engineering 54: 493 - 505.	n/a	Authors recommend using Argus video imaging in order to monitor beach erosion on a short-term. More detailed changes in shoreline, erosion, etc. can be observed in this way. Can also be used to monitor beach nourishment projects.	Video-derived Coastal State Indicators; Argus imaging; Beach Management	
Auckland Regional Council and Papakura District Council	2006	Auckland Regional Council and Papakura District Council	MGMT PLAN or STRATEGY	Internat'l State/Local doc	Auckland Regional Council and Papakura District Council, 2006. Draft Puhurehure Inlet Management Plan. Papakura, New Zealand, 55 pp.	New Zealand, Papakura (Papakura Inlet)	Their issue is increased sedimentation and resulting mangrove expansion. The District Council wanted to install a tidal gate to keep water in during high recreation times, but this request was declined because they didn't have a management plan. So they wrote this management plan.	inlet management plan; new zealand; papakura	http://www.arc.govt.nz/shadomx/apps/fms/fmsdownload.cfm?file_uid=F1EEA19D-BCD4-1A24-94DB-96858AE47257&siteName=arc
Trembanis, A.C.	2004	College of William and Mary	B/I ECOSYSTEM DESCRIPTION	Other	Trembanis, A.C., 2004. Complex inner shelf environments: observations and modeling of morphodynamics and scour processes, PhD dissertation. College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, Virginia, 419 pp.	NZ, Florida, Virginia, North Carolina			
Bernd-Cohen	1999	Coastal Management	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Bernd-Cohen, T., and Gordon, M., 1999. State coastal program effectiveness in protecting natural beach, dunes, bluffs and rocky shores. Coastal Management 27: 187 - 217.	US	Authors suggest that because so much coastal land is privately owned, regulatory programs are going to work best in managing resources. The recommend managers use the following tools: coastal setbacks, coastal construction control areas, shoreline stabilization regulations, access restrictions, habitat protection, permit tracking and enforcement, adopted plans (like the BIMP); increase state coastal land holdings and acquisition; improve stewardship and management activities on protected land. (NC is doing a lot of this already)	CZM; State Programs	
Hershman, M.J.	1999	Coastal Management	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Hershman, M.J., Good, J.W., Bernd-Cohen, T., Goodwin, R.F., Lee, V., Pogue, P., 1999. The effectiveness of coastal zone management in the United States. Coastal Management 27: 113 - 138.	US			
Titus, J.G.	1998	Maryland Law Review	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Titus, J.G., 1998. Rising seas, coastal erosion, and the takings clause: how to save wetlands and beaches without hurting property owners. Maryland Law Review 57 (4): 1279 - 1399.	US	Comprehensive 121 p. article that talks about legal issues surrounding beach mgmt. Haven't made it all the way through this yet.	beach management; sea level rise; takings; legal	
Simmons, H.	2007	American Shore and Beach Preservation Association	PROPOSED MGMT STRATEGIES	Non-profit doc.	Simmons, H., 2007. Vanishing beaches: coastal erosion and its impact on coastal communities. Written testimony of the Honorable Harry Simmons, Mayor of Caswell Beach, North Carolina and President, American Shore and Beach Preservation Association before the Subcommittee on Fisheries, Wildlife and Ocean, Committee on Natural Resources, U.S. House of Representatives.	US	Harry Simmons called upon the US House of Rep (on July 14, 2007), to support beach nourishment on a federal level. He advocated for more funding and a nationwide plan to nourish beaches.	beach nourishment; national strategy	http://www.asbpa.org/pdfs/SimmonsTestimonyJuly142007FINAL.pdf
Pawlukiewicz, M.	2007	Urban Land Institute	PROPOSED MGMT STRATEGIES	Non-profit doc.	Pawlukiewicz, M., Gupta, P.K., and Koelbel, C., 2007. Ten Principles for Coastal Development. The Urban Land Institute, Washington, D.C., 41 pp.	US	interesting, easy-to-read popular literature piece put out by the Urban Land Institute. Talks about things to consider when developing the coast and how to balance natural resource protection with economic growth. The put out ten principles to follow when establishing development policies/guidelines. It is very "common sense", but sometimes that is important.	coastal development	http://www.uli.org/AM/Template.cfm?Section=Home&CONTENTID=98884&TEMPLATE=/CM/ContentDisplay.cfm
Gaddis, E.B.	2007	Ecological Economics	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Gaddis, E.B., Miles, B., Morse, S., Lewis, D., 2007. Full-cost accounting of coastal disasters in the United States: implications for planning and preparedness. Ecological Economics 63: 307 - 318.	US		disasters; cost accounting; mitigation	
Nordstrom, K.F.	1984	Environmental Management	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Nordstrom, K.F., and Renwick, W.H., 1984. A coastal cliff management district for protection of eroding high relief coasts. Environmental Management 8 (3): 197 - 202.	US	Proposed a system similar to "dune management districts" but for cliff areas. You have different zones (not just setbacks), in which different degrees of development are permitted. Retreat is mandated in some zones.	Cliff erosion; management districts	
Boruff, B.J.	2005	Journal of Coastal Research	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Boruff, B.J., Emrich, C., and Cutter, S.L., 2005. Erosion hazard vulnerability of US coastal counties. Journal of Coastal Research 21(5): 932 - 942.	US	Combined socioeconomic data with USGS physical vulnerability data to assess coastal counties in the US and see if these counties are more vulnerable to hazards due to socioeconomic or physical reasons. Counties in VA and NC obviously had a high physical vulnerability index. NC, VA and MD also have the highest socioeconomic vulnerability on the Atlantic Coast. One NC county is in the top ten most vulnerable in the US: Perquimans, NC. No NC counties were in the top ten least vulnerable. Overall, "physical factors are the more important determinants of vulnerability on the Atlanta and Pacific, but social factors dominate vulnerability on the Gulf Cost. Mitigation plans need to be localized, not one-size fits all.	Vulnerability (social and physical)	
Michel, J.	2004	Journal of Coastal Research	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Michel, J., 2004. Regional management strategies for federal offshore borrow areas, U.S. East and Gulf of Mexico Coasts. Journal of Coastal Research 20(1): 149 - 154.	US	Minerals Management Service contracted out a study to see about developing regional sand management groups. Basically, MMS needs a strategy for managing sand and gravel sources on the outer continental shelf. They held workshop in two states (TX and NJ) to bring stakeholders. MMS interested in ACOE's Regional Sediment Mgmt demo programs that concern the littoral zone. Article presents preliminary guidelines for regional mgmt (a "region" generally will be a state, states need to be able to lead, establish Sand Mgmt Task force etc.). Relationship between Sand Task Force and ACOE RSM projects need to be addressed.	nourishment; borrow sites; regional planning; offshore; outer continental shelf	
Rosati, J.D.	2005	Journal of Coastal Research	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Rosati, J.D., 2005. Concepts in sediment budgets. Journal of Coastal Research 21 (2): 307 - 322.	US	Discusses how to develop sediment budgets and the inherent difficulties in developing sediment budgets. She uses examples from NY and MD.	sediment; sediment budget; regional sediment management	
