

OFFICE OF COASTAL MANAGEMENT

COASTAL USE PERMITS

**GUIDE TO DEVELOPING
ALTERNATIVES AND JUSTIFICATION
ANALYSES
FOR
PROPOSED USES WITHIN THE
LOUISIANA COASTAL ZONE**

Introduction

One of the goals of the Office of Coastal Management (OCM) is to achieve a balance between conservation of coastal resources and development of the coastal zone. Development in the coastal zone is encouraged but avoidance of unnecessary impacts to coastal resources is essential in order to protect those resources for future generations. To accomplish this goal, OCM reviews every Coastal Use Permit (CUP) application with the objective of avoiding and/or minimizing adverse impacts wherever possible. Pursuant to La. RS 49:214.27.B and C., OCM uses the Coastal Use Guidelines, found in LAC Title 43, Part I, Chapter 7, Subpart B, §701-719, to determine the type of information needed to fully evaluate a particular use and the adverse impacts that must be avoided to the maximum extent practicable. All coastal uses must be in conformance with all applicable Coastal Use Guidelines in order to receive approval from OCM.

Part of these guidelines, §701.H, charges OCM with ensuring that the public benefits of a proposed coastal use clearly outweigh any adverse impacts to public resources resulting from that use. **Public benefits** include providing goods and/or services to users that currently do not have reasonable access to such goods and/or services, increasing permanent employment opportunities and increasing public revenues. **Coastal resources** include coastal waters, wetlands, fisheries, wildlife and unique ecological/coastal features such as ridges, cheniers, salt domes, beaches and dunes. These resources provide value to the public in the form of storm and flood protection, nursery grounds for commercial and recreational fishing, critical habitat for endangered species and improved water quality. Public resources also include existing structures and infrastructure. **Adverse impacts** are direct or indirect loss and/or negative alteration of a public resource as well as negative impact on concurrent and neighboring coastal users and include such things as increased intensity or frequency of flooding, accelerated erosion and salt water intrusion.

Review of a proposed coastal use using the Coastal Use Guidelines includes asking questions such as:

1. Can adverse impacts from a proposed use on coastal resources and/or user groups be avoided by moving the use to an area which results in less adverse impact to coastal resources and/or users?
2. If the use cannot be moved, can demand for the proposed goods and/or services in the area to which they will be introduced be documented?
3. If a use cannot be moved and demand can be demonstrated, can the use be redesigned/reconfigured, or can different methods be used to accomplish the use, which results in less damage to coastal resources?

To answer these questions, OCM requires that the applicant provide Alternatives and Justification Analyses in sufficient detail to demonstrate a thorough consideration of the respective subjects. In an effort to recognize the differences between small and large projects, and/or low and high coastal resource impact projects, OCM has developed a tiered approach to Analysis development. Factors such as, but not limited to, the complexity of the development, surrounding land use, type and level of resource impact and coastal use objective(s) are used to determine the range of alternatives to be considered in the Alternatives Analysis and the information and level of detail required for the Justification Analyses. This guide was developed to assist applicants for Coastal Use Permits with

determining, in general, the type of information and level of detail needed to fully evaluate a proposed coastal use's potential impacts and benefits and therefore it's conformance with the Coastal Use Guidelines. Any combination of analyses may be required depending on the nature of the proposed coastal use and the potential adverse impacts that may occur from that use.

Alternatives and Justification Analyses

To fully evaluate a proposed coastal use's benefits and impacts, Alternatives and/or Justification Analyses are required during review of a use from which adverse impacts to coastal resources are, in OCM's opinion, likely to occur. The Alternatives Analysis should address several options for project siting that are compared equally for feasibility and will allow OCM to determine the least damaging feasible site for the proposed use. The Alternatives Analysis should provide documentation that clearly demonstrates that reasonable efforts were made to find less damaging sites and should provide an explanation for why each less damaging site was not feasible. The Alternatives Analysis also should address alternate site configuration, alternate methods of construction, and how adverse impacts to coastal resources will be minimized. Appendix 1 provides some available sources of this information.

The Justification Analysis should include sufficient detail to clearly demonstrate demand for the proposed use and will allow OCM to determine the public need the proposed use. The Justification Analysis should explain the goods and/or services that the proposed coastal use will provide and include documentation that clearly demonstrates a public demand for, or public benefit resulting from, the proposed use. The analysis should provide enough information for OCM to determine that there is a reasonable chance that the project will be successful and not result in a situation where large scale destruction of resources is permitted for a project that fails economically, floods, causes flooding on adjacent areas or in some other way fails the public. Appendix A provides some available sources of this information.

In general, the greater the resource or user group impacts, the more detail required for both the Alternatives and Justification Analyses. If reviewing this guide prior to submission of a JPA, the information presented herein should be taken into consideration and addressed while developing the project. In most cases, alternatives, or the lack thereof, are evident and a simple discussion of the options considered is sufficient. This information can be provided in steps 11b-c of the Joint Permit Application. If the information is not provided in or attached to the JPA, the OCM permit analyst will review the project and determine if any less damaging alternatives are evident. Additional information may be requested by the permit analyst in order to address the less damaging options he/she identified. Using the information contained in these analyses, OCM can effectively evaluate the proposed coastal use's conformance with the applicable Coastal Use Guidelines (specifically §701.F.3, 5, 7, 8, 10, 13, 16 and 19; §701.G.2 and 6; §701.H; §701.I; and all applicable Use Specific Guidelines).

Proposed Coastal Uses

All of the above analyses are not required for every type of coastal use and the type of information and level of detail required to address potential concerns varies within and between uses. OCM has taken a tiered approach to these analyses and has graded the level

of detail required to be reflective of the extent of potential resource impacts. In general, the greater the risk to coastal resources, the more detailed the required analyses must be.

Several types of coastal uses are addressed in this guide however exclusion from this guide does not mean that other types of coastal uses do not require Alternatives and Justification Analyses. Likewise, all types of coastal uses will be reviewed on a case-by-case basis using the Coastal Use Guidelines to determine which, if any, of the analyses are required and to what level of detail they should be developed. Depending on the nature of the proposed use and the type and extent of adverse impact that may occur, information in addition to that suggested in a particular guide may be required, if in OCM's opinion, such additional information is necessary to fully evaluate the proposed coastal use. An explanation for the need for any additional information OCM may request will be provided with the request for information.

Guides have been developed for the following types of coastal uses:

[Commercial Developments](#)
[Drainage Projects](#)
[Industrial Developments](#)
[Levees](#)
[Marinas](#)
[Oil & Gas Facilities](#)

[Pipelines](#)
[Ports](#)
[Recreational Developments](#)
[Residential Developments](#)
[Transportation Projects](#)
[Utility Projects](#)

Multiple-use developments will require submission of information related to each type of development so multiple guides may be needed for a single overall project. OCM encourages potential applicants to avoid adverse impacts to coastal resources to the maximum extent practicable and will provide assistance with identifying alternate sites and developing a Justification Analysis. Pre-application coordination meetings with the regulatory and resource agencies provide a good starting point for project development. These meetings can be used to identify potential alternate sites, outline information that should be included in the Justification Analysis and provide suggestions for avoidance and minimization of adverse impacts. To arrange a pre-application meeting, please contact our office at OCMInfo@la.gov or 800-267-4019.

Commercial Developments

Introduction

Commercial developments include, but are not limited to, non-manufacturing business establishments such as department stores, hardware stores, retail outlets, grocery stores, car washes, corner stores, office buildings, strip malls, shopping centers, movie theaters, hotels/motels/inns, hospitals, etc. These types of developments require Alternatives and Justification Analyses if, in OCM's opinion, adverse impacts to coastal resources may occur during construction and/or operation. The complexity of the development, surrounding land use, type and level of resource impact and coastal use objective(s) are used to determine the range of alternatives to be considered in the Alternatives Analysis and the level of detail required for the Justification Analysis.

Other factors that must be identified when developing the Alternatives and Justification Analyses are site description, infrastructure needs (roads, powerlines, sewerage, water, drainage) proximity to needed services (grocery, pharmacy, bank, hospital) and the development's effects on evacuation routes and existing infrastructure. Secondary impacts that may be necessary but fall outside the scope of the proposed development also must be considered as part of the overall development project. **Secondary impacts** include, but are not limited to, the construction of power, water, sewer, cable, internet and telephone lines as well as roads and access channels by which the development will be connected with existing infrastructure. These secondary impacts may be permitted separately, but because they are dependent on the development project and vice versa, the impacts associated with them must be evaluated as part of the whole project.

Because the level of detail required in the Justification-Analysis depends largely on the type and level of surrounding land use and the type and level of coastal resource impacts, **alternative sites should be addressed first**. All feasible sites, as defined below, should be considered and the least damaging site selected as the preferred site. Once the site has been selected, justification of the project should be prepared for that site. Please keep in mind that the type of information and level of detail required for the Justification Analysis, as requested by the OCM Permit Analyst, are dependent on the level of resource impact, level of surrounding land use and the size of the development. These parameters may change depending on the location, scope and configuration of the development ultimately determined to be the least damaging. Please check with your OCM Permit Analyst to determine if the level of detail originally requested still is required.

OCM encourages potential applicants for commercial developments to hold pre-application coordination meetings with the regulatory and resource agencies. These meetings can be used to identify potential alternate sites and outline information that should be included in the Justification Analysis. To arrange a pre-application meeting, please contact our office at OCMinfo@la.gov or 800-267-4019.

Maintenance of Existing Commercial Facilities

Maintenance of existing facilities includes repair or replacement of existing buildings, access roads, parking areas, storage areas and staging areas within the existing facility. Please note

that in some cases, normal repairs and the rehabilitation, replacement or maintenance of existing structures do not require Coastal Use Permit provided that:

1. the structure or work was lawfully in existence, currently serviceable, and in active use during the year preceding the repair, replacement or maintenance; and
2. the repair or maintenance does not result in an encroachment into a wetland area greater than that of the previous structure or work; and
3. the repair or maintenance does not involve dredge (the removal by excavation or any other means of native material, including soil, sand, mud, clay and semisolid sediment, regardless of whether the material supports or is supporting vegetation, from any lands or water bottoms in the coastal zone of Louisiana) or fill activities; and
4. the repair or maintenance does not result in a structure or facility that is significantly different in magnitude or function from the original.
5. the activity is not located in vegetated wetlands (emergent, submergent or forested); within one-quarter ($\frac{1}{4}$) mile of a barrier island; or on a chenier, barrier beach, dune, salt dome or other similar isolated, raised landform.

Maintenance activities that do not qualify for the above exemption will require a Coastal Use Permit and if, in OCM's opinion, have adverse impacts on coastal resources, will require brief Alternatives and Justification Analyses as outlined below. Please note that an exemption determination from OCM is exclusive to OCM and does not relieve the applicant from obtaining other local, state or federal permits, as required by law.

Alternatives Analysis

OCM recognizes that maintenance activities have a limited range of alternatives therefore the Alternatives Analysis need not address alternate sites. The Analysis instead should address alternate methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should be a narrative that includes an explanation of the nature and objectives of the proposed maintenance activity(ies); an identification and discussion of any available feasible options for the proposed activity that minimize adverse impacts to coastal resources; and an explanation of why less damaging feasible options were not selected.

Justification Analysis

The Justification Analysis should be a narrative that clearly explains the reason(s) for the proposed activity(ies) and the consequences of not implementing the proposed activity(ies).

Expansion of Existing Commercial Facilities

Expansion of existing facilities includes expansion of existing buildings, storage areas, staging areas and parking areas. Expansion activities that, in OCM's opinion, have adverse impacts on coastal resources will require Alternatives and Justification Analyses as outlined below.

Alternatives Analysis

OCM recognizes that expansion activities have a limited range of alternatives, therefore the Alternatives Analysis need not address alternate sites that are not adjacent to existing facility unless separation from existing facilities is not logically precluded. The Alternatives Analysis instead should address alternate locations surrounding existing facility property as well as methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should include the following:

1. A narrative explaining the project objective(s) and identifying the proposed features required to meet the objective(s). The narrative also should identify any project objectives or features that may limit the range of alternatives to be considered.
2. A description of each location considered. Include general topography, water/wetland features, habitat type(s) present, if known, and estimate of impact to each.
3. A narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Justification Analysis

The Justification Analysis for facility expansion activities must demonstrate the need for the enhanced goods and/or services to be provided by the expansion. The Analysis should include a narrative explaining the enhanced goods and/or services to be provided by the expansion and the consequences of not implementing the proposed expansion. Supporting documentation may be required depending on the extent of resource impacts.

New Commercial Developments

Alternatives Analysis

The goal of an Alternatives Analysis is to find a location for the proposed development which results in the least amount of adverse impact to coastal resources while allowing the project to fulfill its main objective(s). The Alternatives Analysis provides an objective method of performing a fair and thorough consideration of feasible options for the location, construction, operation and maintenance of a proposed coastal use. OCM encourages applicants to utilize areas that avoid or minimize both direct and indirect adverse impacts to coastal resources. If a selected project location, construction, operation or maintenance method may, in OCM's opinion, result in adverse impacts to coastal resources, an Alternatives Analysis will be required.

Feasible sites are defined as any available parcel of land within the general vicinity of the proposed site (within same parish/geographic area; near preferred features such as existing residential, industrial and/or commercial areas) that can support the main objective(s) of the proposed development. Project objective(s), surrounding land use, total project impact, availability of existing infrastructure and type and extent of coastal resource impacts should be considered when selecting feasible alternative sites. Sites that would result in more damage to

coastal resources or are not of a size large enough to support the project are not considered to be feasible sites and should not be included in the Alternatives Analysis.

Feasible sites can be identified using current aerial photography. Landowners can be identified through clerk of court records and contacted to determine availability of the land for purchase. Local newspapers also provide a source of available real estate offerings. A drive-by search for lots posted for sale in the general development vicinity also can be an effective method of finding available sites. Several websites offer listings of large tracts of land (see "Available Sources" below). Multiple Listing Real Estate Searches (MLS) also can be used to determine the availability of property for development and also can be used to assess the current housing/real estate market in the development area. MLS or other real estate search results provided for site identification purposes must include the parameters used for the search. If no available alternate sites can be identified, documentation demonstrating such (letters of refusal from landowners to sell property (or chronology and summary of attempts), MLS or other real estate searches resulting in no matches - include search parameters and full results; aerial photos showing no available undeveloped land, any other documentation showing an attempt to find less damaging properties) must be provided.

Documentation that clearly demonstrates that each parcel was compared equally and explains why less damaging parcels were eliminated will be required. Documentation that supports the reasons for elimination should be included with the analysis. All alternate sites and the preferred site must be compared using, at a minimum, the factors identified below. If other factors not identified by OCM are used to compare sites, please define those factors and explain how they were used to evaluate each site. Table 1 can be used to determine the minimum range of alternatives and level of detail that should be considered when developing an Alternatives Analysis.

Table 1 – Determining the Range of Alternatives that should be considered and the level of detail required in the Justification Analysis when proposing a commercial development. Resource Impacts refers to coastal resource impacts as a percentage of total project impact.

Scope of Development	Resource Impacts (% of total impacts)		
	Low (<10%)	Med (10.01-30%)	High (>30.01%)
Small (less than 1 acre)	Category 1	Category 2	Category 3
Large (1 acre or more)	Category 2/3*	Category 2/3*	Category 3

* If more than 5 acres of resource impact will occur, higher level of detail is required.