Martin, L.	2002	U.S. Army Corps of Engineers	TOOLS FOR BEACH MGMT	US Federal gov't doc	Martin, L., 2002. Regional Sediment Management: background and overview of initial implementation. Prepared as part of the U.S. Army Corps of Engineers Institute for Water Resources Policy Studies Program, IWR Report 02-PS-2, 87pp.	US	Talks about what RSM is; where the demo sites have been; how to decide if it is for you etc.	regional sediment management	

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Wozencraft, J.M.	2001	U.S. Army Corps of Engineers	TOOLS FOR BEACH MGMT	US Federal gov't doc	Wozencraft, J. M., Hardegree, L., Bocamazo, L. M., Rosati, J. D., and Davis, J. E., 2001. Tools for regional sediment management. ERDC/CHL CHETN-XIV-2, U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.	US	Technical note describing the GIS models and ArcGIS tools created to help managers with regional sediment management.	regional sediment management; GIS	
State of Alaska	?	State of Alaska	POLICY OR LEGISLATION	US State gov't doc	State of Alaska. Erosion Management Policy. No further biblio info	US, Alaska	general policy stating rules by which structures will be considered	erosion; policy; Alaska	
King, P.G.	2003	California Department of Boating and Waterways	ANALYSIS OF MGMT STRATEGIES	US State gov't doc	King, P.G., and Symes, D., 2003. The potential loss in gross national product and gross state product from a failure to maintain California's beaches. Prepared for the California Department of Boating and Waterways, 43 pp.	US, California	They surveyed over 2,000 households in southern California. Data analysis showed that, with no beaches, CA would lose annually \$5.5 billion in Gross State Product and the US would lose \$2.4 billion in GDP annually. Does not look at what would happen if just a percentage of beaches were lost.	economic analysis; cost/benefit; beach nourishment	http://userwww.sfsu.edu/~pgking/Econ%20Impact%20of%20Out%20of%20State%20and%20For%20tourism%20v7.pdf
California Department of Boating and Waterways and State Coastal Conservancy	2002	California Department of Boating and Waterways and State Coastal Conservancy	ANALYSIS OF MGMT STRATEGIES	US State gov't doc	California Department of Boating and Waterways and State Coastal Conservancy, 2002. California Beach Restoration Study. Sacramento, California, 280 pp.	US, California	Nourishment is a HUGE priority. Says that the State of CA needs to invest \$120 million in on-time beach restoration costs and \$27 million in "annual beach maintenance costs for 23 projects in 8 coastal counties" to nourish 24 miles of heavily-used public beaches. Nourishment has a 100 year history in CA. Report also identifies dam removal and other regional management strategies that will lead to more sand reaching the beaches. Encourages monitoring, and opportunistic nourishment.	California; beach nourishment; beach restoration; erosion	http://www.dbw.ca.gov/Environmental/BeachReport.aspx
California Coastal Sediment Management Workgroup	2006	California Coastal Sediment Management Workgroup	MGMT PLAN or STRATEGY	US State gov't doc	California Coastal Sediment Management Workgroup, 2006. California Coastal Sediment Master Plan Status Report. California: http://dbw.ca.gov/csmw/csmwhome.htm , 53 pp.	US, California	CA has been working on a Sediment Mgmt plan for several years - this is the most recent update. The program started with a \$1.2 million grant from NOAA. Subsequent funding has come from the ACOE and CA state agencies. The plan is a Regional Sediment Plan based on the concept of a littoral cell. A Coastal Sediment Management Workgroup was set up to develop the plan. Strong focus on using dredged or "waste" sand/material for nourishment, instead of disposing of it. Their goals are, "to reduce shoreline erosion and coastal storm damages; restore and protect beaches and other coastal environments by restoring natural sediment supply from rivers, impoundments and other sources; and optimize the use of sediment from ports, harbors and other opportunistic sources." The workgroup identified a bunch of research needs that will exist as individual, mini-reports, separate from the Master Plan. Some of these reports are completed; others are not; the status report says which are done and which are not.	regional sediment management; RSM; sediment management plan; California	http://www.dbw.ca.gov/CSMW/PDF/SMPSR_status_report.pdf
California Resources Agency	1978	California Resources Agency	POLICY OR LEGISLATION	US State gov't doc	California Resources Agency, 1978. Shoreline Erosion Protection Policy. Sacramento, California.	US, California	Also identifies nourishment as a priority.	California; beach nourishment; shoreline; erosion	
State of California	1999	State of California	POLICY OR LEGISLATION	US State gov't doc	State of California, 1999. Public Beach Restoration Act. Found in Harbors and Navigation Code, sections 69.5-69.9. Sacramento, California.	US, California	Legislation that outlines nourishment and other activities to protect CA's beaches. This legislation mandated that the CA Beach Restoration Study take place.	California; beach nourishment; beach management; beach restoration	http://www.calcoast.org/restprog/ab_64_bill_19991010_chaptered.pdf
SANDAG (San Diego Association of Governments) and the CA Coastal Sediments Management Workgroup	2006	SANDAG (San Diego Association of Governments) and the CA Coastal Sediments Management Workgroup	TOOLS FOR BEACH MGMT	US State gov't doc	SANDAG and the CA Coastal Sediments Management Workgroup, 2006. Final sand compatibility and opportunistic use program plan. San Diego, California, 122 pp.	US, California	Moffatt and Nichol developed this plan to identify ways to use sand opportunistically - they use areas in southern California as examples.	nourishment; opportunistic; sand; california	http://www.sandag.cog.ca.us/uploads/publications/publicationid_1203_5355.pdf
King, P.G.	2006	Coastal Sediment Management Workgroup	ANALYSIS OF MGMT STRATEGIES	US Local gov't doc	King, P.G., 2006. The Economics of Regional Sediment Management in Ventura and Santa Barbara Counties: A Pilot Study. Prepared for the Coastal Sediment Management Workgroup, San Francisco, California, 69 pp.	US, California (Santa Barbara and Ventura Counties)	Report looks at the economics of using dredged material to nourish beaches. "Placing dredged material in the near-shore adjacent to sediment depleted beaches is the most cost effective policy," (as opposed to putting it on beaches themselves).	economic analysis; beach management; Santa Barbara; Ventura	http://www.dbw.ca.gov/csmw/PDF/Economics_of_RSM_0706.pdf
Santa Barbara County Parks Department	2004	Santa Barbara County Parks Department	MGMT PLAN or STRATEGY	US Local gov't doc	Santa Barbara County Parks Department, 2004. Goleta Beach Revetment: Beach Management and Nourishment Plan. Santa Barbara, California, 14 pp.	US, California (Santa Barbara)	Developing this beach mgmt plan was a permit requirement for Santa Barbara. They got permits to put down emergency rip-rap, do beach nourishment and sand berm construction. A requirement of the permit was to develop a beach and erosion mgmt plan for the duration of the permit. In order to mitigate for these larger, more invasive projects, the city proposes to minimize beach grooming; limit jet ski access points; get sand for the berm from another location; ensure the rock revetment is covered with sand; improve habitat restoration and public educ. plans.	beach management plan; revetment; Goleta Beach; Santa Barbara	http://www.sbparks.com/goletabeach/docs/MitigMeasuresPlanR4-PDF.pdf
Connecticut Department of Environmental Protection	2000	Connecticut Department of Environmental Protection	POLICY OR LEGISLATION	US State gov't doc	Connecticut Department of Environmental Protection, 2000. Shoreline Flood and Erosion Control Structures Fact Sheet. Connecticut Coastal Management Manual, Section 3: Coastal Uses. State of Connecticut, Hartford, Connecticut, 4 pp.	US, Connecticut	Very specific guidelines for beach/shoreline management, given that it is a four page document. They discourage any hard structures unless absolutely necessary.	shoreline management; fact sheet	
Daniel, H.	2001	Ocean & Coastal Management	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Daniel, H., 2001. Replenishment versus retreat: the cost of maintaining Delaware's beaches. Ocean & Coastal Management 44: 87 - 104.	US, Delaware	Article addresses the nourish vs retreat debate by discussing Delaware's beach mgmt plan: Beaches 2000, which opted for beach nourishment rather than retreat. 26% of replenished barrier island beaches disappear in less than 1 year; 62% last btw 2 and 5 years; 12% last more than 5 years. In MD, NJ and DE, only 1-3 yrs. Retreat is the only choice that makes sense in the long-term, if sea level rises. Where to move the houses? Some hotels just couldn't be moved. Beaches 2000 was asked to decide this issue in 6 months. They did a cost benefit analysis - nourishment always came out on top. Public also supported this option.	Delaware; beach management; replenishment; nourishment; retreat	
Carey, W.	2004	Delaware Department of Natural Resources and Environmental Control	TOOLS FOR BEACH MGMT	US State gov't doc	Carey, W., Maumeyer, E., and Pratt, T., 2004. Striking a balance: a guide to coastal dynamics and beach management in Delaware. Prepared for the Delaware Department of Natural Resources and Environmental Control, Division of Soil and Water Conservation, Shoreline and Waterway Management Section, Dover, Delaware, 52 pp.	US, Delaware	Very colorful document; doesn't look like a "traditional" management plan. Has a user friendly glossary, tons of contact information. They present four options for beach mgmt: No action; beach hardening; strategic retreat; and beach nourishment. They give pros and cons. DE has used a combo of hardening and nourishment. They want to move to nourishment, but see all the difficulties. They don't have the money to buy out properties for retreat. The report says that DE is moving toward Regional Sediment Management, establishing "littoral cells" etc, but none of that was in existence at the time of the report. The report is kind of like a status report - or, as it is called, a "guide".	Guide; beach management; Delaware	http://www.swc.dnrec.delaware.gov/NR/rdonlyres/B6388E86-4F86-4879-A9D3-CC543DD37C8E/0/StrikeBalance.pdf
Peterson, C.H.	2005	Bioscience	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Peterson, C.H., and Bishop, M.J., 2005. Assessing the environmental impacts of beach nourishment. Bioscience 55 (10): 887 - 896.	US, East Coast	They looked at 46 beach nourishment projects published in the academic literature in order to assess the ecological impacts.		
Moser, S.C.	2005	Global Environmental Change	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Moser, S.C., 2005. Impact assessments and policy responses to sea-level rise in three U.S. states: an exploration of human-dimension uncertainties. Global Environmental Change 15: 353 - 369.	US, East Coast	she interviewed managers in NC, SC and ME and did case study reviews of each state to look at how they were addressing or not addressing sea-level rise in policy making.	North Carolina; South Carolina; Maine; sea level rise; policy	

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Author (last, first)	Year	Journal/Source	Topic	Publication Type	Citation	Location	Summary/Relevance to BIMP	Keyword	Link
Kelley, S.W.	2004	Journal of Coastal Research	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Kelley, S.W., Ramsey, J.S., and Byrnes, M.R., 2004. Evaluating shoreline response to offshore sand mining for beach nourishment. <i>Journal of Coastal Research</i> 20(1): 89 - 100.	US, East coast	Used modeling (STWAVE) to look at potential effects of sand mining offshore on coastal and nearshore environments. Offshore mining can cause waves to refract toward the shallow edges of the borrow site, and thus can affect sediment transport. Wave heights and propagation can also be altered. Methods incorporate spatial and temporal variations into analysis impacts of borrow sites on waves. Has a case study of Oregon Inlet, NC. Evaluated 4 potential borrow sites for Oregon Inlet and found that all were acceptable, but one had a more significant effect on nearshore sediment transport. They developed a SD method for accepting/rejecting proposed sites.	beach nourishment; offshore sand mining; borrow sites; longshore sediment transport	
Elko, N.A.	2007	Coastal Engineering	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Elko, N.A., and Wang, P., 2007. Immediate profile and planform evolution of a beach nourishment project with hurricane influences. <i>Coastal Engineering</i> 54: 49 - 66.	US, Florida	They studied immediate changes in planform after beach nourishment. They believe that Hurricane Frances put the beach back into equilibrium days after the project. They believe that beach adjustment after nourishment is driven by the first high-energy event.	beach nourishment	
Finkl, C.W.	2003	Journal of Coastal Research	COMMENTARY	Peer-reviewed journal	Finkl, C.W., and Charlier, R.H., 2003. Sustainability of subtropical coastal zones in Southeastern Florida: challenges for urbanized coastal environments threatened by development, pollution, water supply, and storm hazards. <i>Journal of Coastal Research</i> 19(4): 934 - 943.	US, Florida	Addresses concept of sustainability and claims that the science is known, but the political and social will is missing. Focuses on water pollution rather than physical alterations of coast. Poor management of the coastal plain is perhaps more key to solving beach problems than nourishment. Authors support nourishment in FL because they say that to do otherwise would be economic suicide. They mention nutrient groundwater contamination as having serious impacts in years to come on coastal environments because of submarine groundwater dischargers (if nutrient-rich, these discharges can lead to eutrophication, HABs etc.). People have to suck it up and deal with root causes of problems or else sustainability is not possible.	Sustainability; water pollution; nutrients; submarine groundwater discharge; ecophilosophy	
Florida Department of Environmental Protection	2007	Florida Department of Environmental Protection	MGMT PLAN or STRATEGY	US State gov't doc	Florida Department of Environmental Protection, 2007. <i>Draft revisions</i> , State of Florida Strategic Beach Management Plan. Tallahassee, Florida.	US, Florida	These are the proposed 2007 revisions to the statewide beach mgmt plan original developed in 2000. It addresses the state as 7 separate regions. There are also about 14 separate Inlet Mgmt Implementation Plans, each for an individual inlet. These individual plans are incorporated into the beach mgmt plan by reference in the text. There is a Critical Beach Erosion Areas list that identifies beaches eligible for state funding assistance. Mgmt plan recommends that FL start using an RSM strategy. FDEP has initiated the Regional Offshore Sand Search (ROSS) project to find more sand.	Florida; beach management plan	http://www.dep.state.fl.us/beaches/publications/gen-pub.htm
Makowski, C.	2007	Journal of Coastal Research	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Makowski, C., and Rusenko, K., 2007. Recycled glass cullet as an alternative beach fill material: results of biological and chemical analyses. <i>Journal of Coastal Research</i> 23(3): 545 - 552.	US, Florida	Authors studied effects (on biological community) of using recycled glass cullet on beaches for nourishment. They present evidence that the cullet will behave similar to silica sands. They looked at predator-prey and other micro/macrobenthic interactions. They conclude that cullet is "biologically safe". Cullet did generate a hydrogen sulfide film (in anaerobic environment), so cullet should be placed in "active" zones, where mixing ensures oxygen.	Florida; nourishment; recycled glass cullet	