A minimum of two (**Category 1**), three (**Category 2**) or five (**Category 3**) alternate feasible sites must be considered. Each site should be compared using the same parameters and should, at a minimum, include the items listed below.

1. Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered.
2. Identify, on a map, the location of each site considered for development. If less than the minimum number of sites, as specified above, have been considered, please explain why and provide documentation demonstrating the efforts made to find alternate sites.

3. Describe each site considered. Include parcel size relative to development size, topography, water/wetland features, habitat type(s) present and amount of impact to each. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the site using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.
4. Identify the availability and capacity of existing infrastructure (roads, utilities, water, sewer, etc.). Describe any new infrastructure required (excluding tie-in from individual units to existing infrastructure).
5. Describe the surrounding land use within one-quarter (1/4) mile (**Category 1**), one-half (1/2) mile (**Category 2**) or one (1) mile (**Category 3**) of each site considered. Include type and extent of existing use and any planned future uses, if known.
6. Identify the current zoning of the site and indicate if any zoning variances will be required prior to development.
7. Explain how the use will affect existing infrastructure, including evacuation and identify any additional permits required (e.g., DOTD driveway permit). Describe any secondary infrastructure (excluding tie-in from individual units) that may be required to service the development. Include location and/or route of the needed infrastructure and type and extent of impacts associated with installation of that infrastructure.
8. Provide a narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Once the least damaging feasible site has been identified, alternate configurations/methods and/or reduction in scope should be considered in an attempt to avoid or minimize adverse impacts to coastal resources on the selected site. Be aware that some parishes and municipalities, depending on the size of the development, require set-asides for green space/park/recreation areas and possibly detention or retention ponds. These requirements for set-asides should be taken into consideration when selecting a site and configuring the development.

Justification Analysis

Once adverse impacts have been avoided to the maximum extent practicable through the Alternatives Analysis process outlined above, justification for the project at the selected site must be demonstrated. The goal of a Justification Analysis is to ensure that there is a public need and demand for the goods and/or services to be provided by the development. The below items must be addressed when developing a Justification Analysis for commercial developments. Please note that a market analysis done for other reasons, such as to secure financial backing, can be used as the Justification Analysis if the information outlined below is addressed within that analysis. Table 2 can be used to determine the level of detail required in the Justification Analysis.

Table 2 – Determining the level of detail required in the Justification Analysis.

	Resource Impact (% of total impact)			
Size of Development	Low (<20%)	Med (20.01-70%)	High (>70.01%)	Surrounding Land Use †
Small (less than 1 acre)	S	S/M *	M	High (dense residential/commercial/industrial)
	S	S/M *	M	Moderate (light residential/commercial, agriculture)
	M	M	C	Low (no development)
Large (1 acre or more)	S	S/M **	M/C **	High
	S/M **	M/C **	M/C **	Moderate
	M/C **	C	C	Low

* If more than 1/2 acre of resource impact will occur, higher level of detail is required.
** If more than 5 acres of resource impact will occur, higher level of detail is required.
† Refers to the type and extent of the uses occurring on lands in the vicinity of the proposed development

Simple Justification (S)

1. State the objective(s) of the coastal use (what goods and/or services will the development provide) and identify to what geographic area the development will provide these goods and/or services (indicate if confidential). If the new development is intended to serve existing developments in the target geographic area, identify the existing developments which will be served by the new development.
2. Identify all competitor facilities (those providing the same or similar goods and/or services to the same geographic area). Provide a narrative explaining the competitor's location(s) relative to the geographic area to which the new facility is proposed to serve and include any identifiable limitations of each competitor. If proposing a multiple-use development, provide data for each different type of use proposed.
3. Provide a narrative explaining how the proposed development will introduce or enhance the existing availability of goods and/or services in the target geographic area (indicate if confidential). Include in the narrative an explanation of the coastal water dependent nature of the proposed development (i.e. why the development must be located within or near coastal waters), difference in driving time between the new development and existing goods and/or services and any other information that the applicant feels demonstrates a demand for the goods and/or services to be provided. If proposing a multiple-use development, provide data for each different type of use proposed. If all amenities are not known at the time of application, provide information on anticipated basic services and anchor stores/facilities.

Moderate Justification (M)

Provide information for 1-3 above plus:

4. Indicate the density and % occupancy of any residential developments identified in #1 above and an estimate of how long those developments have been available. If not residential, indicate the type and nature of the existing developments identified in #1 above and provide an estimate of available customers that may be drawn to the proposed development.
5. Include a map showing the geographic area identified in #1 above to which the development will provide goods and/or services. Identify on this map the location of any other similar existing facilities (as identified in #2 above).
6. Provide the anticipated volume of users from various driving distances (minimum of 3 distances - i.e. 5, 15 and 30 minutes) and various socio-economic groups within target geographic area.
7. Provide existing retail goods and services expenditures trends over the last ten years for the target geographic area.

Complex Justification (C)

Provide information for 1-7 above plus:

8. Provide population trend data and household income trend data over the last ten years.
9. Provide labor force trend data over the last ten years in the target geographic area.
10. If a multiple-use development is proposed, provide letters of intent from potential tenants (indicate if confidential).

Drainage Features

Introduction

Drainage features include gravity drainage channels and canals; water control structures; and pump stations and associated structures. If, in OCM's opinion, adverse impacts to coastal resources will occur during construction, maintenance and/or operation of a proposed activity, Alternatives and Justification Analyses will be required. The level of detail needed in the Analyses is dependent on whether the activity is maintenance of existing features, expansion of existing features or installation of new features. A feasibility study done during the course of project development can be submitted as the Alternatives and Justification Analyses. If a feasibility study has not been done, the below information will assist in the development of Alternatives and Justification Analyses. OCM encourages applicants to avoid adverse impacts to coastal resources to the maximum extent practicable and will provide assistance with identifying alternate sites, minimizing impacts and developing a Justification Analysis.

Maintenance of Existing Drainage Features

Maintenance of existing drainage features includes clean out of existing channels, canals and ditches; control of existing bankline vegetation; and upkeep, repair and replacement of existing water control structures and pump stations. Brief Alternatives and Justification Analyses will be required if adverse impacts to coastal resources are likely to occur during maintenance activities. The information required in the analyses is dependent on the nature of the maintenance activity and the extent of resource impacts.

Alternatives Analysis

OCM recognizes that maintenance activities are limited to existing drainage features, therefore, an Alternatives Analysis for maintenance activities need not address alternate sites for performing the activity. The analysis instead should address methods and equipment to be used to perform the maintenance activity; the access route to the maintenance site; the size of the work area around the maintenance site; the location and manner of dredged material disposal; and the siting of staging area(s) that minimize adverse impacts to coastal resources to the maximum extent practicable. Only those aspects of the proposed maintenance activity that result in adverse impacts to coastal resources need be addressed. The analysis can take the form of a brief narrative that identifies all practical options for performing the work and siting the staging areas in order to avoid or minimize adverse impacts to coastal resources.

Method(s) and Equipment

OCM understands that the methods and equipment used to perform the maintenance activity may be limited by the type of activity to be done. If the methods and/or equipment used to perform the maintenance activity will result in adverse impacts to coastal resources, and options exist, the Alternatives Analysis should include:

1. An explanation of the method(s) and equipment to be used to access the site and perform the maintenance work. The narrative should identify and discuss all practical options for performing the work (e.g., land based versus water based operations;

hydraulic or suction dredging versus bucket dredging or propwashing; etc.) and explain why each option was eliminated or chosen. If using economics as a deciding factor, provide cost comparisons of all options considered.

2. An explanation of any limiting factors and special equipment requirements.

Access

Access to the site should be selected to minimize adverse impacts to coastal resources. Existing access routes should be used in lieu of clearing and construction of new access routes. If adverse impacts to coastal resources will occur during access, the Alternatives narrative should include:

3. A map showing location, length and width of proposed and alternate access routes considered. This can be displayed on the project vicinity map or plan view plat.
4. An explanation of why each route was eliminated or chosen. Routes should be compared using the same criteria and the comparison should consider the extent of coastal resource impacts. Access equipment identified in #1 above should be route appropriate and should be selected to minimize adverse impacts to coastal resources.

Staging and Work Areas

The staging and work area(s) needed to perform the maintenance activities should be the minimum size necessary to safely store and access equipment and perform the maintenance activity. The staging area should be located on a site that avoids adverse impacts to coastal resources. If coastal resources will be impacted adversely by staging and/or work areas, the Alternatives narrative should include:

5. A discussion of all practical staging area locations and an explanation of why each was eliminated or chosen. The narrative also should explain the need for the size(s) of the staging and work area(s), any onsite limitations that may be present and any special equipment requirements. Maps, illustrations and site layout plans may be helpful in demonstrating space requirements and limitations.

Dredged Material Disposal

The manner and location of dredged material placement can greatly affect the extent of adverse impacts to coastal resources, especially vegetated wetlands. Previously elevated spoil banks may have subsided enough to revert to wetland habitat. Typically, spreading dredged material on vegetated wetland banklines to a height of no more than 6 inches may allow the wetlands to recover and revegetate within a reasonable amount of time. Stacking dredged material more than 6 inches high on adjacent banklines may result in significant impacts that should be avoided to the maximum extent practicable. If vegetated wetlands, or other coastal resources, will be adversely impacted by dredged material placement, the Alternatives narrative should include:

6. An explanation of all practical options for disposal of the dredged material. The narrative should include any equipment limitations that may exist and should compare

each option identified using the same criteria. If using economics as a deciding factor, provide cost comparisons of all options considered.

Justification Analysis

The Justification Analysis for maintenance activities should be a narrative that explains why the maintenance work is required (i.e., identify the consequences of not performing the maintenance activities).

Expansion of Existing Drainage Features

Expansion of existing drainage features includes deepening and widening of currently existing, maintained channels, canals or ditches; and increasing capacity at existing pump stations and water control structures. For the purposes of this guide, maintained channels, canals and ditches are defined as those which require no more than 80% cross sectional excavation from original design specifications. If more than 80% of the cross sectional area of the channel, canal or ditch has filled in, reestablishment of the drainage feature will be considered a new feature for the purposes of Alternatives and Justification Analyses. Expansion activities that have adverse impacts on coastal resources will require Alternatives and Justification Analyses.

Alternatives Analysis

OCM recognizes that existing drainage feature expansion activities are limited to the location of the existing drainage feature, therefore, an Alternatives Analysis need not address alternate alignments. The Alternatives Analysis instead should address the methods and equipment to be used to perform the maintenance activity, the method of access to the maintenance site, the size of the work area around the maintenance site, the siting of staging area(s) and other options for protecting structures that minimize adverse impacts to coastal resources to the maximum extent practicable. The analysis can take the form of a narrative that identifies all practical options for performing the work (including water- versus land-based access). Only those aspects of the proposed maintenance activity that result in adverse impacts to coastal resources need be addressed. The analysis can take the form of a brief narrative that identifies all practical options for performing the work and siting the staging areas.

Method(s) and Equipment

OCM understands that the methods and equipment used to perform the expansion activity may be limited. If the methods and/or equipment used to perform the maintenance activity will result in adverse impacts to coastal resources, and options exist, the Alternatives Analysis should include:

1. An explanation of the method(s) and equipment to be used to access the site and perform the expansion work, including source of fill. The narrative should identify and discuss all practical options for performing the work and explain why each option was eliminated or chosen. If using economics as a deciding factor, provide cost comparisons of hauled in fill versus fill excavated on site for all options considered.
2. An explanation of any limiting factors and special equipment requirements.

3. For gravity drainage features, an explanation of how tidal surges and other storm events will affect reverse flow and flooding in the area the drainage feature is designed to protect.

Access

Access to the expansion site should be selected to minimize adverse impacts to coastal resources. If adverse impacts to coastal resources will occur during access, the above narrative should include:

4. A map showing location, length and width of proposed and alternate access routes considered. This can be displayed on the project vicinity map or plan view plat.
5. An explanation of why each route was eliminated or chosen. Routes should be compared using the same criteria and should include a consideration of coastal resource impacts. Access equipment identified in #1 above should be route appropriate and should be selected to minimize adverse impacts.

Staging and Work Areas

The staging and work area(s) needed to perform the expansion activities should be of the minimum size necessary to safely store and access equipment and perform the expansion activity. The staging area should be located on a site that avoids adverse impacts to coastal resources. If coastal resources will be impacted adversely by staging and/or work areas, the above narrative should include:

6. A discussion of all practical staging area locations and an explanation of why each was eliminated or chosen. The narrative also should explain the need for the size(s) of the staging and work area(s), any limitations that may be present on site and any special equipment requirements. Maps, illustrations and site layout plans may helpful in demonstrating space requirements and limitations.

Other Options

Other options, such as the “no-build” option should be considered in lieu of expansion activities that adversely impact coastal resources. Structures in the protected area can be relocated or elevated to eliminate the risk of flooding. An Alternatives Analysis for expansion activities that may result in adverse impacts to coastal resources should address these options. The analysis can be a narrative that includes:

7. The type of structures and number of each type of structure in the protected area.
8. A comparison of costs for expansion activities versus relocating or raising of protected structures. The cost of the expansion activities should include the frequency and cost of anticipated future maintenance work.

Justification Analysis

The Justification Analysis should clearly demonstrate a public need and/or demand for the proposed drainage feature expansion. The analysis should include data that identifies the existing and proposed capacity of the drainage feature; the entire area to be affected; the number and type (houses, businesses, churches, etc.) of structures located within that area; the current water flow patterns into and out of that area; and the frequency and severity of historic flooding events in that area. The analysis also should explain why the existing drainage capacity is not sufficient and what capacity is needed. The Justification Analysis can take the form of a feasibility study done during the normal course of project planning and should be provided in its entirety. If a feasibility study has not been done, please refer to the outline for a Justification Analysis in the New Drainage Features section below.

New Drainage Features

New drainage features include lengthening existing channels, canals and ditches; excavating previously non-existent channels, canals and ditches; and installing new pump stations or water control structures. If, in OCM's opinion, adverse impacts to coastal resources may occur during or after construction, Alternatives and Justification Analyses will be required. A formal feasibility study done during the course of project planning can be submitted as the Alternatives and Justification Analyses. OCM recognizes that drainage features are designed for a specific purpose and affect areas much larger than the footprint of construction. Because of this OCM recommends that justification be addressed first, with alternatives addressed after the project objective(s) and area(s) of impact (direct and indirect; adverse and beneficial) are identified.

Justification Analysis

The Justification Analysis should clearly demonstrate a public need/demand for the proposed drainage feature. The analysis should include data that identifies the entire area to be affected; the number and type of structures (houses, businesses, churches, etc.) located within the affected area; the current water flow patterns into and out of the affected area; the frequency and severity of historic flooding events in the affected area; and historic habitat information and salinity patterns (if applicable to the project objective) in the affected area. The most appropriate form of Justification Analysis for new drainage features is a feasibility study done during the normal course of project planning and should be provided in its entirety, if available. Hydrologic studies may be required depending on the size of the area to be affected by the drainage feature and the extent of direct and indirect adverse impacts to coastal resources.

If no formal feasibility studies have been done, this section offers an outline of the information OCM requires to document the need/demand for the proposed drainage feature. Table 1 can be used to determine the level of detail required in the Justification Analysis. The affected area land use refers to the type and level of usage of the area to be affected by the drainage feature. The need for drainage features may be easily justified in high development areas, however as the type and level of land use in the affected area changes, the justification for the drainage feature likewise will change.