Florida Department of Environmental Protection and the City of Boca Raton	1997	Florida Department of Environmental Protection and the City of Boca Raton	MGMT PLAN or STRATEGY	US Local gov't doc	Florida Department of Environmental Protection and the City of Boca Raton, 1997. Boca Raton Inlet Management Study Implementation Plan. Boca Raton, Florida, 9 pp.	US, Florida (Boca Raton)	Implementation plan says that they will bypass sediment to downdrift beaches (dredging and nourishment); construct a deposition basin to "facilitate bypassing"; maintain jetty structures and continue/develop further a beach and inlet monitoring program.	inlet management plan; florida; boca raton	http://bcs.dep.state.fl.us/bchmngmt/boca_rtn.pdf
Stronge, W.B.	2002	City of Sanibel	ANALYSIS OF MGMT STRATEGIES	US Local gov't doc	Stronge, W.B., 2002. Benefit of the Project to Restore the Gulf Pines, Gulf Shores and West Gulf Drive Beaches, Sanibel Island. Prepared for the City of Sanibel,	US, Florida (Sanibel Island)	Cost/benefit analysis showing the benefit of beach nourishment (storm protection and recreational benefits).	beach nourishment; Florida; Sanibel Island; cost/benefit	http://www.mysanibel.com/Planning/BeachManagementPlan/Benefit%20Analysis%20of%20Beach%20
City of Sanibel	1995	City of Sanibel	MGMT PLAN or STRATEGY	US Local gov't doc	City of Sanibel, 1995. Island wide beach management plan. Sanibel, Florida, 284 pp.	US, Florida (Sanibel Island)	First 233 pages are ALL background. City of Sanibel prohibits hardened structures such as seawalls, though it seems like there are exceptions in emergencies (based upon one case described). Goals and objectives of management plan are presented in 25 or so pages at the end. They propose a mix of retreat and nourishment. They propose restricting armoring in favor of dune restoration. Plan states that homes destroyed in storms should be built more landward or else be restricted to the location of the original foundation. Plan states that all coastal problems should be categorized based upon whether they are an emergency and whether they are a public or private concern. Depending on the category, they should be treated in different ways. Plan states that implementation of erosion control measures is primarily the responsibility of private propertyowners on the island. They provide a list of do's (nourishment, retreat, breakwaters, sandbags, revetments if absolutely necessary) and don'ts (seawalls, armoring, jetties, etc.). Recommends dune restoration, removal of invasives, etc. Plan recommends making construction siting rules more effective.	beach management plan; florida; sanibel	http://www.cityofsanibel.com/sanibel/beachmanagement/Beach%20Management%20Plan.pdf
State of Georgia	1992	State of Georgia	POLICY OR LEGISLATION	US State gov't doc	State of Georgia, 1992. Shore Protection Act. O.C.G.A. § 12-5-230, p. 1362, §1.	US, Georgia	Not a beach mgmt plan but establishes for Georgia a committee made up of five coastal county reps to review all permits for beach structures. Says structures should be placed only when absolutely necessary.	shoreline protection; shoreline management; legislation	http://crd.dnr.state.ga.us/assets/documents/SPA_OCGA_12_5_230.pdf
Georgia Coastal Resources Division	2004	Georgia Coastal Resources Division	PROPOSED MGMT STRATEGIES	US State gov't doc	Georgia Coastal Resources Division, 2004. Coastal Zone Management Funding, Fiscal Year 2004. Handout, 3 pp.	US, Georgia	States that, in 2004, establishing beach management guidelines was on their list of goals, but it didn't get done. At the end of the handout, beach management is listed as "need".	beach management; Georgia	
Schmitt, M.A.	2003	Proceedings of the 2003 Georgia Water Resources Conference	PROPOSED MGMT STRATEGIES	Conference Proceedings	Schmitt, M.A., and Haines, A.C., 2003. Beach nourishment: the magic bullet for Georgia's shore? Proceedings of the 2003 Georgia Water Resources Conference, held April 23 - 24, 2003, at the University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, The University of Georgia, Athens, Georgia, 4 pp.	US, Georgia	States that Georgia needs a management plan or strategy; needs to educate the public about sea level rise and the pros and cons of beach nourishment; determine if there is a long-term source of sediment; and establish an ecological and economic monitoring system.	beach management; beach nourishment; Georgia	http://cms.ce.gatech.edu/gwri/uploads/proceedings/2003/Schmitt%20and%20Haines.PDF

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Kriesel, W.	2004	Coastal Management	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Kriesel, W., Keeler, A., and Landry, C., 2004. Financing beach improvements: comparing two approaches on the Georgia coast. Coastal Management 32: 433-447.	US, Georgia (Jekyll Island)	Study was a survey of 1,040 visitors to Jekyll Island in order to collect data for a cost-benefit analysis of beach nourishment versus retreat options. Survey estimated public perceptions of nourishment and retreat projects and willingness to pay via parking fees. They concluded that either type of beach improvement would result in a net benefit (retreat or nourishment), but that the benefits to retreat were larger (financially) for Jekyll. However, retreat would mean taking of property etc. Nourishment has to be done over and over, so parking fees would have to keep increasing. It will be hard to retreat in areas that are densely populated. "Across the range of coastal communities there probably exists a threshold density of property development below which a retreat policy will yield higher net benefits than beach nourishment".	Georgia; beach nourishment; beach retreat; financing projects	
Elfner, M.A.	2005	City of Tybee Island	MGMT PLAN or STRATEGY	US Local gov't doc	Elfner, M.A., 2005. Tybee Island beach management plan. Prepared for the City of Tybee Island. City of Tybee Island, Georgia, 83 pp.	US, Georgia (Tybee Island)	Island has a history of lots of beach structures, dredging, nourishment. Citizens VERY worried about beach loss. Covers everything from beach cleaning to lifeguard presence to parking to road signage in detail. They also have issues with private vs. public ownership as beaches recede.	beach management plan; Georgia; Tybee Island	http://www.cityoftybee.org/Assets/Files/Beachplan.pdf
US Army Corps of Engineers	2005	Army Corps of Engineers	ANALYSIS OF MGMT STRATEGIES	US Federal gov't doc	US Army Corps of Engineers, 2005. Lessons learned in Regional Sediment Management: the Mobile District demonstration program technical program implementation. ERDC/RSM-TN-13, U.S. Army Engineer Research and Development Center, Vicksburg, Mississippi.	US, Gulf Coast	They had trouble developing an accurate sediment budget, upon which everything is based. It was difficult to find accurate historical and contemporary data. Your data needs to be good! To do these coastal assessments, you need hydrodynamic and meteorological data: waves, water levels, currents, winds, and storm data; historic bathymetric, topographic, and shoreline data; regional, continuous, current, and synoptic bathymetric and topographic surveys; georeferenced/ortho-rectified aerial photography and/or satellite imagery.	regional sediment management; lessons learned	http://www.wes.army.mil/rsm/pubs/pdfs/rsm-tn-13.pdf
Hawaii Department of Land and Natural Resources, Lands Division, Coastal Lands Program	2000	Hawaii Department of Land and Natural Resources, Lands Division, Coastal Lands Program	MGMT PLAN or STRATEGY	US State gov't doc	Hawaii Department of Land and Natural Resources, Lands Division, Coastal Lands Program, 2000. Hawaii coastal erosion management plan. Honolulu, Hawaii, 90 pp.	US, Hawaii	Talks a lot about beach and dune management and the erosional problems. It lays the groundwork for a beach management plan, but is not actually a beach management plan. It proposes several alternatives for dealing with beach problems and suggests that an agency be put in charge of designing a technical manual on beach restoration, among other things.	erosion management plan; Hawaii	http://www.hawaii.gov/dlnr/occl/files/coemap.pdf
State of Hawaii, Department of Land and Natural Resources	2006	State of Hawaii, Department of Land and Natural Resources	PROPOSED MGMT STRATEGIES	US State gov't doc	State of Hawaii, Department of Land and Natural Resources, 2006. Three-year plan for beach restoration studies and projects. Report to the Twenty-Fourth Legislature Regular Session of 2007. Honolulu, Hawaii, 4 pp.	US, Hawaii	This is an update to the Hawaiian legislature on how they are progressing with restoration activities. Report states that Hawaii is in the process of preparing a statewide Hawaii Beach Management Plan (HBMP). "HBMP is intended to provide a rational process for allocating funds for beach conservation and restoration efforts. The HBMP is intended to identify site-specific management tools and strategies for an efficient response to erosion and allocation of limited resources." This plan is supposed to build upon and further define beach issues discussed in the more general Hawaii Coastal Erosion Management Plan (2000).	beach restoration; Hawaii; beach management plan	
University of Hawaii Sea Grant Extension Service and County of Maui Planning Department	1997	University of Hawaii Sea Grant Extension Service and County of Maui Planning Department	MGMT PLAN or STRATEGY	US Local gov't doc	University of Hawaii Sea Grant Extension Service and County of Maui Planning Department, 1997. Beach management plan for Maui. Maui, Hawaii, 71 pp.	US, Hawaii (Maui)	They were seeing most of their major erosion next to seawalls, revetments, armoring. Report identifies erosion hotspots and "watchspots". At the time of the study, Maui had done only a few small-scale nourishment projects and they had no dredge so they couldn't use offshore sand - only inland sand. They want to build beach nourishment capacity. They also want to look at dune restoration, and protect reefs. They also propose increasing setbacks and making them variable (to deal with high erosion areas). They propose to increase awareness of developers regarding hazards of shoreline development.	beach management plan; hawaii; maui	http://www.hawaii.gov/dlnr/occl/files/Erosion/BeachManagementPlan.pdf
State of Maine Beach Stakeholder's Group	2006	State of Maine	MGMT PLAN or STRATEGY	US State gov't doc	State of Maine Beach Stakeholder's Group, 2006. Protecting Maine's beaches for the future: a proposal to create an integrated beach management program. A report of the Beach Stakeholder's Group to the Joint Standing Committee on Natural Resources, 122nd Maine Legislature, 2nd Regular Session. Augusta, Maine, 86 pp.	US, Maine	GREAT PROPOSAL FOR MGMT PLAN!! VERY CLOSE TO WHAT NC IS PLANNING! WE SHOULD TALK TO THESE FOLKS! Presents a "Beach Score" prioritization system as well as a framework for a "willing seller" land buy-back program	beach management	http://www.maine.gov/dep/blwq/topic/dunes/report06_protect.pdf
Saco Bay Planning Committee	2000	Saco Bay Planning Committee	MGMT PLAN or STRATEGY	US Local gov't doc	Saco Bay Planning Committee, 2000. Saco Bay Regional Beach Management Plan. Southern Main Regional Planning Commission, Springvale, Maine, 109 pp.	US, Maine (Saco Bay)	Some Saco Bay beaches are experiencing major erosion problems because of an ACOE jetty. Economically, they cannot afford to lose their beaches. There is a huge difference between what retailers make in the summer quarter vs. the other quarters. The plan provides both short-term and long-term management proposals. In the short-term, they want to buy a dredge and start nourishing. In the long-term, they want to get the Corps to lower the jetty by five feet and shorten it by 1000 feet.	beach management plan; Maine; Saco Bay	http://www.smrpc.org/landuse/Coastal/Saco%20Bay%20Plan%20Final.pdf
Maryland Department of Natural Resources	2005	Maryland Department of Natural Resources	MGMT PLAN or STRATEGY	US State gov't doc	Maryland Department of Natural Resources, 2005. Assateague State Park Land Unit Plan. Annapolis, Maryland, 65 pp.	US, Maryland	31% of Maryland's 4360 miles are experiencing erosion. General goal of this task force was to identify shore erosion needs by county; clarify gov't roles; and establish 5 and 10 year erosion control plans. Plan calls for the establishment of a Comprehensive Shore Erosion Control Plan for the state, but there is no evidence that this has occurred (follow up and see). They also recommend looking into new stabilization technologies; using dredged material on beaches; encourage cooperative mgmt; develop selection criteria for projects; prioritize shore protection projects; establish emergency assistance program for those who need it.	shoreline erosion; Maryland	http://www.mgs.md.gov/estic/publications/download/drnerostf.pdf
State of Maryland Shore Erosion Task Force	2000	State of Maryland Shore Erosion Task Force	MGMT PLAN or STRATEGY	US State gov't doc	State of Maryland Shore Erosion Task Force, 2000. State of Maryland Shore Erosion Task Force Final Report. Baltimore, Maryland, 76 pp.	US, Maryland			
State of Massachusetts Coastal Hazards Commission	2007	State of Massachusetts Coastal Hazards Commission	PROPOSED MGMT STRATEGIES	US State gov't doc	State of Massachusetts Coastal Hazards Commission, 2007. Preparing for the storm: recommendations for management of risk from coastal hazards in Massachusetts. Boston, Massachusetts, 49 pp.	US, Massachusetts	recommendations - not a plan. CHC recommends that MA develop a RSM strategy, map offshore sediment, etc.. They also recommend developing "a standardized benefit-cost analysis model using an approach adapted from that used by the USAACE to justify projects that fully compares the capital, societal, and natural resource benefits and costs of proposed shoreline protection projects and appropriate alternatives."	coastal hazards; regional sediment management; Massachusetts	http://www.mass.gov/czm/chc/recommendations/chc_final_report_2007.pdf
Massachusetts Barrier Beach Task Force	1994	Massachusetts Barrier Beach Task Force	PROPOSED MGMT STRATEGIES	US State gov't doc	Massachusetts Barrier Beach Task Force, 1994. Guidelines for barrier beach management in Massachusetts. Massachusetts Office of Coastal Zone Management, Boston, Massachusetts, 266 pp.	US, Massachusetts	Sounds similar to NC. Strong structures are pretty much prohibited. Soft techniques are discussed. This isn't actually a management policy, but guidelines for management. This document goes way beyond sand management and talks about how beaches should be managed to deal with invasive plants, pest organisms, rare species etc.	beach management; barrier beach management; massachusetts	not online