Table 1 – Determining the level of detail required in the Justification Analysis.

	Direct Resource Impact from Construction (% of total construction impact)			
Area Affected by Feature	Low (≤20%)	Med (20.01-70%)	High (>70.01%)	Affected Area Land Use [†]
Small (less than 200 acres)	S	S/M *	M	High (dense residential/commercial/industrial)
	S	S/M *	M	Moderate (light residential/commercial, agriculture)
	M	M	C	Low (no development)
Large (200 acres or more)	S	S/M **	M/C **	High
	S/M **	M/C **	M/C **	Moderate
	M/C **	C	C	Low

S=Simple, low level of detail, M=Moderate, mid-level of detail, C=Complex, high level of detail
* If more than 5 acres of resource impact will occur from construction activities, higher level of detail is required.
** If more than 10 acres of resource impact will occur from construction activities, higher level of detail is required.
[†] Refers to the type and extent of the uses occurring on lands within the area affected by the drainage feature; the higher the degree of affected area land use, the lower the level of detail needed in the Justification Analysis)

Simple Justification (S)

1. Provide a narrative that explains the need for the drainage feature.
2. Provide documentation that clearly explains/illustrates the existing and proposed water flow patterns in the area to be affected by the drainage feature.
3. If proposing water control structures or pumps provide the operational schedule or plan for the opening and closing of the structures and an explanation of why this schedule or plan was chosen.
4. Identify the location, number and type of structures (houses, businesses, churches, etc.), other features and land uses occurring in the area affected by the drainage feature (if applicable to project objective).

Moderate Justification (M)

Provide information for 1-4 above, plus:

5. Include in #1 above historic information related to past flooding events, such as, conditions that resulted in the flooding events, duration of flooded conditions, frequency of events and the environmental and socioeconomic impacts resulting from those events.
6. Include in #4 above any planned or projected future development or use within the affected area.

7. Provide information related to habitat type, salinity, land loss and subsidence in the area affected by the drainage feature and explain how the drainage feature is expected to alter these parameters.
8. If coastal resources (mainly vegetated wetlands) will become isolated from coastal influences by impoundment within the hydrologically altered area, explain why this impoundment cannot be avoided and explain the impacts and benefits to the various habitats to be impounded.

Complex Justification (C)

Provide information for 1-8 above, plus:

9. Provide the capacity of the proposed drainage feature and explain how the feature will alter the existing water flow patterns. Include the conditions under which existing features would be overwhelmed, how often this is anticipated to occur and how the new drainage feature will alleviate this.
10. Discuss the consequences of the “no-build” option and provide a cost comparison of the selected option versus relocating or elevating structures at risk if the drainage feature is not constructed (if applicable to the project objective).
11. If the objective of the feature is to manage habitat in the affected area, explain the effects on habitat if the area is not managed.

Please note that additional information may be required in response to comments received during the public notice period.

Alternatives Analysis

Every effort should be made to route/site drainage features such that adverse impacts to coastal resources are avoided or minimized to the maximum extent practicable. The goal of an Alternatives Analysis is to find a route or site for the proposed drainage feature which results in the least amount of adverse impact (both direct and indirect) to coastal resources while allowing the project to fulfill its main objective(s). The Alternatives Analysis provides an objective method of performing a fair and thorough consideration of feasible options for the location, construction, operation and maintenance of the proposed drainage feature. **Feasible routes/sites** are defined as any route/site that can support the main objective(s) of the proposed development. Current aerial photography and/or specific knowledge of the area can be used to identify feasible routes/sites. Project objective(s), surrounding land use, total project impact and type and extent of coastal resource impacts should be considered when selecting feasible alternative routes/sites.

Documentation that clearly demonstrates that each route was compared equally and explains why each route was eliminated or chosen will be required. Documentation that supports the reasons for elimination of alternatives should be included in the analysis. All alternate routes and the preferred route must be compared using, at a minimum, the factors identified below. If other factors not identified by OCM are used to compare sites, please define those factors and

explain how they were used to evaluate each route. Table 2 can be used to determine the minimum range of alternatives that should be considered when developing an Alternatives Analysis.

Table 2 – Determining the Range of Alternatives that should be considered when proposing a new drainage feature.

Scope of Feature	Direct Resource Impacts from Construction (%) of total construction impact)		
	Low (<10%)	Med (10.01-30%)	High (>30.01%)
Small (one mile or less for linear features, one acre or less for non-linear features)	Category 1	Category 2	Category 3
Large (more than one mile for linear features, more than one acre for non-linear features)	Category 2/3*	Category 2/3*	Category 3
* If more than 2 acres of resource impact will occur, higher level of detail is required.			

A minimum of three (**Category 1**), five (**Category 2**) or seven (**Category 3**) alternate feasible routes/sites must be considered. Each route/site should be compared using the same parameters and should, at a minimum, include the items listed below.

1. Define the project objective(s) and identify all of the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered. Identify the area(s) to which the proposed drainage feature will provide protection and/or habitat or water management opportunities.
2. Identify, on a map, the area to be affected by the drainage feature and identify each route/site considered for the drainage feature. If less than the minimum number of routes/sites have been considered, please explain why and provide documentation demonstrating the efforts made to find alternate routes/sites.
3. Describe the area to be affected by the drainage feature. Include type and extent of habitats within the affected area and the condition of those habitats and salinity, subsidence and land loss information, if known. For gravity drainage features, include an explanation of how tidal surges and other storm events will affect reverse flow and flooding in the area the drainage feature is designed to protect.
4. Describe each route/site considered. Include topography, effects on surface hydrology, and cost. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the route using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit or restrict construction of the project.
5. Identify the minimum required capacity of the drainage feature to meet the project objectives. If material excavated from the feature will be placed on-site and coastal resources will be impacted, include in the narrative a discussion of removing the material and disposing of it at an approved facility or using the material beneficially to create marsh in another location.

6. A no-build option also is an acceptable alternative. This option may include relocating or elevating structures currently existing in the affected area (if applicable to project objective). A no-build discussion should include the number and types of structures (homes, businesses, churches, etc.) affected and the estimated costs of relocating or elevating those structures compared to the cost of construction and future maintenance of the proposed drainage feature. If the objective of the drainage feature is to manage habitat within the affected area, discuss the consequences of not constructing the drainage feature.
7. Provide a narrative explaining the reasons for the elimination or selection of each route/site presented. Please note that the factors used to compare each route should be identified and should be consistent among routes.

Industrial Developments

Introduction

Industrial developments are defined as facilities used to produce goods in connection with, or as part of, a process or system. Such developments include refineries, steel mills, shipyards, fabrication facilities, food processing facilities, bulk loading facilities, landfills, water treatment systems, etc. These types of developments require Alternatives and Justification Analyses if, in OCM's opinion, adverse impacts to coastal resources are expected to occur during construction and/or operation. The complexity of the development, surrounding land use, type and level of resource impact and coastal use objective(s) are used to determine the range of alternatives to be considered in the Alternatives Analysis and the level of detail required for the Justification Analysis.

Other factors that must be identified when developing the Alternatives and Justification Analyses are site description, infrastructure needs (roads, powerlines, sewerage, water, drainage) proximity to needed services (grocery, pharmacy, bank, hospital) and the development's effects on evacuation routes and existing infrastructure. Secondary impacts that may be necessary but fall outside the scope of the proposed development also must be considered as part of the overall development project. **Secondary impacts** include, but are not limited to, the construction of power, water, sewer, cable, internet and telephone lines as well as roads and access channels by which the development will be connected with existing infrastructure. These secondary impacts may be permitted separately, but because they are dependent on the development project and vice versa, the impacts associated with them must be evaluated as part of the whole project.

Because the level of detail required in the Justification-Analysis depends largely on the type and level of surrounding land use and the type and level of coastal resource impacts, **alternative sites should be addressed first**. All feasible sites, as defined below, should be considered and the least damaging site selected as the preferred site. Once the site has been selected, justification of the project should be prepared for that site. Please keep in mind that the type of information and level of detail required for the Justification Analysis, as requested by the OCM Permit Analyst, are dependent on the size of the proposed development, the associated magnitude of the coastal resource impacts and the extent of surrounding land use. These parameters may change depending on the location, scope and configuration of the development ultimately determined to be the least damaging. Please check with your OCM Permit Analyst to determine if the level of detail originally requested still is required.

OCM encourages potential applicants for industrial developments to hold pre-application coordination meetings with the regulatory and resource agencies. These meetings can be used to identify potential alternate sites and outline information that should be included in the Justification Analysis. To arrange a pre-application meeting, please contact our office at OCMInfo@la.gov or 800-267-4019.

Maintenance of Existing Industrial Facilities

Maintenance of existing facilities includes repair or replacement of existing buildings, access roads, parking areas, storage areas and staging areas within the existing facility. Please note

that in some cases, normal repairs and the rehabilitation, replacement or maintenance of existing structures do not require Coastal Use Permit provided that:

1. the structure or work was lawfully in existence, currently serviceable, and in active use during the year preceding the repair, replacement or maintenance; and
2. the repair or maintenance does not result in an encroachment into a wetland area greater than that of the previous structure or work; and
3. the repair or maintenance does not involve dredge (the removal by excavation or any other means of native material, including soil, sand, mud, clay and semisolid sediment, regardless of whether the material supports or is supporting vegetation, from any lands or water bottoms in the coastal zone of Louisiana) or fill activities; and
4. the repair or maintenance does not result in a structure or facility that is significantly different in magnitude or function from the original.
5. the activity is not located within one-quarter mile of a barrier island; or on a chenier, barrier beach, dune, salt dome or other similar isolated, raised landform.

Maintenance activities that do not qualify for the above exemption will require a Coastal Use Permit and if, in OCM's opinion, have adverse impacts on coastal resources, will require brief Alternatives and Justification Analyses as outlined below. Please note that an exemption determination from OCM is exclusive to OCM and does not relieve the applicant from obtaining other local, state or federal permits, as required by law.

Alternatives Analysis

OCM recognizes that maintenance activities have a limited range of alternatives therefore the Alternatives Analysis need not address alternate sites. The Analysis instead should address alternate methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should be a brief narrative that includes an explanation of the nature and objectives of the proposed maintenance activity(ies); an identification and discussion of any available feasible options for the proposed activity that minimize adverse impacts to coastal resources; and an explanation of why less damaging feasible options were not selected.

Justification Analysis

The Justification Analysis should be a narrative that clearly explains the reason(s) for the proposed activity(ies) and the consequences of not implementing the proposed activity(ies).

Expansion of Existing Industrial Facilities

Expansion of existing facilities includes expansion of existing buildings, storage areas, staging areas and parking areas. Expansion activities that, in OCM's opinion, are expected to have adverse impacts on coastal resources will require Alternatives and Justification Analyses as outlined below.

Alternatives Analysis

OCM recognizes that expansion activities have a limited range of alternatives therefore the Alternatives Analysis need not address alternate sites that are not adjacent to existing facility unless separation from existing facilities is not precluded logically. The Alternatives Analysis instead should address alternate locations surrounding existing facility property as well as methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should include the following:

1. A narrative explaining the project objective(s) and identifying the proposed features required to meet the objective(s). The narrative also should identify any project objectives or features that may limit the range of alternatives to be considered.
2. A description of each location considered. Include general topography, water/wetland features, habitat type(s) present, if known, and estimate of impact to each.
3. A narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Justification Analysis

The Justification Analysis for facility expansion activities must demonstrate the need for the additional capacity to be provided by the expansion. The Analysis should include a narrative explaining the additional products to be provided by the expansion and the consequences of not implementing the proposed expansion. Supporting documentation may be required depending on the extent of resource impacts.

New Industrial Facilities

New facilities include any proposed feature at a location which currently does not have existing similar or related features. New facilities that, in OCM's opinion, have adverse impacts on coastal resources will require Alternatives and Justification Analyses as outlined below.

Alternatives Analysis

The goal of an Alternatives Analysis is to find a location for the proposed development which results in the least amount of adverse impact to coastal resources while allowing the project to fulfill its main objective(s). The Alternatives Analysis provides an objective method of performing a fair and thorough consideration of feasible options for the location, construction, operation and maintenance of a proposed coastal use. OCM encourages applicants to utilize areas that avoid or minimize both direct and indirect adverse impacts to coastal resources. If a selected project location, construction, operation or maintenance method may, in OCM's opinion, result in adverse impacts to coastal resources, an Alternatives Analysis will be required.

Feasible sites are defined as any available parcel of land within the general vicinity of the proposed site (within same parish/geographic area and/or near preferred features such as existing industrial areas or transportation features) that can support the main objective(s) of the

proposed development. Project objective(s), surrounding land use, total project impact, availability of existing infrastructure and type and extent of coastal resource impacts should be considered when selecting feasible alternative sites.

Feasible sites can be identified using current aerial photography. Landowners can be identified through clerk of court records and contacted to determine availability of the land for purchase. Available parcels are considered any parcel that is or can be for sale. If the current landowner refuses to sell or discuss sale of the parcel, that parcel is considered unavailable (documentation of attempts to acquire unavailable parcels should be preserved for inclusion in the Alternatives Analysis). Local newspapers also provide a source of available real estate offerings. A drive-by search for lots posted for sale in the general development vicinity also can be an effective method of finding available sites. Several websites offer listings of large tracts of land (see "Available Sources" below). Multiple Listing Real Estate Searches (MLS) also can be used to determine the availability of property for development and also can be used to assess the current housing/real estate market in the development area. MLS or other real estate search results provided for site identification purposes must include the parameters used for the search. If no available alternate sites can be identified, documentation demonstrating such (letters of refusal from landowners to sell property (or chronology and summary of attempts), MLS or other real estate searches resulting in no matches - include search parameters and full results; aerial photos showing no available undeveloped land, any other documentation showing an attempt to find less damaging properties) must be provided.

Documentation that clearly demonstrates that each parcel was compared equally and explains why less damaging parcels were eliminated will be required. Documentation that supports the reasons for elimination should be included with the analysis. All alternate sites and the preferred site must be compared using, at a minimum, the factors identified below. If other factors not identified by OCM are used to compare sites, please define those factors and explain how they were used to evaluate each site. Table 1 can be used to determine the minimum range of alternatives and level of detail that should be considered when developing an Alternatives Analysis.

Table 1 – Determining the Range of Alternatives that should be considered and the level of detail required in the Justification Analysis when proposing a industrial development.
Resource Impacts refers to coastal resource impacts as a percentage of total project impact.

Scope of Development	Resource Impacts		
	Low (<10%)	Med (10.01-30%)	High (>30.01%)
Small (less than 5 acres)	Category 1	Category 2	Category 3
Large (5 acres or more)	Category 2/3*	Category 2/3*	Category 3

* If more than 5 acres of resource impact will occur, higher level of detail is required.

A minimum of three (**Category 1**), four (**Category 2**) or five (**Category 3**) alternate feasible sites must be considered. Each site should be compared using the same parameters and should, at a minimum, include the items listed below.

1. Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered.

2. Identify, on a map, the location of each site considered for development. If less than the minimum number of sites, as specified above, have been considered, please explain why and provide documentation demonstrating the efforts made to find alternate sites.
3. Describe each site considered. Include parcel size relative to development size, topography, water/wetland features, habitat type(s) present and amount of impact to each. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the site using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.
4. Identify the availability and capacity of existing infrastructure (roads, utilities, water, sewer, etc.). Describe any new infrastructure required (excluding tie-in from individual units to existing infrastructure)
5. Provide the source of the raw materials to be used and the method(s) and routes of delivery of those raw materials to the proposed facility.
6. Provide the destination(s) of the products to be manufactured and the method(s) and route(s) of delivery of those products.
7. Describe the surrounding land use within one mile of each site considered. Include type and extent of existing use and any planned future uses, if known.
8. Identify the current zoning of the site and indicate if any zoning variances will be required prior to development.
9. Explain how the use will affect existing infrastructure, including evacuation and identify any additional permits required (e. g. DOTD driveway permit). Describe any secondary infrastructure (excluding tie-in from individual units) that may be required to service the development. Include location and/or route of the needed infrastructure and type and extent of impacts associated with installation of that infrastructure.
10. Provide a narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Once the least damaging feasible site has been identified, alternate configurations/methods and/or reduction in scope should be considered in an attempt to avoid or minimize adverse impacts to coastal resources on the selected site. Be aware that some parishes and municipalities, depending on the size of the development, require set-asides for green space/park/recreation areas and possibly detention or retention ponds. These requirements for set-asides should be taken into consideration when selecting a site and configuring the development.

Justification Analysis

Once adverse impacts have been avoided to the maximum extent practicable through the Alternatives Analysis process outlined above, justification for the project at the selected site must be demonstrated. The goal of a Justification Analysis is to ensure that there is a public need and demand for the product(s) to be provided by the development. The below items must be addressed when developing a Justification Analysis for industrial developments. Please note that a market analysis done for other reasons, such as to secure financial backing, can be used as the Justification Analysis if the information outlined below is addressed within that analysis. Table 2 can be used to determine the level of detail required in the Justification Analysis.

Table 2 – Determining the level of detail required in the Justification Analysis.

	Resource Impact (% of total impact)			
Size of Development	Low (≤20%)	Med (20.01-70%)	High (>70.01%)	Surrounding Land Use †
Small (less than 5 acres)	S	S/M *	M	High (dense residential, commercial and/or industrial)
	S	S/M *	M	Moderate (light residential/commercial, agriculture)
	M	M	C	Low (no development)
Large (5 acres or more)	S	S/M **	M/C **	High
	S/M **	M/C **	M/C **	Moderate
	M/C **	C	C	Low

* If more than 1 acre of resource impact will occur, higher level of detail is required.
** If more than 5 acres of resource impact will occur, higher level of detail is required.
† Refers to the type and extent of the uses occurring on lands in the vicinity of the proposed development

Simple Justification (S)

1. State the objective(s) of the coastal use (what products and/or services will the development provide) and describe or identify on a map the market to which the products and/or service will be provided.
2. Provide a narrative explaining how the proposed development will introduce or enhance the existing availability of products and/or services in the market area. Include in the narrative an explanation of the coastal water dependent nature of the proposed development (i.e. why the development must be located within or near coastal waters), difference in transport time between that offered by the new development compared to that offered by existing facilities and any other information that the applicant feels demonstrates a demand for the products and/or services to be provided. If proposing a multiple-use development, provide data for each different type of use proposed.

Moderate Justification (M)

Provide information for 1-2 above plus:

3. Identify on a map all competitor facilities (those providing the same or similar products and/or services to the same market). Provide a narrative explaining the competitor's location(s) relative to the proposed facility and include any identifiable limitations of each competitor.
4. Provide supply and demand trends over the last 10 years for the proposed products and/or services in the identified market area and provide projections of the same over the next 10 years.

Complex Justification (C)

Provide information for 1-4 above plus:

5. Provide labor force trend data for the last 10 years in the geographic area of the proposed development.
6. Provide an estimate of the number of permanent new jobs and associated payroll that would be created by the proposed development.

Levees

Introduction

A **levee** is defined as an embankment or wall to control or prevent water movement, to retain water or other material, or to raise a road or other lineal use above normal or flood water levels. Examples include levees, dikes, flood walls and embankments of any kind. If, in OCM's opinion, adverse impacts to coastal resources will occur during construction, maintenance and/or operation of a proposed activity, Alternatives and Justification Analyses will be required. The level of detail needed in the Analyses is dependent on whether the activity is maintenance of existing features, expansion of existing features or installation of new features. Please note that a feasibility study done during the course of project development can be submitted as the Alternatives and Justification Analyses. If a feasibility study has not been done, the below information will assist in the development of Alternatives and Justification Analyses. OCM encourages applicants to avoid adverse impacts to coastal resources to the maximum extent practicable and will provide assistance with identifying alternate sites, minimizing impacts and developing a Justification Analysis.

Maintenance of Existing Levees

Maintenance of existing levees includes re-establishing original design/construction specifications, repair of breaches and maintenance/placement of erosion control measures on currently existing levee features. If, in OCM's opinion, adverse impacts to coastal resources may occur from proposed maintenance activities, brief Alternatives and Justification Analyses will be required. The information required in the analyses is dependent on the nature of the maintenance activity and the extent of resource impacts.

Alternatives Analysis

OCM recognizes that maintenance activities are site-specific therefore an Alternatives Analysis for maintenance activities need not address alternate sites for performing the activity. The analysis instead should address methods and equipment to be used to perform the maintenance activity, the access route to the maintenance site, the size of the work area around the maintenance site and the siting of staging area(s) that minimize adverse impacts to coastal resources to the maximum extent practicable. Only those aspects of the proposed maintenance activity that result in adverse impacts to coastal resources need be addressed. The analysis can take the form of a brief narrative that identifies all practical options for performing the work and siting the staging areas.

Method(s) and Equipment

OCM understands that the methods and equipment used to perform the maintenance activity may be limited by the type of activity to be done. If the methods and/or equipment used to perform the maintenance activity will result in adverse impacts to coastal resources, and options exist, the Alternatives Analysis should include:

1. An explanation of the method(s) and equipment to be used to access the site and perform the maintenance work, including source of fill. The narrative should identify and discuss all practical options for performing the work, including the use of hauled in fill in lieu of fill excavated on site, and explain why each option was eliminated or chosen. If using economics as a deciding factor, provide cost comparisons of hauled in fill versus fill excavated on site for all options considered.
2. An explanation of any limiting factors and special equipment requirements.

Access

Access to the repair site should be selected to minimize adverse impacts to coastal resources. If adverse impacts to coastal resources will occur during access, the above narrative should include:

3. A map showing location, length and width of proposed and alternate access routes considered. This can be displayed on the project vicinity map or plan view plat.
4. An explanation of why each route was eliminated or chosen. Routes should be compared using the same criteria and should include a consideration of coastal resource impacts. Access equipment identified in #1 above should be route appropriate and should be selected to minimize adverse impacts.

Staging and Work Areas

The staging and work area(s) needed to perform the maintenance activities should be of the minimum size necessary to safely store and access equipment and perform the maintenance activity. The staging area should be located on a site that avoids adverse impacts to coastal resources. If coastal resources will be impacted adversely by staging and/or work areas, the above narrative should include:

5. A discussion of all practical staging area locations and an explanation of why each was eliminated or chosen. The narrative also should explain the need for the size(s) of the staging and work area(s), any limitations that may be present on site and any special equipment requirements. Maps, illustrations and site layout plans may helpful in demonstrating space requirements and limitations.

Justification Analysis

The Justification Analysis for maintenance activities should be a narrative that explains the nature and extent of the proposed maintenance work and why the maintenance work is required (i.e. identify the consequences of not performing the maintenance activities).

Expansion of Existing Levees

Expansion of existing levees includes raising and widening of currently existing levee features and re-establishing substandard levees to previous or expanded design grades. Expansion

activities that have adverse impacts on coastal resources will require Alternatives and Justification Analyses.

Alternatives Analysis

OCM recognizes that existing levee expansion activities are limited to the location of the existing levee therefore an Alternatives Analysis need not address alternate alignments. However alternatives still exist, such as shifting the centerline to avoid or minimize impacts to coastal resources and raising or relocating existing structures in the protected area to eliminate the need for expanding the levee. The Alternatives Analysis should address the methods and equipment to be used to perform the expansion activity, the method of access to the expansion site, the size and location of the associated work area around the expansion site and other options for protecting structures that minimize adverse impacts to coastal resources to the maximum extent practicable. Only those aspects of the proposed expansion activity that result in adverse impacts to coastal resources need be addressed. The analysis can take the form of a brief narrative that identifies all practical options for performing the work and siting the staging areas.

Method(s) and Equipment

OCM understands that the methods and equipment used to perform the expansion activity may be limited. If the methods and/or equipment used to perform the maintenance activity will result in adverse impacts to coastal resources, and options exist, the Alternatives Analysis should include:

1. An explanation of the method(s) and equipment to be used to access the site and perform the expansion work, including the source of any fill material used. The narrative should identify and discuss all practical options for performing the work, including the use of hauled in materials in lieu of material excavated on site, and explain why each option was eliminated or chosen. If using economics as a deciding factor, provide cost comparisons of hauled in fill versus fill excavated on site for all options considered.
2. An explanation of any limiting factors and special equipment requirements.

Access

Access to the expansion site should be selected to minimize adverse impacts to coastal resources. If adverse impacts to coastal resources will occur during access, the above narrative should include:

3. A map showing location, length and width of proposed and alternate access routes considered. This can be displayed on the project vicinity map or plan view plat.
4. An explanation of why each route was eliminated or chosen. Routes should be compared using the same criteria and should include a consideration of coastal resource impacts. Access equipment identified in #1 above should be selected to minimize adverse impacts.

Staging and Work Areas

The staging and work area(s) needed to perform the expansion activities should be of the minimum size necessary to safely store and access equipment and perform the expansion activities. The staging area should be located on a site that avoids adverse impacts to coastal resources. If coastal resources will be impacted adversely by staging and/or work areas, the above narrative should include:

5. A discussion of all practical staging area locations and an explanation of why each was eliminated or chosen. The narrative also should explain the need for the size(s) of the staging and work area(s), any limitations that may be present on site and any special equipment requirements. Maps, illustrations and site layout plans may helpful in demonstrating space requirements and limitations.

Other Options

Other options should be considered in lieu of expansion activities that adversely impact coastal resources. For example, it may be feasible and more cost effective to move or elevate structures in the protected area to reduce or eliminate the risk of flooding. An Alternatives Analysis for expansion activities that may result in adverse impacts to coastal resources should address these options. The analysis can be a narrative that includes:

6. The type of structures and number of each type of structure in the protected area.
7. A comparison of costs for levee expansion activities versus relocating or elevating protected structures. The cost of the expansion activities should include the frequency and cost of anticipated future levee maintenance work.

Justification Analysis

The Justification Analysis should clearly demonstrate a public need and/or demand for the proposed levee expansion. The analysis should include data that identifies the entire area to be affected; the number and type (house, business, church, etc.) of structures located within that area; the current water flow patterns into and out of that area; and the frequency and severity of historic flooding events in that area. The Justification Analysis can take the form of the feasibility study done during the normal course of project planning and should be provided in its entirety. If a feasibility study has not been done, please refer to the outline for a Justification Analysis in the New Levee section below.

New Levees

New levee features include the construction of previously non-existent levees and the lengthening of existing levees into previously non-leveed areas. If, in OCM's opinion, adverse impacts to coastal resources may occur during or after construction, Alternatives and Justification Analyses will be required. Please note that a feasibility study done during the course of project planning can be submitted as the Alternatives and Justification Analyses.

Alternatives Analysis

Every effort should be made to site levees such that adverse impacts to coastal resources are avoided or minimized to the maximum extent practicable. Ideally, levees should be located on the non-wetland side of the wetland/non-wetland interface. Consideration must be given to using hauled in fill instead of excavating fill material from wetland areas.

The goal of an Alternatives Analysis is to find a route for the proposed levee which results in the least amount of adverse impact (both direct and indirect) to coastal resources while allowing the project to fulfill its main objective(s). The Alternatives Analysis provides an objective method of performing a fair and thorough consideration of feasible options for the location, construction, operation and maintenance of the proposed levee feature. OCM encourages applicants to utilize routes that avoid or minimize both direct and indirect adverse impacts to coastal resources to the maximum extent practicable. **Feasible routes** are defined as any route that can support the main objective(s) of the proposed development. Current aerial photography and/or specific knowledge of the area can be used to identify feasible routes. Project objective(s), surrounding land use, total project impact and type and extent of coastal resource impacts should be considered when selecting feasible alternative routes.

Documentation that clearly demonstrates that each route was compared equally and explains why each route was eliminated or chosen will be required. Documentation that supports the reasons for elimination should be included with the analysis. All alternate routes and the preferred route must be compared using, at a minimum, the factors identified below. If other factors not identified by OCM are used to compare sites, please define those factors and explain how they were used to evaluate each route. Table 1 can be used to determine the minimum range of alternatives that should be considered when developing an Alternatives Analysis.

Table 1 – Determining the Range of Alternatives that should be considered when proposing a new levee feature.

	Resource Impacts (% of total project impacts)		
Scope of Development	Low (<10%)	Med (10.01-30%)	High (>30.01%)
Small (one mile or less)	Category 1	Category 2	Category 3
Large (more than one mile)	Category 2/3*	Category 2/3*	Category 3

* If more than 10 acres of resource impact will occur, higher level of detail is required.

Coastal resources, particularly wetlands and coastal waters, which become isolated inside of the protected area must be included as adverse impacts. OCM recommends that culverts, or other water control structures, be inserted in the levee such that normal water exchange can be maintained during normal conditions. Otherwise, mitigation will be required for wetlands that become isolated in addition to mitigation required for direct impacts from the levee footprint.

A minimum of three (**Category 1**), five (**Category 2**) or seven (**Category 3**) alternate feasible routes must be considered. Each route should be compared using the same parameters and should, at a minimum, include the items listed below.

1. Define the project objective(s) and identify all of the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered. Identify the area(s) to which the proposed levee feature will provide protection.
2. Identify, on a map, each route considered. If less than the minimum number of routes specified above have been considered, please explain why and provide documentation demonstrating the efforts made to find alternate routes.
3. Describe each route considered. Include topography, water/wetland interface, effects on surface hydrology, habitat type(s) present and amount of impact to each, and cost. If access to the property is limited or unavailable, explain the limitations and provide any available information about the route using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit or restrict construction of the project.
4. Provide a narrative that explains the minimum necessary width of the proposed right-of-way. Include any regulatory or engineering requirements and site limitations that affect the width chosen. If material will be excavated on-site, include a comparison of using hauled in fill in lieu of excavating material on-site. Illustrations and site layout plans may helpful in demonstrating space requirements and limitations.
5. A no-build option also is an acceptable alternative. This option may include elevating or relocating structures currently existing in the area proposed for protection and must be addressed in the Alternatives Analysis. A no-build discussion should include the number and types of structures (homes, businesses, churches, etc.) affected and the estimated costs of raising or relocating those structures compared to the cost of construction and future maintenance of the proposed levee.
6. Provide a narrative explaining the reasons for the elimination or selection of each route. Please note that the factors used to compare each route should be identified and should be consistent among routes.

Justification Analysis

The Justification Analysis should clearly demonstrate a public need or demand for the proposed levee. The analysis should include data that identifies the entire area to be affected, the number and type (houses, businesses, churches, etc.) of structures located within that area; the current water flow patterns into and out of that area; and the frequency and severity of historic flooding events in that area. The most common form of Justification Analysis for new levees is the feasibility study done during the normal course of project planning and should be provided in its entirety. Hydrology studies may be required depending on the size of the area to be affected by the levee. If no formal feasibility studies have been done, Table 2 can be used to determine the level of detail required in the Justification Analysis. Please note that if the levee is part of the State of Louisiana's Master Plan for a Sustainable Coast no further justification will be required.