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The Trustees of Reservations	2004	The Trustees of Reservations	MGMT PLAN or STRATEGY	Non-profit doc.	The Trustees of Reservations, 2004. Crane Beach Management Plan. Leominster, Massachusetts, 236 pp.	US, Massachusetts (Crane Beach)	Crane Beach is protected, conservation land, that is open to the public. They plan to limit visitation by not allowing overflow parking; improve shorebird protection; remove invasive species; cull deer. Erosion is mentioned as it relates to social trail erosion and dune erosion (they plan to install fencing to help restore dunes). Their concern is people climbing on dunes to catch the scenic views. They acknowledge that the beach is retreating, but say they will not interfere. They want to allow areas of accretion to revegetate. In general, they have problems with visitors not following the rules. This plan is an interesting contrast to the other plans that focus on erosion as it affects human development.	beach management plan; massachusetts; Crane Beach	http://www.thetrustees.org/pages/294_crane_beach.cfm
Wilber, D.H.	2006	Journal of Coastal Research	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Wilbur, D.H., Clarke, D.G., and Burlas, M.H., 2006. Suspended sediment concentrations associated with a beach nourishment project on the northern coast of New Jersey. Journal of Coastal Management 22 (5): 1035 - 1042.	US, New Jersey	they monitored nourished versus un-nourished sites during storms and found there were higher TSS concentrations at nourished sites, but only in the swash zone (not in the surf zone)	TSS; sediment; turbidity; New Jersey; monitoring	
U.S. Fish & Wildlife Service	2006	U.S. Fish & Wildlife Service	PROPOSED MGMT STRATEGIES	US Federal gov't doc	U.S. Fish & Wildlife Service, 2006. Beach management planning in New Jersey, for the protection of federally and state-listed Threatened and Endangered Species. Handout produced by the U.S. Fish & Wildlife Service, Ecological Service New Jersey Field Office, Pleasantville, New Jersey, 2 pp.	US, New Jersey	States that USFWS is working with NJDEP to develop beach management plans, with a focus on protected species. Handout states that NJDEP requires communities to have beach management plans before they can do any beach nourishing projects. It sounds as though the State and USFWS will go into communities and work with them to develop the plans. Waiting to hear back from NJ about their Shore Protection Management Plan.	beach management plan; protected species; New Jersey	
Nordstrom, K. F.	2000	Environmental Management	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Nordstrom, K.F., Lampe, R., and Vandemark, L.M., 2000. Reestablishing naturally functioning dunes on developed coast. Environmental Management 25 (1): 37 - 51.	US, New Jersey	Proposed ways of restoring dune ecosystems.	Dunes; management; restoration	
Kana, T.W.	1995	Marine Geology	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Kana, T.W., 1995. A mesoscale sediment budget for Long Island, New York. Marine Geology 126: 87 - 110.	US, New York (Long Island)		sediment budget	
Kim, B.O.	1996	College of William and Mary	B/I ECOSYSTEM DESCRIPTION	Other	Kim, B.O., 1996. Modeling storm-induced sediment transport on the inner shelf: effects of microstratigraphy, PhD dissertation. College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, Virginia, 197 pp.	US, North Carolina			
Lee, G.	2000	College of William and Mary	B/I ECOSYSTEM DESCRIPTION	Other	Lee, G., 2000. Across-shelf sediment transport modeling and its application to storms at Duck, North Carolina, PhD dissertation. College of William and Mary, Virginia Institute of Marine Science, Gloucester Point, Virginia, 154 pp.	US, North Carolina			
Beavers, R.L.	1999	Duke University	B/I ECOSYSTEM DESCRIPTION	Other	Beavers, R.L., 1999. Storm sedimentation on the surf zone and inner continental shelf, Duck, North Carolina, PhD dissertation. Duke University, Durham, North Carolina, 136 pp.	US, North Carolina			
Thieler, E.R.	1997	Duke University	B/I ECOSYSTEM DESCRIPTION	Other	Thieler, E.R., 1997. Shoreface sedimentation in southeastern North Carolina, PhD dissertation. Duke University, Durham, North Carolina, 221 pp.	US, North Carolina			
Wren, P.A.	2004	North Carolina State University	B/I ECOSYSTEM DESCRIPTION	Other	Wren, P.A., 2004. Sediment transport measurements on the mid-continental shelf in Onslow Bay, North Carolina, PhD dissertation. North Carolina State University, Raleigh, North Carolina, 185 pp.	US, North Carolina			
Camann, E.J.	2005	University of North Carolina at Chapel Hill	B/I ECOSYSTEM DESCRIPTION	Other	Camann, E.J., 2005. Morphological variability and beach-dune-nearshore interactions on a barrier island: Shackleford Banks, NC, PhD dissertation. University of North Carolina, Chapel Hill, North Carolina, 577 pp.	US, North Carolina			
Hench, J.L.	2002	University of North Carolina at Chapel Hill	B/I ECOSYSTEM DESCRIPTION	Other	Hench, J.L., 2002. Circulation and dynamics at shallow tidal inlets, PhD dissertation. University of North Carolina, Chapel Hill, North Carolina, 121 pp.	US, North Carolina			
Park, J.	2000	University of North Carolina at Chapel Hill	B/I ECOSYSTEM DESCRIPTION	Other	Park, J., 2000. Littoral processes on the Cape Lookout cusped foreland, North Carolina: wave refraction/diffraction modeling of longshore currents and sediment transport, PhD dissertation. University of North Carolina, Chapel Hill, North Carolina, 229 pp.	US, North Carolina			
Judge, E.K.	2003	Journal of Waterway, Port, Coastal and Ocean Engineering	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Judge, E.K., Overton, M.F., and Fisher, J.S., 2003. Vulnerability indicators for coastal dunes. Journal of Waterway, Port, Coastal and Ocean Engineering 129 (6): 270 - 278.	US, North Carolina		vulnerability; dunes; beach erosion; north carolina	
Bin, O.	2007	National Commission on Energy Policy	TOOLS FOR BEACH MGMT	US Federal gov't doc	Bin, O., Dumas, C., Poulter, B., and Whitehead, J., 2007. Measuring the impacts of climate change on North Carolina coastal resources. Prepared for the National Commission on Energy Policy, Washington, DC, 91 pp.	US, North Carolina	They use estimates of new coastline locations in NC to estimate the loss of beach access on different sectors (recreation, business, real estate). They predict significant economic losses by both 2030 and 2080.	economic impacts; climate change; sea level rise; North Carolina	http://econ.appstate.edu/climate/NC-NCEP%20final%20report.031507.pdf
Hoffman, C.W.	2006	NC Geological Survey and NC Division of Emergency Management	TOOLS FOR BEACH MGMT	US State gov't doc	Hoffman, C.W., Nickerson, J.G., Ward, A.N., Chapman, J.S., and Hanna, H.D., 2006. A pilot study to assess relative risk to oceanside overwash along the North Carolina coastal barrier island system. A contract report by the North Carolina Geological Survey for the North Carolina Division of Emergency Management. Raleigh, North Carolina, 31 pp.	US, North Carolina	In-state study looked at fore-island dune characteristics and created a weighted average and ranking system for vulnerability to overwash. Carolina Beach area and Long Bay area were most vulnerable. Focused on dune characteristics and looked to see if important infrastructure was in vulnerable sites. Did address economic or cultural issues related to vulnerability.	vulnerability; barrier islands	we have pdf
Jain, V.K.	2007	Risk Analysis	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Jain, V.K., and Davidson, R.A., 2007. Application of a regional hurricane wind risk forecasting model for wood-frame houses. Risk Analysis 27 (1): 45 - 58.	US, North Carolina	they applied a model to help improve understanding of how hurricane winds will affect homes built under different housing codes, at different times etc. The results showed that the reduction in hurricane losses caused by improved building codes was about equal to the increase in losses expected because the building industry has increased so much.	vulnerability; north carolina; development	