Table 2 – Determining the level of detail required in the Justification Analysis.

	Resource Impact (% of total impact)			
Size of Development	Low (<20%)	Med (20.01-70%)	High (>70.01%)	Surrounding Land Use †
Small (less than 1 mile)	S	S/M *	M	High (dense residential/commercial/industrial)
	S	S/M *	M	Moderate (light residential/commercial, agriculture)
	M	M	C	Low (no development)
Large (1 mile or more)	S	S/M **	M/C **	High
	S/M **	M/C **	M/C **	Moderate
	M/C **	C	C	Low

* If more than 2 acres of resource impact will occur, higher level of detail is required.
** If more than 10 acres of resource impact will occur, higher level of detail is required.
† Refers to the type and extent of the uses occurring on lands in the vicinity of the proposed development

Simple (S)

1. Provide a narrative that explains the need for the levee.
2. Identify the type and number of structures to be protected.
3. Provide a narrative and illustrations that clearly explain and demonstrate the existing and proposed water flow patterns in the areas inside and outside of the proposed levee.

Please note that additional information may be required in response to comments received during the public notice period.

Moderate (M)

Provide information for 1-3 above, plus:

4. If coastal resources (mainly vegetated wetlands) will be isolated from coastal influences by impoundment within the protected area, explain why this impoundment cannot be avoided (impoundment can be avoided by building at the wetland/non-wetland interface and/or by using water control structures to maintain normal water flow patterns during non-flood events).
5. Include in #1 above historic information related to past flooding events and explain how the levee will prevent future flooding events.
6. Include in #2 above any planned or projected future development.
7. Provide population trend data for the last 10 years in the area that is to be protected.

Please note that additional information may be required in response to comments received during the public notice period.

Complex (C)

8. Provide a formal feasibility study that, at a minimum, addresses items 1-7 above.
Please note that the feasibility study must include consideration of no-build alternatives.
9. Provide a pre- and post-construction hydrology modeling study.

Marinas

Introduction

OCM defines **marinas** as any type of development focused on providing water access and docking services to the boating community. **Marina amenities** include fueling stations, pump-out stations, wash stations, ice houses, seafood processing facilities (including fish cleaning stations), stores, bait shops, restaurants, lodging, etc. Shipyards and other exclusive retail/service type facilities such as boat retail and/or repair are not considered marinas for the purposes of this guide (see the Commercial or Industrial Alternatives and Justification Analyses Guides for these types of developments). Marinas typically require Alternatives and Justification Analyses when, in OCM's opinion, adverse impacts to coastal resources may occur during construction and/or operation of the marina facility.

Secondary impacts that may be necessary but fall outside the scope of the proposed development also must be considered as part of the overall development project. Secondary impacts include, but are not limited to, the construction of power, water, sewer, cable, internet and telephone lines as well as roads or access channels which are located outside of the footprint of the development site but are necessary to connect the development to existing infrastructure. These secondary impacts may be permitted separately, but because they are dependent on the development project and vice versa, the potential impacts associated with them must be evaluated as part of the whole project.

Because the level of detail required in the Justification Analysis depends largely on the type and level of surrounding land use and the type and level of coastal resource impacts, **alternative sites should be addressed first**. All feasible sites, as defined below, should be considered and the least damaging site selected as the preferred site. Once the site has been selected, justification of the project should be prepared for that site. Please keep in mind that the type of information and level of detail required for the Justification and Drainage Analyses, as requested by the OCM Permit Analyst, are dependent on the level of resource impact, level of surrounding land use and the size of the development. These parameters may change depending on the location, scope and configuration of the development ultimately determined to be the least damaging. Please check with your OCM Permit Analyst to determine if the level of detail originally requested still is required if a less damaging alternate site is selected for development. OCM encourages potential marina applicants to hold pre-application coordination meetings with the regulatory and resource agencies. These meetings can be used to identify potential alternate sites, outline information that should be included in the Justification Analyses, determine the need and level of detail required for a Drainage Analysis and identify potential coastal hazards that will need to be addressed. To arrange a pre-application meeting, please contact our office at OCMinfo@la.gov or 800-267-4019.

If a marina is proposed in combination with a residential development, independent Alternatives and Justification Analyses will be required for the two types of developments (see Residential Developments guide for the subdivision portion of the development). Marina amenities likewise will require independent analyses using the Commercial Alternatives and Justification Analyses guide. A single comprehensive analysis is acceptable if each proposed feature is addressed independently.

Maintenance of Existing Marinas

Maintenance of existing facilities includes activities such as maintenance dredging of existing slips, canals and channels and the disposal of the dredged material; repair and/or replacement of existing bulkheading, mooring structures, docks, piers and wharves; and repair or replacement of existing buildings, roads, parking areas, storage areas and staging areas within the existing facility. Please note that in some cases, normal repairs and the rehabilitation, replacement or maintenance of existing structures do not require Coastal Use Permit provided that:

6. the structure or work was lawfully in existence, currently serviceable, and in active use during the year preceding the repair, replacement or maintenance; and
7. the repair or maintenance does not result in an encroachment into a wetland area greater than that of the previous structure or work; and
8. the repair or maintenance does not involve dredge (the removal by excavation or any other means of native material, including soil, sand, mud, clay and semisolid sediment, regardless of whether the material supports or is supporting vegetation, from any lands or water bottoms in the coastal zone of Louisiana) or fill activities; and
9. the repair or maintenance does not result in a structure or facility that is significantly different in magnitude or function from the original.
10. the activity is not located in vegetated wetlands (emergent, submergent or forested); within one-quarter ($\frac{1}{4}$) mile of a barrier island; or on a chenier, barrier beach, dune, salt dome or other similar isolated, raised landform.

Maintenance activities that do not qualify for the above exemption will require a Coastal Use Permit and if, in OCM's opinion, have adverse impacts on coastal resources, will require brief Alternatives and Justification Analyses as outlined below. Please note that an exemption determination from OCM is exclusive to OCM and does not relieve the applicant from obtaining other local, state or federal permits, as required by law.

Alternatives Analysis

OCM recognizes that maintenance activities have a limited range of alternatives, therefore the Alternatives Analysis need not address alternate sites. The Analysis instead should address alternate methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should be a narrative that includes an explanation of the nature and objectives of the proposed maintenance activity(ies); an identification and discussion of any available feasible options for the proposed activity that minimize adverse impacts to coastal resources; and an explanation of why less damaging feasible options were not selected.

Justification Analysis

The Justification Analysis should be a narrative that clearly explains the reason(s) for the proposed activity(ies) and the consequences of not implementing the proposed activity(ies).

Expansion of Existing Marinas

Expansion of existing facilities includes extension and/or widening of existing slips, canals and channels; excavation of new slips, canals and channels; expansion of existing infrastructure (roads, utilities, bulkheading); expansion of existing docking or vessel storage facilities; and expansion of existing parking, staging, storage, and/or office areas. Expansion activities that, in OCM's opinion, have adverse impacts on coastal resources will require Alternatives and Justification Analyses as outlined below.

Alternatives Analysis

As with maintenance of existing facilities, OCM recognizes that expansion activities have a limited range of alternatives therefore the Alternatives Analysis need not address alternate sites not adjacent to existing marina property unless separation from existing facilities is not precluded logically. The Alternatives Analysis instead should address alternate locations surrounding existing marina property as well as methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should include the following:

4. A narrative explaining the project objective(s) and identifying the proposed features required to meet the objective(s). The narrative also should identify any project objectives or features that may limit the range of alternatives to be considered.
5. A description of each location considered. Include general topography , water/wetland features, habitat type(s) present, if known, and estimate of impact to each.
6. A narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Justification Analysis

The Justification Analysis for marina expansion activities must demonstrate the need for the enhanced goods and/or services to be provided by the expansion. The Analysis should include a narrative explaining the enhanced goods and/or services to be provided by the expansion and the consequences of not implementing the proposed expansion.

New Marinas

Alternatives Analysis

The goal of an Alternatives Analysis is to perform a fair and thorough consideration of feasible alternative locations for a proposed coastal use thereby ensuring that the site selected will result in the least amount of adverse impact to coastal resources. OCM encourages applicants to utilize upland and/or previously developed areas in an effort to avoid or minimize both direct and indirect adverse impacts to coastal resources. If upland or previously developed land is not being utilized, an Alternatives Analysis will be required. The availability and capacity of existing infrastructure such as utilities, sewerage, community services, etc. also must be addressed (are there existing roads and/or utilities or will new access and/or utilities be required).

Marinas, by definition, must be located on or near water in order to serve their primary function and therefore are considered to be coastal water dependent uses when located within the Coastal Zone of Louisiana. **Feasible sites** for marinas should include parcels of land within the general vicinity of the proposed development area (+/- 1 hour drive from proposed site, within same Parish, near preferred features, etc.) that have, *or can be reasonably provided with*, water access and can support the main objective(s) of the development. Project objective(s), surrounding land use, total project impact, secondary impacts and type and extent of coastal resource impacts should be considered when selecting feasible alternative sites. Ownership of a parcel of land is NOT adequate justification for selecting that site over other, less damaging sites. However since site purchase is a large part of development costs, ownership of a parcel of land can affect the economics of a project such that purchasing another parcel of land would make a proposed coastal use economically infeasible to a reasonably financed applicant. The applicant will need to provide documentation of both project cost differentials and applicant/project financing that clearly demonstrates that purchase of additional land will make the proposed coastal use economically infeasible.

Feasible sites can be identified using current aerial photography. Landowners can be identified through clerk of court records and contacted to determine availability of the land for purchase. Local newspapers also provide a source of available real estate offerings. A drive-by search for lots posted for sale in the general development vicinity also can be an effective method of finding available sites. Several websites offer listings of large tracts of land (see "Available Sources" below). Multiple Listing Real Estate Searches (MLS) also can be used to determine the availability of property in the development area. MLS results provided for site identification purposes must include the parameters used for the search. The Alternatives Analysis should include a discussion of all sites considered and rejected. If no alternate sites can be identified, documentation demonstrating such (letters of refusal from landowners to sell property, written chronology/summary of attempts to contact landowners, MLS resulting in no matches - include search parameters and full results; aerial photos showing no available undeveloped land, etc.) must be provided.

Documentation that clearly demonstrates that each parcel was compared equally and explains why less damaging parcels were eliminated will be required. Documentation that supports the reasons for elimination should be included with the analysis. Table 1 can be used to determine the minimum range of alternatives and level of detail that should be considered when developing an Alternatives Analysis.

Table 1 – Determining the Range of Alternatives that should be considered and the level of detail required in the Justification Analysis when proposing a marina development. Resource Impacts refers to coastal resource impacts as a percentage of total project impact.

Scope of Development	Resource Impacts (%) of total project impact)		
	Low (<10%)	Med (10.01-30%)	High (>30.01%)
Small boat launch, pier/wharf, bait shop/store/diner, parking)	Category 1	Category 2	Category 2/3*
Large (any development that includes on-site vessel storage and/or overnight accommodations)	Category 2/3*	Category 2/3*	Category 3

* If more than 5 acres of resource impact will occur, higher level of detail is required.

A minimum of two (**Category 1**), three (**Category 2**) or five (**Category 3**) alternate feasible sites must be considered. Each site should be compared using the same parameters and should, at a minimum, include the items listed below.

1. Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered.
2. Identify, on a map, the location of each site considered for development. If less than the minimum number of site, as specified above, have been considered, please explain why and provide documentation demonstrating the efforts taken to find alternate sites.
3. Describe each site considered. Include parcel size relative to development size, topography, water/wetland features, habitat type(s) present and amount of impact to each. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the site using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.
4. Identify the availability and capacity of existing infrastructure (roads, utilities, water, sewer, etc.). Describe any new infrastructure required (excluding tie-in from individual units to existing infrastructure).
5. Describe the surrounding land use within one-quarter (1/4) mile (**Category 1**), one-half (1/2) mile (**Category 2**) or one (1) mile (**Category 3**) of each site considered. Include type and extent of existing use and any planned future uses, if known.
6. Identify the current zoning of the site and indicate if any zoning variances will be required prior to development.
7. Explain how the use will affect existing infrastructure, including evacuation and identify any additional permits required (e.g. DOTD driveway permit). Describe any secondary infrastructure (excluding tie-in from individual units) that may be required to service the development. If known, include location and/or route of the needed infrastructure and type and extent of impacts associated with installation of that infrastructure.
8. Provide a narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Once the least damaging feasible site has been identified, alternate configurations/methods and/or reduction in scope should be considered in an attempt to avoid or minimize adverse impacts to coastal resources on the selected site. Be aware that some parishes and municipalities, depending on the size of the development, require set-asides for green space/park/recreation areas and possibly detention or retention ponds. These requirements for set-asides should be taken into consideration when selecting a site and configuring the development.

Justification Analysis

Once adverse impacts have been avoided to the maximum extent practicable through the Alternatives Analysis process outlined above, justification for the project at the selected site must be demonstrated. The goal of a Justification Analysis is to ensure that there is a public need and demand for the goods and/or services to be provided by the development. The below items must be addressed when developing a Justification Analysis for marina developments. Please note that a market analysis done for other reasons, such as to secure financial backing, can be used as the Justification Analysis if the below information is addressed within that analysis. Table 2 can be used to determine the level of detail required in the Justification Analysis.

Table 2 – Determining the level of detail required in the Justification Analysis.

	Resource Impact (% of total impact)			
Size of Development	Low (≤20%)	Med (20.01-70%)	High (>70.01%)	Surrounding Land Use †
Small boat launch, pier/wharf, bait shop/store/diner, parking)	S	S/M *	M	High (dense residential/commercial/industrial)
	S	S/M *	M	Moderate (light residential/commercial, agriculture)
	S	M	M	Low (no development)
Large (any development that includes on-site vessel storage, overnight accommodations and/or other marina amenities)	S	S/M **	M/C **	High
	S/M **	M/C **	M/C **	Moderate
	M/C **	C	C	Low

* If more than 1 acre of resource impact will occur, higher level of detail is required.
** If more than 5 acres of resource impact will occur, higher level of detail is required.
† Refers to the type and extent of the uses occurring on lands in the vicinity of the proposed development

Simple Justification (S)

1. State the objective(s) of the coastal use (what goods and/or services will the development provide) and identify to what geographic area the development will provide access. Include in the discussion existing options for boating access to the geographic area of interest.
2. Identify all competitor marinas (those providing boating access to the same geographic area). Provide a narrative explaining the competitor marina's location relative to the geographic area to which boating access is proposed and include the capacity, vacancy and any identifiable limitations of each competitor marina.
3. Provide a narrative explaining how the proposed development will introduce or enhance existing availability of goods and/or services.

Moderate Justification (M)

Provide responses to 1-3 above plus:

4. Include a map showing the geographic area identified in #1 above to which the development will provide access. Identify on this map the location of any other similar facility (as identified in #2 above), and any other alternate access points to the target geographic area.

Complex Justification (C)

Provide responses to 1-4 above plus:

Provide narrative explaining why there is a public demand for the proposed on-site vessel storage and/or overnight accommodations at the selected location. Include in your discussion the availability and capacity of similar services within the general vicinity of the proposed development. If other marina amenities are proposed please prepare the appropriate justification as described in the Commercial Development Alternatives and Justification Analyses Guide.