Boss, S.K.	2001	U.S. Minerals Management Service/International Activities and Marine Minerals Division (INTERMAR)	TOOLS FOR BEACH MGMT	US Federal gov't doc	Boss, S.K., and Hoffman, C.W., 2001. Geologic framework derived from high-resolution seismic reflection, side-scan sonar, and vibrocore data offshore Oregon Inlet to Duck, Dare County, North Carolina. Prepared for the U.S. Minerals Management Service, International Activities and Marine Minerals Division, 48 pp.	US, North Carolina	This study "refined" Hoffman's earlier study (1998) of the four potential borrow sites off of the coast. Now, they think that these four sites contain 306 million cubic yards of sand. They need to do more work to understand whether how much of this sand is high versus low grade. Also, we may not be able to get all 306 million cubic yards due to mining limitations etc.	offshore; offshore sand resources; North Carolina	http://www.mms.gov/SandAndGravel/PDF/MMSFinal.pdf
Hoffman, C.W.	1998	U.S. Minerals Management Service/State of North Carolina Sand Resources Task Force	TOOLS FOR BEACH MGMT	US State gov't doc	Hoffman, C.W., 1998. Preliminary Assessment of Potential Sand Resource Areas Offshore of Nags Head, Kitty Hawk, and Kill Devil Hills, North Carolina. Prepared for the U.S. Mineral Management Service/State of North Carolina Sand Resources Task Force, Raleigh, North Carolina, 13 pp.	US, North Carolina	Preliminary research identified four areas with the potential for sand resources. Total sand volume was estimated at 77 million cubic yards. Report says more sampling is required to "prove" sand is there.	offshore; offshore sand resources; North Carolina	http://www.mms.gov/SandAndGravel/PDF/nc%20sand.pdf
Park, J.	2007	Journal of Coastal Research	B/I ECOSYSTEM DESCRIPTION	Peer-reviewed journal	Park, J., and Wells, J.T., 2007. Spit growth and downdrift erosion: results of longshore transport modeling and morphologic analysis at the Cape Lookout cusped foreland. Journal of Coastal Research 23(3): 553 -568.	US, North Carolina (Cape Lookout)	Study looks at formation and development of Power Squadron Spit on Cape Lookout.	Cape Lookout; longshore sediment transport; spit formation	

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Author (last, first)	Year	Journal/Source	Topic	Publication Type	Citation	Location	Summary/Relevance to BIMP	Keyword	Link
Cleary, W.J.	2003	Journal of Coastal Research	B/I ECOSYSTEM DESCRIPTION	Peer-reviewed journal	Cleary, W.J., and FitzGerald, D.M., 2003. Tidal inlet response to natural sedimentation processes and dredging-induced tidal prism changes: Mason Inlet, North Carolina. <i>Journal of Coastal Research</i> 19(4): 1018 - 1025.	US, North Carolina (Mason Inlet)	Effects of Mason Inlet relocation	Mason Inlet; North Carolina; Dredging; Relocation; Sedimentation	
Esnard, A.	2001	Coastal Management	ANALYSIS OF MGMT STRATEGIES	Peer-reviewed journal	Esnard, A., Brower, D., and Bortz, B., 2001. Coastal hazards and the built environment on barrier islands: a retrospective view of Nags Head in the late 1990s. <i>Coastal Management</i> 29: 53 - 72.	US, North Carolina (Nags Head)	Discusses the history of natural hazard mitigation and planning in Nags Head. Talks about Nags Head efforts as being progressive. Also promotes the use of GIS. 70% of Nags Head is developed. The island is extremely vulnerable. Authors recommend continuing efforts to mitigate.	Nags Head; North Carolina; GIS; natural hazard mitigation	
US Army Corps of Engineers	2005	Federal Register	PROPOSED MGMT STRATEGIES	US Federal gov't doc	US Army Corps of Engineers. Intent to prepare a Draft Environmental Impact Statement (DEIS) for the nourishment of 7.25 miles of beach, the repositioning of the New River Inlet Channel, and the implementation of an inlet management, in North Topsail Beach, Onslow County, NC. <i>Federal Register</i> : May 19, 2005 [Volume 70, Number 96].	US, North Carolina (New Topsail Beach)	Corps noticed that it was planning an EIS, that would include an inlet management plan, for the New River Inlet. Has this been completed yet? Do we have a copy? We should probably find out what they have done, as other		
US Department of the Interior, Fish and Wildlife Service, Southeast Region	2006	US Department of the Interior, Fish and Wildlife Service, Southeast Region	MGMT PLAN or STRATEGY	US Federal gov't doc	US Fish and Wildlife Service, 2006. Comprehensive Conservation Plan for Pea Island National Wildlife Refuge Dare County, North Carolina. US Fish and Wildlife Service Southeast Regional Office: Atlanta, Georgia, 192 pp.	US, North Carolina (Pea Island NWR)	Management plan for all of Pea Island NWR. Currently, Corps disposes of sand dredged from Oregon Inlet in the refuge. The Corps has a permit with USFWS to do this. The NC DOT also has a right-of-way, and if they decide to rebuild Bonner Bridge, then they will need to do considerable earth moving around their easement. Mentions a long history of dune nourishment in the outer banks. There are 3 erosional "hot spots" that threaten NC 12 in the refuge. "Pea Island would be an overwash-dominated island if left to completely natural processes." Dune building, sand fences, bulldozers and vegetation has held the island in place. NC DOT continually rebuilds artificial dunes between the highway and beach. Under preferred alternative, they would focus on their primary purpose: to preserve nesting and migratory habitat for migratory birds and help meet the North American Waterfowl Management Plan (also protecting other species). The road and terminal groin influence how they are able to manage the refuge. They have to keep removing sand behind the groin to create piping plover nesting habitat. They want to let nature do what it can. This document is not super helpful. Just outlines all of the park's specific annual goals. It does explain that the park's enabling legislation states that: "Except for certain portions of the area, deemed to be especially adaptable for recreational uses, particularly swimming, boating, sailing, fishing and other recreational activities of similar nature, which shall be developed for such uses as needed, the said area shall be permanently reserved as a primitive wilderness and no development of the project or plan for the convenience of visitors shall be undertaken which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing in the area". And the plan acknowledges that, "expectations of standardized and unchanging uses of seashore lands by visitors and local users often conflict with the ever-changing park environment. This conflict is central to many park issues including: beach nourishment, protection/relocation of NC Highway 12, off-road vehicle use, protected species management, Oregon Inlet dredging, hardening of seashore beaches, relocation of historic s	Pea Island; management plan; wildlife	http://www.fws.gov/southeast/planning/PDFdocuments/Pea%20Island%20Final/Pea%20Island%20Si gsBlocked.pdf
National Park Service, Cape Hatteras National Seashore	2006	National Park Service, Cape Hatteras National Seashore	MGMT PLAN or STRATEGY	US Federal gov't doc	National Park Service, 2006. Strategic Plan for Cape Hatteras National Seashore, October 1, 2006 - September 30, 2011. Manteo, North Carolina, 29 pp.	US, North Carolina, Cape Hatteras National Seashore		strategic management plan; cape hatteras; north carolina	http://www.nps.gov/caha/parkmgmt/upload/072307%20CAHA%20Strategic%20Plan%202006-2011.pdf
Oregon Parks and Recreation Department	2005	Oregon Parks and Recreation Department	MGMT PLAN or STRATEGY	US State gov't doc	Oregon Parks and Recreation Department, 2005. Ocean Shore Management Plan. Salem, Oregon, 194 pp.	US, Oregon	In Oregon, parks dept oversees management of beaches. This statewide plan mentions nourishment and erosion.	beach management; Oregon	http://www.oregon.gov/OPRD/PLANS/docs/mas terplans/osmp_hcp/FinalOceanShoresMP052305.pdf