Oil & Gas Facilities

Introduction

Oil and Gas facilities located within the coastal zone of Louisiana include (for the purposes of this guide) well sites, production facilities and storage facilities. OCM is responsible for ensuring that energy development is supported but that unavoidable adverse impacts to coastal resources are minimized to the maximum extent practicable. This guide addresses the Alternatives and Justification Analyses required for well sites, production facilities and storage facilities. Please refer to the Pipelines Guide for pipeline and pipeline related structure installation and the Industrial Guide for refinery development.

Well Sites

Well sites are located where the potential exists for extraction of oil, gas or other minerals from underground formations. This type of development is very common in the coastal zone of Louisiana and is subject to Coastal Use Permitting by OCM. The LA Department of Natural Resources (LDNR) Office of Conservation (OC) permits the drilling of the well. OCM permits those activities required to access the site and any site improvements necessary to access and/or facilitate drilling activities. Exploration of mineral resources for the purpose of energy production has been determined to be an issue of national significance and therefore considered justified. No further documentation to demonstrate public benefits is required.

An Alternative Analysis is required and is accomplished via the established Geologic Review (GR) process. Geologic Review will be required when a well site and/or access to that well site adversely impacts 0.25 or more acres of vegetated wetlands; adversely impacts other coastal resources; or includes project dimensions in excess of OCM established standards (see OCM Established Standards section below). Please note that the Louisiana Department of Wildlife and Fisheries (LDWF) can request a GR meeting for projects on oyster seed grounds if, in their opinion, impacts to oyster resources can be avoided through an alternatives review. Recommendations for avoiding or minimizing coastal resource impacts will be made at the meeting. It is then up to the applicant to adopt those recommendations or provide justification for an alternate plan. Follow-up GR meetings may be required depending on the recommendations made at the initial GR meeting. Impacts related to coastal hazards such as hurricanes, storm surge and flooding also should be addressed in order to minimize potential detrimental releases of pollutants.

Alternatives Analysis (Geologic Review Process)

The **Geologic Review** process involves a meeting at OCM's Baton Rouge office that involves structured question and answer sessions regarding the geology, engineering and siting of the proposed well. GR meetings can be held during the course of processing a Coastal Use Permit application or as a pre-application coordination effort. (To arrange a pre-application meeting, please contact our office at OCMinfo@la.gov or 800-267-4019.) Information is reviewed by an OCM contracted geology and engineering expert to determine the limitations of the drilling program and the range of alternative surface locations that could be used and still allow the objectives of the well to be achieved. The US Army Corps of Engineers (COE) and various resource agencies (LDWF, the Louisiana Department of Environmental Quality (DEQ),

the Louisiana Coastal Protection and Restoration Authority (CPRA), the Louisiana Department of Culture, Recreation and Tourism (CRT), the US Fish and Wildlife Service (FWS), the National Oceanic and Atmospheric Administration (NOAA) Fisheries and the US Environmental Protection Agency (EPA)) are invited to this meeting and are given the opportunity to express their views regarding the siting of the well. The applicant should be represented by a person or persons familiar with the geology of the area to be explored and the engineering design of the proposed well. The following information is required for a complete Geologic Review. Please note that missing or incomplete information may result in an incomplete review and require a follow-up meeting in order to present the missing or incomplete information.

General Information

- Name of the applicant
- Name(s) of operator(s), if not the applicant, including partners
- Name and location of the well
- Accurate, detailed location plats (normally these are the plats sent to the appropriate agencies before scheduling the meeting)
- Nature of the application (i.e. land/water location/access, dredging, filling, directional well, etc.)
- Dimensions of any dredging or filling
- Names and locations of any other permits held by the applicant in the area
- Aerial and/or ground photographs and/or imagery of the proposed site and access route(s)
- Status and/or soundings of proposed access routes
- Field trip data and site surveys that provide data about the proposed location; often the inclusion of site photography can avoid the necessity of a field trip to the site and the associated costs and delays.
- Future Plans - The best estimate of the applicant's future plans in the event of both the success and the failure of the well(s) in question. Include the need for possible pipelines and production facilities
- Economic Data - The overall project cost of the various available options to be considered can be a limiting factor for selection. If cost is a selection factor driving the choice of alternatives, cost comparisons (Authorizations for Expenditure, or AFEs) for all of the options considered will be required. The AFEs should include a detailed cost breakdown of the entire project for each option considered. These AFEs will be forwarded to our LGS contractor for review and comment. While not usually needed, detailed dry hole AFEs for the well as proposed and as suggested during the GR meeting may be required. The need for AFEs will be determined during the GR meeting and can be provided at a later date.
- Lease maps and lease information
- Spacing and unitization constraints
- Contractual obligations
- Any constraints (landowner restrictions, pipelines, houses, ditches, etc.) that may affect the proposed location

Geology Information

- Number of significant objectives
- Depth and expected contents
- Structure maps of all significant horizons
- Well logs of nearby wells (preferably correlated ones)
- Cross-sections relevant to the area
- Fault cuts
- Fault plane maps
- Isopach maps
- All significant seismic lines (with interpretations)
- Gas/oil/water contacts
- Shows and production of nearby wells in the same producing horizon
- The well's surface and bottomhole locations should be shown on all maps and the well path should be projected onto all cross-sections and seismic lines.

Engineering Information

- Total Vertical Depth (TVD) of the well
- Proposed mud program
- Proposed casing program
- Presence of depleted zones their depths and pressure readings
- Presence of overpressured zones and the depth(s) they begin
- Formation Pressure Gradient (FPG) and Formation Fracture Gradient (FFG) plots of nearby wells
- Well histories of wells in the area
- Directional history in the area
- Documentation to back up the presented well histories (i.e. mud recaps, drilling time, bit records, etc.).

All data, maps, cross-sections, aerial photos, images, and charts must be legible, clearly marked, and interpreted where appropriate. The proposed location's surface and bottomhole location (if different) should be clearly marked on each map, cross-section, seismic line, aerial photo, and image and each item should have its scale and orientation clearly shown. Details of ring levees, access roads, excavation and dredged material placement should be clearly shown. All plats and maps should be the same scale, if possible. Please be advised that all data presented at the meeting and left with OCM will be entered into a public record. Any proprietary information deemed necessary for complete Geologic Review should be presented at the meeting but not officially submitted to OCM for inclusion in the public record.

OCM Established Standards

OCM administers a series of General Permits (GPs) that cover a variety of commonly occurring activities that have predictable impacts. Development of these GPs, many of which are oil and gas related, have helped establish typical standard practices for the preparation of oil and gas exploration sites in water and on land. Projects that meet the specified criteria within the appropriate GP do not require public notice and generally experience expedited review and approval. The OCM GPs related to oil and gas exploration sites are GPs 5, 7, 10, 12, 15, 16, 19, 21, 25 and 26 and can be viewed at

<http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=728>. Oil and gas exploration projects that do not meet the applicable GP criteria may require Geologic Review to determine the need for the deviation from standard practices.

Water Location

Water locations involve the installation of a drilling barge, pile clusters, and a well protection structure; and possibly excavation for access. GPs 7, 10, 12, 15, 16, 19, 21 and 26 and apply to water locations and outline the dimensions of slips, channels, canals and dredged material placement. In some cases, volume of material also is limited. In general, canals should be no wider than 70 feet and no deeper than 8 feet. Slips should be no more than 345 feet long by 160 feet wide by 8 feet deep with a 90 feet by 90 feet wing. Expansion of an existing slip cannot exceed 375 feet long by 120 feet wide by 8 feet deep with a 60 feet by 60 feet wing. Dredged material must be disposed of in an approved manner or used beneficially. In some cases, canal/channel length and/or dredged material placement are limited.

Barge foundation pads using approved materials may be used and should not exceed 250 feet long by 225 feet wide by 10 feet high or use more than 10,000 cubic yards of material. If the waterbottom elevation is less than -8 NGVD, the foundation pad cannot extend more than 1 foot above the waterbottom.

Land Location

Land locations involve the construction of an earthen ring levee around the proposed well site. GP 5, 19 and 25 applies to ring levees and outlines the dimensions of the ring levee and the access road, if needed. In general, ring levees should be no larger than 300 feet by 300 feet, or 90,000 square feet. Fill material must be clean and excavated from within the ring levee or hauled in from offsite.

Access roads should be no wider than 40 feet at the base (toe to toe) and no more than 5 feet above mean sea level, or three (3) feet above adjacent ground, whichever is less. Borrow pits for road fill shall be a maximum of 300 feet long by 30 feet wide (at surface) with the lip of the borrow pit no more than 20 feet from the toe of the road bed. Borrow pits should be staggered on alternating sides of the road when practical, and when not practical shall have 50 foot gaps between pits. Culverts shall be installed through the road bed at appropriate intervals to handle surface water flow but should be installed at least every 250 feet and at the crossing of any creeks, streams, sloughs, and other water bodies. Culverts shall provide a minimum of 452 square inches of cross-sectional flow area, but must be of sufficient size to convey normal flows. Culverts shall be installed at elevations to approximate pre-project flow conditions and shall not be installed to promote the drainage of wetlands or to impede wetland flooding. At no time shall culverts be placed to connect one borrow pit to another.

Production and Above Ground Storage Facilities

Oil and gas related production facilities addressed in this guide include tank batteries, production barges, heater platforms, separator platforms, flare platforms and compressor stations. Production of mineral resources for the purpose of energy production has been

determined to be an issue of national significance and therefore considered justified. No further justification for production facilities is required.

An Alternatives Analysis is required when, in OCM's opinion, adverse impacts to coastal resources may occur and should include a review of all feasible sites within the field being produced. The goal of an alternatives analysis is to find a location for the proposed facility that results in the least amount of adverse impact to coastal resources while allowing the objectives of the project to be met. **Feasible sites** are defined as any parcel of land within the field being produced that can support the main objective(s) of the facility. Feasible sites can be identified using current aerial photography to find currently developed areas and contacting landowners to determine availability for purchase or lease. Local newspapers also provide a source of available real estate offerings. A drive-by search for parcels posted for sale or lease in the field to be produced also can be an effective method of finding available sites. Several websites offer listings of large tracts of land (see "Available Sources" below). Existing infrastructure (access roads, utilities) should be reviewed to determine if adequate to support the proposed facility. The route of potential pipelines also should be considered when selecting a production facility site. Impacts related to coastal hazards such as hurricanes, tornadoes, storm surge, flooding, sea level rise and subsidence also should be addressed in order to minimize potential detrimental releases of pollutants (see Drainage and Coastal Hazards guide for more information).

Alternatives Analysis

All feasible sites should be considered. OCM reserves the right to suggest consideration of other sites not identified by the applicant. The following information should be included in the Alternatives Analysis:

1. Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered, including anticipated future plans in the field that may limit the location of the facility.
2. Identify, on a map, the location of each site considered. If no available alternate sites were found, please explain why and provide documentation demonstrating the efforts taken to find alternate sites. If no efforts were undertaken to find alternate sites, provide an explanation of why not.
3. Describe each site considered. Include parcel size relative to project size, general topography and water/wetland features, habitat type(s) present, if known, and estimate of impact to each. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the site using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.
4. Identify the infrastructure needs of the facility and the availability and capacity of existing infrastructure (roads, utilities, water, sewer, etc.) at each site. Describe any new infrastructure required to service the facility

5. Describe the surrounding land use within one (1) mile of each site considered. Radius should extend from the outside boundaries of the proposed project. Include type and extent of existing use and any planned future uses, if known.
6. Provide a narrative explaining the reasons for the elimination of each site considered but not selected. Please note that the factors used to compare each site should be identified and should be consistent among sites.

OCM encourages applicants to hold pre-application consultation meetings with the regulatory and resource agencies in order to identify the least damaging feasible site for development of the production facility. To arrange a pre-application meeting, please contact our office at OCMinfo@la.gov or 800-267-4019.

Underground Storage Facilities

Oil & Gas storage facilities involve the long term storage of oil and gas products for the purpose of providing the Strategic National Petroleum Reserves. In coastal Louisiana, salt domes are the feature most commonly used for large scale storage of oil & gas products. The use of salt domes as storage facilities is regulated by the Federal Energy Regulatory Commission (FERC) and the LA DNR Office of Conservation. OCM is not involved in the permitting of the salt dome for use as a storage facility. It is OCM's responsibility to minimize adverse impacts to coastal resources resulting from improvements needed to construct the injection well sites and the install the pipelines needed to service the facility. OCM also is responsible for reviewing the source and/or salinity of any surface or ground water used to solution mine the dome to facilitate storage capabilities, and the fate of any waste water generated during solution mining. Storage of energy resources has been determined to be an issue of national significance and therefore considered justified. No further justification for the need for large scale oil & gas storage facilities is required.

An Alternative Site Analysis, however, is required for the siting of well locations and the routing of pipelines and should follow the recommendations made in the applicable Alternatives and Justification Analyses Guides. A Geologic Review meeting may be necessary for the siting of the wells. OCM encourages applicants to hold pre-application consultation meetings with the regulatory and resource agencies in order to identify the least damaging feasible options for development of the storage facility. To arrange a pre-application meeting, please contact our office at OCMinfo@la.gov or 800-267-4019.

Pipelines and Flowlines

Introduction

Pipelines and flowlines (hereafter referred to as “lines”) are linear features installed for the purpose of transporting materials from one location to another. Lines can be of any diameter and length and any type of liquid or gaseous material can be transported within them. Adverse impacts to coastal resources should be avoided when selecting a route. If it is not possible to avoid the coastal resource(s), the method of installation which minimizes adverse impact to these resources should be utilized. If, in OCM’s opinion, adverse impacts to coastal resources may occur during installation and/or operation of a line, Alternatives and Justification Analyses will be required.

This guide focuses on those aspects of a pipeline project for which options should be available: route and method of installation. The Alternatives and Justification Analyses should address both of these aspects and discuss the efforts undertaken to select the route, method of installation and work space size that result in the least possible amount of damage to coastal resources while achieving project objectives. Because options for existing line installation differ from options for new line installation, each will be presented separately.

Maintenance of Existing Lines

Maintenance of existing lines includes the installation of clamps or other leak prevention devices, replacement of all or portions of existing lines, replacement of support structures, replacement of erosion control or protection measures, replacement of warning signage and trimming of existing cleared rights-of-way. Maintenance activities that, in OCM’s opinion, may result in adverse impacts to coastal resources will require a brief Alternatives and Justification Analyses. The information required is dependent on the nature of the maintenance activity and is outlined in the sections below.

Alternatives Analysis

Because maintenance activities occur on existing lines and work sites are determined by the location and type of maintenance activities required, an Alternative Sites Analysis is not required. However, since access to the site and method of repair are flexible, the Alternatives Analysis should include a discussion of the options available to accomplish the proposed activity while minimizing adverse impacts to coastal resources. Options can include different access routes to the work site(s) and different methods of completing the activity that minimize adverse impacts to the maximum extent practicable.

Route

The Alternatives Analysis should address alternate routes that provide access to the work site and minimize adverse impacts to coastal resources. Traveling within the existing ROW or previously cleared areas to the work site is preferred over using or clearing new access points.

Method

The use of less-damaging equipment such as air boats or helicopters is preferred over marsh buggy use or excavation/clearing machinery for shorter access. If less-damaging equipment cannot be used, an explanation must be provided. Trench and spoil widths should be of the minimum size required to perform the activities safely. Work spaces around the maintenance size should be minimized to only that necessary to safely store and use the required equipment and materials.