Oregon Natural Heritage Information Center and Oregon Parks and Recreation Department	2004	Oregon Parks and Recreation Department website	MGMT PLAN or STRATEGY	US State gov't doc	Oregon Natural Heritage Information Center and Oregon Parks and Recreation Department, 2004. Draft Habitat Conservation Plan for the Western snowy plover. Salem, Oregon, 164 pp.	US, Oregon	this HCP has a lot of beach mgmt in it - it was developed hand in hand with the ocean shore management plan	beach management; Oregon	http://www.oregon.gov/OPRD/PLANS/docs/mas terplans/osmp_hcp/HCP11-17-04.pdf
Oregon Sea Grant	1994	Oregon Sea Grant	PROPOSED MGMT STRATEGIES	US State gov't doc	Oregon Sea Grant, 1994. Improving Natural Hazards Management on the Oregon Coast, Recommendations of the Coastal Natural Hazards Policy Working Group. Oregon Sea Grant Publication ORESU-T-94-002, Oregon State University, Corvallis, Oregon, 141 pp.	US, Oregon	Done with consensus building. Group was comprised of 20 coastal residents and resource managers (to make up the Coastal Natural Hazards Policy Working Group). Mostly, the are recommendations to the state: don't use hard armoring, develop better maps, gather more data, improve permit process, clarify regulatory roles, prevent development in coastal areas from being subsidized by public funding (e.g., tax write-offs for losses). Recommendations are quite strong and lean heavily toward preventing development in coastal hazard areas. Recommendations are quite specific.	coastal hazards; shoreline protection;	http://seagrant.oregonstate.edu/sgpubs/onlinepubs/t94002.pdf
South Carolina Coastal Council	1992	South Carolina Coastal Council	MGMT PLAN or STRATEGY	US State gov't doc	South Carolina Coastal Council, 1992. South Carolina's Beachfront Management Plan. Charleston, South Carolina, 142 pp.	US, South Carolina	Their policy is for "carefully planned" nourishment when it is economically feasible.	beach management plan; nourishment	http://www.scdhec.net/environment/ocrm/regs/docs/BFMA.pdf
Texas General Land Office	2005	http://www.glo.state.tx.us/coastal/ct2020/2005report/HomeDocuments/CT2020_Executive_Summary.pdf	MGMT PLAN or STRATEGY	US State gov't doc	Texas General Land Commission, 2005. Coastal Texas 2020: A Clear Vision for the Texas Coast (Executive Summary). Texas General Land Commission, Austin, TX, 17 pp.	US, Texas	Coastal Texas 2020 is about fighting erosion. They use battle language. For every one dollar invested in Coastal Erosion Planning and Response Act (CEPRA) projects (e.g., armoring, renourishment), \$14-16 will be generated in economic benefits. TX's theme "SAND DOLLARS: FUNDING THE FIGHT AGAINST EROSION". "A Heinz Center study predicts 1 out of 4 houses within 500 feet of the US shoreline will be lost to erosion within the next 60 years." 80% of Galveston beaches eroding; wetlands eroding also. They also want to permanently protect resources that may be impacted by offshore oil and gas drilling. They recommended fully funded state erosion program, ACOE statewide feasibility study. Funding is a major issue for them.	Texas; Coastal Texas 2020; CEPRA; shoreline erosion; fighting erosion	http://www.glo.state.tx.us/coastal/ct2020/2005report/HomeDocuments/CT2020_Executive_Summary.pdf
McKenna, K.K.	2004	Texas General Land Office	MGMT PLAN or STRATEGY	US State gov't doc	McKenna, K.K., 2004. Texas Coastwide Erosion Response Plan: 2004 Update. Prepared for the Texas General Land Office, Austin, Texas, 72 pp.	US, Texas			http://www.glo.state.tx.us/coastal/ct2020/2005report/HomeDocuments/TCERP_2004.pdf
Texas General Land Office	2007	Texas General Land Office	POLICY OR LEGISLATION	US State gov't doc	Texas General Land Office, 2007. Coastal Erosion Planning & Response Act (CEPRA), Report to the 80th Texas Legislature. Austin, Texas, 83 pp.	US, Texas	This is the mandated legislative update on the Texas Coastal Erosion Planning & Response Act (1999). So much of the coastline is receding and the state has a rolling easement. This easement was established by an Open Beaches Act that declares all beach within that easement to be open to the public. There is not enough money to do the projects they feel are necessary. They believe they are getting between \$11.66 and \$16.10 for every dollar invested. They are using a combo of defense, nourishment, retreat and restoration. They are doing a lot of studies to see if they can use dredged material for beach nourishment.	coastal erosion; planning	http://www.glo.state.tx.us/coastal/erosion/CEPRA-LegReport2007/CEPRALegReport2007.pdf

BEACH AND INLET MANAGEMENT PLAN: LITERATURE REVIEW

Author (last, first)	Year	Journal/Source	Topic	Publication Type	Citation	Location	Summary/Relevance to BIMP	Keyword	Link
Jones, K.	2004	Ecological Engineering	TOOLS FOR BEACH MGMT	Peer-reviewed journal	Jones, K. and Hanna, E., 2004. Design and implementation of an ecological engineering approach to coastal restoration at Loyola Beach, Kleberg County, Texas. Ecological Engineering 22: 249 - 261.	US, Texas (Kleberg)	Authors used bioengineering techniques (rip-rap toe and vegetated soil lifts like you see in stream restoration) in order to stabilize a beach in TX that was rapidly eroding. They plan to plant and revegetate the bank. This would work in areas where there is vegetation up to the waters edge, but probably not where there are big beaches.	bioengineering; Texas; bank stabilization	
Virginia Beach Beaches and Waterways Advisory Commission	2002	Virginia Beach Beaches and Waterways Advisory Commission	MGMT PLAN or STRATEGY	US Local gov't doc	Virginia Beaches and Waterways Advisory Commission, 2002. Virginia Beach Beach Management Plan. Virginia Beach, Virginia, 63 pp.	US, Virginia (Virginia Beach)	Plan originally drafted in 1993. They divided the City's beach into 8 units and 2 inlets. Plan tries to represent citizen concerns and needs; the plan leaves the technical stuff up to the City staff. They have a major issue with beach ownership. Can't get public assistance when claiming it is private land. Underwater lot owners are apparently waiting for accretion (wouldn't be an issue here). Virginia Beach also has an Erosion Control and Hurrican Prevention plan (no copy could be found online) that provides for beach nourishment with offshore sand, and seawall construction.	beach management plan; Virginia; Virginia Beach	http://www.vbgov.com/file_source/dept/pw/Document/beach_management_plan.pdf
Washington State Department of Ecology	2001	Washington State Department of Ecology	MGMT PLAN or STRATEGY	US State gov't doc	Washington State Department of Ecology, 2001. Managing Washington's Coast, Washington State's Coastal Zone Management Program. Ecology Publication 00-06-129: Olympia, Washington, 167 pp.	US, Washington	It seems that, in Washington, local gov'ts are responsible for developing their own master program plans to deal with shoreline management, with technical assistance from the state if requested.	coastal zone management; washington	
Washington State	1971	Washington State	POLICY OR LEGISLATION	US State gov't doc	Washington State, 1971. Shoreline Management Act of 1971. Chapter 90.58 RCW. Olympia, Washington.	US, Washington	Local gov'ts have to develop a master program. "Each master program shall contain standards governing the protection of single family residences and appurtenant structures against damage or loss due to shoreline erosion. The standards shall govern the issuance of substantial development permits for shoreline protection, including structural methods such as construction of bulkheads, and nonstructural methods of protection. The standards shall provide for methods which achieve effective and timely protection against loss or damage to single family residences and appurtenant structures due to shoreline erosion."	legislation; washington; shoreline management	http://apps.leg.wa.gov/RCW/default.aspx?cite=90.58
					Louisiana. Coast 2050 Florida beach prioritization rules				