Justification Analysis

A narrative explaining the need for the proposed activities should be provided. If new access or new clearing for access is required, a statement explaining the need for the new access should be provided.

New Line Installation

New line installation includes the installation of previously non-existent lines and the lengthening of existing lines. New lines may require detailed Alternatives and Justification Analyses if, in OCM's opinion, adverse impacts to coastal resources may occur during or after construction. Alternate routes and methods of installation that minimize adverse impacts to coastal resources to the maximum extent practicable should be considered during initial project development. Documentation of these efforts should be preserved for inclusion in an Alternatives Analysis if adverse impacts to coastal resources cannot be avoided.

Route

The point of beginning (POB) and the point of ending (POE) of a line usually are somewhat fixed and relocation may not be possible; however, the route the line follows from the POB to the POE can be adjusted. Efforts to select a route that avoids impacts to coastal resources should be taken first. If avoiding coastal resources is not possible, efforts to minimize adverse impacts to coastal resources should be taken. Existing line or utility corridors should be used whenever possible. Forested wetland habitats should be avoided to the maximum extent practicable. Alternate routes can be identified by coordinating with landowners who have historical knowledge of the property and by using current aerial photography.

Method of Installation

Methods of installation include laying the line on the surface, burying the line below the surface or horizontally directionally drilling the line. The method of installation can include the use of manpower (hand labor) and/or equipment such as marsh buggies, airboats, barges, tug boats, backhoes, bulldozers, plows, jet sleds, drilling units, etc. A combination of methods is acceptable and should be considered if using more than one method would minimize adverse impacts to coastal resources. Please note that lines typically must be buried a minimum of three (3) feet below the mudline in all navigable water bodies. To view the US Army Corps of Engineers general criteria for pipeline burial within the New Orleans District, please visit <http://www.mvn.usace.army.mil/ops/regulatory/Pipeline%20burial%20depth%20May%2031%202010.pdf>.

Lines laid on the surface

Smaller, intrastate lines can be laid on the surface of the ground/marsh/forest if the exposed line does not pose a risk to the public or violate state or federal requirements. This method can include transporting a pull rope across the surface and pulling the line from one point to another. The method of pull rope transportation can include walking, air boat and wheeled and/or tracked vehicles. The use of different types of equipment across marsh should be considered (i.e. marsh buggy versus air boat versus walking) to minimize impacts. Pushing the line across the surface and the use of pipe bents are acceptable. If working in forested habitat, snaking the line through the trees, with minimal tree removal, should be considered in lieu of clearing a right-of-way.

Buried Lines

Buried lines typically are installed a minimum of 3 to 4 feet below the waterbottom surface or ground surface and can be installed using handheld or sled-mounted jets, backhoes, draglines, plows or other mechanical excavation equipment. Marsh buggy or airboat mounted equipment should be considered in lieu of larger, more impacting equipment and manpower should be considered in lieu of the use of marsh buggies and air boats. Please note that OCM does not consider open trenching an acceptable method of installation for beach crossings or barrier island crossings.

Buried lines that cross banklines and shorelines must include bankline stabilization measures at the crossing unless adequate justification for not doing so is provided to OCM. **Bankline stabilization** is the placement of erosion control material at banklines that must be cut in order to bury a line. The material used can include additional dredged material, rip rap, gravel or other material that has been pre-approved by OCM. OCM requires the use of bankline stabilization material at all bankline crossings and encourages applicants to include these measures in their project plans. If the existing bankline is not breached, bankline stabilization measures are not required.

With the abundance of lines installed within coastal Louisiana, it may be necessary to cross an existing line during installation of a new line. These **line crossings** must be done in a manner that maintains the required depth of cover over the uppermost line and may require that new lines be installed beneath existing lines. Bracing material between the lines also may be required. Excavation necessary for typical crossings should be reduced to the minimum size necessary to safely install the line. Reasonable efforts must be taken to account for all line crossings during development of a pipeline installation project. Using OCM's SONRIS GIS interactive map, all known permitted pipelines are indicated and the number of crossings can be estimated.

The **construction right-of way** (ROW) of a line is the work space on either side of the line needed to install the line safely. If trenching a line, the width of the trench should be of minimum size. Typically lines less than 12 inches in diameter can be installed in trenches six feet wide or less at the top. Larger lines will require larger rights-of-way but should be reduced to the minimum size necessary to safely install the line. Excavated material generated during trench excavation should be stockpiled adjacent to the trench temporarily and used as backfill. Trenches should be backfilled immediately following line installation. If installing the line in water, the excavated material must be marked until such time as it is returned to the excavation trench. The footprint of stockpiled excavated material should minimized to the

maximum extent practicable and should be contained as much as possible in order to be available for use as backfill. Every effort should be made to work from and stockpile excavated material on the same side of the trench. Physical limitations on site, such as existing pipelines, power lines and other existing structures should be identified if affecting any aspect of the project. Soil data may be required if using soil conditions as a factor in trench and/or right-of-way width.

Horizontal Directional Drilling

Horizontal Directional Drilling (HDD), or boring, is a method of line installation across sensitive areas. The diameter of the line, the power of the drilling unit and the sediments through which the line will be installed all factor into the length over which a line can be drilled. Current industry standards demonstrate that lines up to 36" in diameter and/or 5,000' in length can be installed using this method. Surface disturbance from bore entry and exit workspaces and pipe backstring areas should be taken into consideration when assessing total project impacts. Bore entry and exit work spaces should be reduced to the minimum size necessary to safely install the line. Drilling in both directions from a single workspace is encouraged where possible. Backstrings should be laid on the surface or floated in open water where possible, however flotation ditches can be used if the need for such can be clearly demonstrated. Soil data may be required if using soil conditions as a limiting factor.

Alternatives Analysis

The Alternatives Analysis will be used to determine the least damaging feasible option for installation of the line. The Analysis should address both the route and the method of installation and should include all available options, or combinations of options, and the reasons for selection or elimination of each option. If access for onsite evaluation is not possible, use of aerial photography and habitat maps will suffice for estimate purposes.

Route

Provide a map showing the route of each alternative considered and a narrative explaining how the routes were compared and why some were eliminated. Include in the narrative a description of the habitats impacted and the estimated extent of the impacts to each habitat type for each route. If the landowner is limiting the route, provide a letter from the landowner stating such and explaining why the chosen route was selected. If unable to obtain a right-of-way for a less damaging route, provide documentation (letters of refusal, returned certified mail or other proof of unsuccessful attempts to contact the landowner, etc.) that demonstrates a good faith attempt to obtain the ROW.

Method of Installation

Provide a narrative explaining what methods of installation were considered and why they were eliminated. Include in the narrative, for each method of installation considered, a description of the habitats impacted and estimate of the extent of impacts to each habitat.

- If installing the line from the surface, include in the narrative an explanation of the need for the width of the proposed right-of-way.

- If using HDD to install the line, include in the narrative an explanation of the size of the entry and exit work areas. Site layout plans may be required in order to demonstrate the need for the size of the work areas requested.
- If soils are limiting factor, provide the relevant soil data and a narrative explaining the issue(s).
- If the landowner is limiting the method of installation, provide a letter from the landowner stating such and explaining why the limitation(s) is/are imposed.
- If equipment usage is an issue, include a work area layout plan and explanation of the space requirements from installation contractors.

Provide any additional documentation available to demonstrate identified limitations on the method of installation (site layout plan, description of physical limitations on site, etc.).

The overall project cost of the various available options to be considered can be a limiting factor for selection. If cost is a selection factor driving the choice of alternatives, cost comparisons (Authorizations for Expenditure, or AFEs) for all of the options considered will be required. The AFEs should include a detailed cost breakdown of the entire project for each option considered.

Justification Analysis

Because energy exploration and production has been determined to be an issue of national significance, lines which carry oil and gas exploration or production related products (including produced waters) do not require justification. Lines which deliver non-oil and gas exploration or production products such as CO₂, Sulfur, Xylene, etc. that are not related to oil and gas exploration or production require a Justification Analysis. The Justification Analysis should be a narrative that explains the need for the product being transported. The narrative should include a discussion of the existing availability of the product; how the product currently is being transported, if applicable; and current and/or projected demand for the product. If transporting a waste product from a facility, discuss the available options for disposal and why options not selected were eliminated.

Miscellaneous Line Features

Miscellaneous line features include tie-ins, meter stations, valve stations, and heater, separator and compressor platforms. Tie-ins for buried lines require some excavation in order to expose the lines to be connected. Meter stations and valve stations also require excavation in addition to a small permatized area. Platforms usually are elevated but may result in shading. Every effort should be made to locate miscellaneous line features in areas that avoid or minimize, to the maximum extent practicable, adverse impacts to coastal resources.

Alternate locations must be addressed, although OCM recognizes that the range of alternatives is limited to the route of existing lines. The Alternatives Analysis should address all alternate sites that result in the least amount of adverse impacts to coastal resources and explains why less damaging sites were eliminated. The Alternatives Analysis also should address the size of the site and explain the efforts made to reduce the site to the minimum necessary size. Platforms should be made of a material and/or installed at a height that allows

light to penetrate to the ground underneath the platform to reduce adverse impacts from shading.

Removal of Lines

If a line was installed under the authority of a Coastal Use Permit or other type of OCM authorization, then the line must be removed upon abandonment for the permitted use unless it can be demonstrated that removal was not required when the line was originally permitted. For the purposes of this guide, **abandonment** is defined as a line that has been out of service for the permitted use for more than 120 days. The Coastal Use Permit program began in August of 1980. By 1988, it had become apparent that abandoned lines posed a potential hazard to fishing gear and marine traffic. In response to this potential hazard, OCM implemented a policy that required removal of lines installed in open water and those laid on the surface of the marsh. It was determined that a blanket requirement for line removal was not practical from an environmental standpoint and that removal vs. abandonment would be reviewed on a case-by-case basis. Lines installed prior to 1980 were determined to be exempt from this criteria based on the exemption given to “uses or activities lawfully commenced or established prior to the implementation of the Coastal Use Permit process” (LAC 43, Part 1, Chapter 7, Subchapter C,§723.8.a). Lines installed after 1980 but prior to the policy change in 1988 may or may not require removal depending on OCM’s review of several factors.

An Alternatives Analysis is required for access to the site and the method of line removal and should address all available methods of line removal. OCM recognizes that alternatives for line removal are limited to the route on which the line was originally installed and does not expect a review of alternative routes for removal. Alternative methods for removal and access; however should be addressed and the estimated environmental impacts from each removal and access method should be investigated. Abandonment can be a potential option in this case, however, if abandonment of a line is requested, a Justification Analysis for abandonment must be provided to OCM.

Alternatives Analysis

An Alternatives Analysis for method of line removal is required and should address all available methods of line removal and should explain why each method would or would not be practicable. These methods include but are not limited to trenching, pulling and zippering. Each method is addressed separately below. Please keep in mind that, because removal is a requirement, the fact that some adverse impact may occur during removal does not eliminate automatically the need to remove a line. However, adverse coastal resource impacts resulting from access, removal or staging activities should be minimized to the maximum extent practicable. Please also note that the Louisiana Department of Wildlife and Fisheries (LDWF) typically requires removal of lines installed in oyster lease areas and oyster seed ground areas. Please check with them to determine if removal will be required. If a landowner objects to line removal, a letter from the landowner stating such and providing the reasons to leave the line in place should be provided.

Trenching

Trenching involves the excavation of a trench of appropriate width and length to expose the line for vertical removal. Trenching a line, including staging areas, should cause no more adverse environmental impact than installing the line. A detailed summary of estimated total project impacts by habitat type should be presented and efforts to minimize those impacts must be undertaken. A narrative should be provided that addresses work areas, staging areas, travel paths and excavated material placement along the pipeline route should be of minimum size and number necessary to safely accomplish the required activities. Whenever possible, material excavated from the trench should be deposited on the same side of the trench and within the same footprint as the access route and replaced immediately upon removal of the line.

Pulling

Pulling the line involves grabbing the line at one end and pulling it out of the substrate into which it was installed. This method typically involves work and staging areas at points of access to the line. Documentation demonstrating the reasons for not using this method of line removal (soil data, line condition data) must be included with the narrative.

Zippering

Zippering the line involves grabbing the line at one end and pulling it back onto itself out of the substrate into which it was installed. This method typically involves work and staging areas at only one end of the line and an access route along the line route for equipment travel while zippering. Documentation demonstrating the reasons for not using this method of line removal (soil data, line condition data) must be included with the narrative.

If other method(s) of line removal are used, an explanation of those methods must be included in the Alternatives Analysis.

Justification Analysis

The potential for adverse coastal resource impacts is not adequate justification for leaving a line in place. Lines installed prior to 1980 require no more justification than a statement regarding date of original installation. Lines installed after 1980 under the authority of an OCM authorization will require removal unless the OCM determines through its review that this activity should not be required. If an OCM authorization for line installation cannot be found and the line was installed after 1980, removal of the line is required.

Justification for not removing a line can be accomplished by stating the reasons for not removing the line and providing documentation to support the statement. If a line is installed in marsh or on land and the landowner(s) objects to removing the line, a letter **from each landowner** must accompany the request to abandon the line in place and should include the specific reason(s) why the landowner objects to line removal. OCM does not require removal of lines that are buried more than 5 feet below the ground, or the mudline if in water or marsh. Lines that are directionally bored typically are installed 5 feet or more below the ground or mudline and therefore usually do not require removal. If using this justification for not removing a line, depth of cover surveys, stamped by a professional engineer or land surveyor, must be provided to demonstrate the depth to which the line is installed, and substrate information should be provided to demonstrate that the line will not migrate to the surface.

For lines that require removal upon abandonment, OCM will, on a case-by-case basis, consider allowing lines to be temporarily taken out of service if there is a reasonable chance that the line will be used again in the future. A narrative explaining the reason(s) for leaving the line in place and the purpose, likelihood and timeframe of the line being reused must be presented with the request to temporarily leave a line in place. Information related to the age and condition of the line, depth of burial, movement of the line, erosion or scouring problems in the area and any permitted work performed on the line after installation should be presented in the Justification Analysis. Be advised that an OCM authorization to temporarily leave a line in place for future use will require that the applicant agree to the following:

1. The line(s) must be cleaned and clear of contaminants which includes oil, condensate and other petroleum products as well as other chemicals or contaminants.
2. The line(s) must remain buried with the amount of cover required for new construction at that location. This requires 3 feet of cover in any waterway and greater depth for those crossing below a navigable channel or fairway.
3. Permittee must agree to remove the line(s) or portions of the line(s), at the applicant's expense, should the line(s) come to have less than 3 feet of cover or become a hindrance to navigation or fisheries or if the pipeline(s)/flowline(s) interfere with any coastal restoration and/or public works projects in the area.
4. Permittee shall maintain liability for, and shall hold the State of Louisiana harmless for, the out-of-service line(s) for as long as the line(s) remain in place.
5. Permittee will perform a depth of burial survey at two-year intervals and after named storms in which the eye passes within 150 nautical miles of the pipeline location and provide a copy of the survey data to OCM upon completion.
6. Permittee will produce and deliver to OCM a monetary instrument or surety bond in sufficient amount to remove the pipeline and maintain said instrument until such time as the line is removed.
7. Permittee will sign a binding contractual agreement with OCM agreeing to the conditions above.

Ports

Introduction

OCM defines a **port** as an industrial type, water-based cargo transfer facility and recognizes that ports are an integral part of commerce in coastal Louisiana and the rest of the nation. The intent of the Louisiana Coastal Resources Program is to achieve a balance between development and resource conservation; therefore, port facilities within the coastal zone of Louisiana should, to the maximum extent practicable, avoid or minimize adverse impacts to coastal resources.

Some proposed port activities do not require a Coastal Use Permit (CUP), as outlined in the Maintenance of Existing Facilities section below. The CUP program is a “self-regulating” program meaning that a potential applicant can make the determination that a CUP will not be required. A written determination from our office is not required to perform the proposed activities. The downside of this, however, is that enforcement action can be taken if an activity undertaken without written OCM authorization is later determined by OCM to have required a Coastal Use Permit. For a written determination from OCM that a proposed activity does not require a CUP, OCM recommends submitting a Request for Determination (RFD) using the Joint Permit Application and stating the reason(s) why a CUP should not be required.

For proposed port development activities that require a CUP, Alternatives and Justification Analyses will be required when, in OCM’s opinion, adverse impacts to coastal resources may occur due to development and/or operation of the proposed facilities. The level of detail necessary in the required Analyses will depend largely on the size and scope of the proposed development and the type and extent of adverse impacts to coastal resources. Project objective, site description, surrounding land use, infrastructure needs (roads, railroads, channels and slips, powerlines, sewerage, water, drainage, telecommunications) proximity to needed services (suppliers, transportation, support personnel), the development’s effects on existing infrastructure and the environmental, social and economic benefits and impacts associated with the development must be addressed when preparing the required analyses. Proposed coastal uses involving new facility development will require more detailed analyses than proposed uses involving existing facility expansion and proposed uses involving existing facility expansion will require more detailed analyses than proposed uses involving existing facility maintenance. OCM encourages potential applicants to avoid adverse impacts to coastal resources to the maximum extent practicable and will provide assistance with identifying alternate sites and developing a Justification Analysis.

The goal of an Alternatives Analysis is to perform a fair and thorough consideration of feasible alternatives (configuration, scope, location) for a proposed port development, thereby ensuring that the site selected and methods of implementation will minimize adverse impacts to coastal resources to the maximum extent practicable. The goal of a Justification Analysis is to ensure that there is a public need and demand for the goods and/or services to be provided by the development.

The Louisiana Department of Transportation and Development (DOTD), Office of Multimodal Planning administers a Port Construction and Development Priority Program that provides eligible applicants with funding for new and existing port facility projects. The Port Program

requires that all applicants submit an economic justification for the proposed activities in order to determine the cost/benefit ratio and rate of return on investment. If DOTD established thresholds are met for both of these criteria, the project can be determined to be eligible for funding by DOTD. OCM and DOTD have executed a Memorandum of Understanding that outlines coordination between OCM and DOTD with regard to Alternatives and Justification Analysis. This MOU (Appendix B) allows OCM to use the results of DOTD review of economic justification for proposed port activities to reduce duplication of effort by the applicant.

DOTD Port Priority Program

Much of the documentation required by DOTD can be used by OCM for Justification Analysis purposes. However, the Alternatives and Justification Analyses reviews done by OCM can result in changes that may require additional engineering and design and/or affect the total cost of the project. Additionally, OCM is required to address beneficial use of dredged material (using dredged material to create wetlands) and compensatory mitigation for unavoidable adverse impacts to coastal resources, which also can add significantly to the total cost of the project. The trend in port projects has been to apply for funding first and regulatory permits second (i.e. after funding is obtained). In order to incorporate all changes necessitated by regulatory agency review, OCM and DOTD executed a Memorandum of Understanding (see attached) in which OCM and DOTD agree to encourage port applicants who wish to apply for DOTD Port Priority funding to hold a pre-application meeting with DOTD and OCM (other regulatory and resource agencies, including the U.S. Army Corps of Engineers, can be invited at the applicant's request) **prior to application for DOTD funding** in order to identify the least damaging alternative and address beneficial use of dredged material and compensatory mitigation. In this way, all project changes necessitated by regulatory agency review can be accounted for and incorporated into the funding request.

Part of the requirements for application to DOTD Port Priority Program is submission of an economic justification for the proposed activities. This economic justification is used to determine whether the project is eligible or ineligible for funding. A large portion of the information contained in the economic justification analysis used by DOTD is the same as that required in the OCM Justification Analysis. To reduce the duplication of effort that may be required in order to satisfy the justification requirements for DOTD and OCM, OCM will accept the "eligible for funding" determination from the DOTD Port Priority Program as documentation of project justification **ONLY IF** pre-funding application consultation with OCM is conducted.

If you would like to schedule a pre-application meeting to discuss the information required and efforts to be undertaken to minimize adverse impacts of proposed activities, please contact our office at (800) 267-4019 or OCMInfo@la.gov. If no pre-funding application meeting is held, OCM will require a full Justification Analysis as outlined in the following sections. Additionally, failure to include in the funding request to DOTD additional costs associated with minimization of impacts, beneficial use of dredged material and compensatory mitigation will not be adequate justification for more damaging alternatives or waivers of OCM requirements.

Maintenance of Existing Port Facilities

Maintenance of existing facilities includes activities such as maintenance dredging of existing port slips, canals and channels and the disposal of the dredged material; repair and/or

replacement of existing bulkheading, mooring structures, docks, piers and wharves; installation of new bulkheading along existing, occupied port banklines; and repair or replacement of existing buildings, roads, parking areas, storage areas and staging areas within the existing port facility. Please note that, in some cases, normal repairs and the rehabilitation, replacement or maintenance of existing structures do not require a Coastal Use Permit provided that:

1. the structure or work was lawfully in existence, currently serviceable, and in active use during the year preceding the repair, replacement or maintenance; and
2. the repair or maintenance does not result in an encroachment into a wetland area greater than that of the previous structure or work; and
3. the repair or maintenance does not involve dredge (the removal by excavation or any other means of native material, including soil, sand, mud, clay and semisolid sediment, regardless of whether the material supports or is supporting vegetation, from any lands or water bottoms in the coastal zone of Louisiana) or fill activities; and
4. the repair or maintenance does not result in a structure or facility that is significantly different in magnitude or function from the original.
5. the activity is not located in vegetated wetlands (emergent, submergent or forested); within one-quarter ($\frac{1}{4}$) mile of a barrier island; or on a chenier, barrier beach, dune, salt dome or other similar isolated, raised landform.

Maintenance activities that do not qualify for the above exemption will require a Coastal Use Permit and if, in OCM's opinion, adverse impacts to coastal resources may occur, will require brief Alternatives and Justification Analyses as outlined below. Please note that an exemption determination from OCM is exclusive to OCM and does not relieve the applicant from obtaining other local, state or federal permits, as required by law.

Alternatives Analysis

OCM recognizes that maintenance activities have a limited range of alternatives; therefore, the Alternatives Analysis need not address alternate sites. The Analysis instead should address alternate methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should be a narrative that includes an explanation of the nature and objectives of the proposed maintenance activity(ies); an identification and discussion of any available feasible options for the proposed activity that minimize adverse impacts to coastal resources; and an explanation of why less damaging feasible options were not selected.

Justification Analysis

The Justification Analysis should be a narrative that clearly explains the reason(s) for the proposed activity(ies) and the consequences of not implementing the proposed activity(ies).

Expansion of Existing Port Facilities

Expansion of existing facilities includes extension and/or widening of existing port slips, canals and channels; excavation of new slips, canals and channels; expansion of existing infrastructure (roads, railways, utilities, bulkheading outside of occupied port areas); expansion

of existing dock facilities; and expansion of existing parking, staging, storage, and/or office areas. Expansion activities that, in OCM's opinion, have adverse impacts on coastal resources will require Alternatives and Justification Analyses as outlined below.

Alternatives Analysis

As with maintenance of existing facilities, OCM recognizes that expansion activities have a limited range of alternatives therefore, the Alternatives Analysis need not address alternate sites outside of existing port property, or proposed port property if part of a written port master plan. The Alternatives Analysis instead should address alternate locations within existing or proposed port property as well as methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should include the following:

1. A narrative explaining the project objective(s) and identifying the proposed features required to meet the objective(s). The narrative also should identify any project objectives or features that may limit the range of alternatives to be considered.
2. A map showing the extent of existing and proposed port property and delineating developed and undeveloped areas. The map also should indicate the location of all sites considered within the existing and/or proposed port property.
3. A description of each site considered. Include general topography, water/wetland features, habitat type(s) present, if known, and an estimate of impact to each type of habitat.
4. A narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Justification Analysis

The Justification Analysis for port expansion activities must demonstrate the need for the enhanced goods and/or services to be provided by the expansion. The level of documentation needed depends on the type and level of adverse impact to coastal resources; the lower the level of resource impact, the lower the level of documentation required in the Analysis. The Analysis should include a narrative explaining the enhanced goods and/or services to be provided by the expansion and the consequences of not implementing the proposed expansion. Please note that, if the expansion area is expected to be leased to a tenant which does not specialize in cargo movement, the Analysis should focus on the tenant's business and not the port's cargo. A market analysis done for other purposes, such as to secure financing for the proposed expansion, can be used as the Justification Analysis if it provides a clear indication of the need for the expansion (see also DOTD Port Priority Program section above).

If the expansion is proposed in an area without an existing tenant, the Analysis should include documentation supporting the need for the new goods and/or services to be provided by the expansion. Documentation should include:

1. A list of prospective tenants (indicate if confidential). If tenants are to be located at the waterfront, sufficient reasons have to be provided that such a location is critical to their operations.
2. Letters of commitment from users (indicate if confidential). Discuss whether commitments have already been made in terms of investments and planning and what other assurances (for example, executed lease agreements) are available to the port that the commitments will be met.
3. A narrative explaining the expected net benefits from implementation of the proposed expansion activities. The term "net benefits" means the difference in the benefits to be derived "with the project" and those to be derived "without the project". For example, when port improvements are implemented, there is usually a higher level of facility costs, mostly for construction. This is offset by the benefits including a reduced level of other costs (vessel operating costs, cargo handling costs, maintenance costs, etc.). There may also be an increase in economic activities, improved (or worsened) environmental consequences, etc. All of these benefits are relative, i.e., they are based on the spread between what would happen with the new project vs. what would happen without the new project. The difference is the net benefits to be derived.

The narrative may include information regarding revenues with and without the project, the number of permanent jobs created or existing jobs saved, identification of any alteration of shipping costs with and without the project and any other benefits that may be realized by implementation of the expansion activities. For projects with more than 5 acres of adverse coastal resource impacts, supporting documentation should be included and presented in a way that clearly demonstrates the need for the proposed development.

If the expansion is done to increase the capacity of an existing tenant, the Analysis should include documentation supporting the need for the increased capacity. Documentation can include:

1. A narrative explaining the existing capacity of the tenant and the reasons for the need for increased capacity. Supporting data should be included and presented in a way that clearly demonstrates the need for the proposed development.
2. Letters of commitment from users (indicate if confidential). Discuss whether commitments have already been made in terms of investments and planning and what other assurances (for example, executed lease agreements) are available to the port that the commitments will be met.

New Port Facilities

A new port facility includes development of any industrial-type water-based cargo transfer facility where none currently exists. Extensive Alternatives and Justification Analyses are required for these types of developments when, in OCM's opinion, adverse impacts to coastal resources are likely to occur. The Alternatives Analysis should demonstrate an earnest effort to locate the facility in an area that avoids and minimizes adverse impacts to coastal resources to the maximum extent practicable. The Justification Analysis should demonstrate clearly that

the proposed goods and/or services are needed in the region, state and/or nation and that the facility will have an overall public benefit.

Secondary impacts to coastal resources that may be necessary but fall outside the scope of the proposed development also must be considered as part of the overall development project. Secondary impacts include, but are not limited to, the construction of power, water, sewer, cable, internet and telephone lines as well as roads or access channels which are located outside of the footprint of the development site but are necessary to connect the development to existing infrastructure. These secondary impacts may be permitted separately, but because they are dependent on the development project and vice versa, the potential impacts associated with them must be evaluated as part of the whole project.

Because the level of detail required in the Justification Analysis depends largely on the type and level of surrounding land use and the type and level of coastal resource impacts, **alternative sites should be addressed first**. All feasible sites, as defined below, should be considered and the least damaging site selected as the preferred site. Once the site has been selected, justification of the project should be prepared for that site. Please keep in mind that the type of information and level of detail required for the Justification Analysis, as requested by the OCM Permit Analyst, are dependent on the level of resource impact, type and extent of surrounding land use and the size of the development. These parameters may change depending on the location, scope and configuration of the development ultimately determined to be the least damaging. Please check with your OCM Permit Analyst to determine if the level of detail originally requested still is required. OCM encourages potential port applicants to hold pre-application coordination meetings with the regulatory and resource agencies (see DOTD Port Priority Program above). These meetings can be used to identify potential alternate sites and outline information that should be included in the Justification Analysis. To arrange a pre-application meeting, please contact our office at OCMinfo@la.gov or 800-267-4019.

Alternatives Analysis

Feasible alternate locations for new port facilities should include adequately sized parcels of land within the general geographic area of the proposed facility that have, *or can be reasonably provided with*, water access and can support the main objective(s) of the development. Project objective(s), surrounding land use, total project impact, secondary impacts and type and extent of coastal resource impacts should be considered when selecting feasible alternative sites.

Feasible sites can be identified using current aerial photography. Landowners can be identified through clerk of court records and contacted to determine availability of the land for purchase. Local newspapers also provide a source of available real estate offerings. A drive-by search for lots posted for sale in the general development vicinity also can be an effective method of finding available sites. Several websites offer listings of large tracts of land (see "Available Sources" below). Multiple Listing Real Estate Searches (MLS) also can be used to determine the availability of property in the development area. MLS results provided for site identification purposes must include the parameters used for the search. If no alternate sites can be identified, documentation demonstrating such (e.g. letters of refusal from landowners to sell property or documentation of attempts to contact for purchase, MLS or other real estate search method resulting in no matches - include search parameters and full results; aerial photos showing no available undeveloped land, etc.) must be provided.

Documentation that clearly demonstrates that each parcel was compared equally and explains why less damaging parcels were eliminated will be required. Documentation that supports the reasons for elimination should be included with the analysis. All alternate sites and the preferred site must be compared using, at a minimum, the factors identified below. If other factors not identified by OCM are used to compare sites, please define those factors and explain how they were used to evaluate each site.

The scope of the project and the type and extent of adverse impacts to coastal resource will determine the range of alternatives to be considered. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint. Developments that involve less than 20% resource impact versus total project impact should consider a minimum of two alternate sites. Developments that involve more than 20% coastal resource impact versus total project impact, or developments that involve more than 10 acres of coastal resource impact should consider a minimum of four alternate sites. Please be advised that OCM reserves the right to suggest consideration of other sites not identified by the applicant. The following information should be provided for each site considered.

1. Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered.
2. Identify, on a map, the location of each site considered for development. If less than the above specified minimum alternate locations were identified, provide an explanation of why and the efforts made to find alternate sites.
3. Describe each site considered. Include parcel size relative to development size, general topography and water/wetland features, habitat type(s) present, if known, and estimate of impact to each. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the site using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.
4. Identify the availability and capacity of existing infrastructure (roads, utilities, water, sewer, etc.). Describe any new infrastructure required.
5. Provide a narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.
6. Describe the surrounding land use within one (1) mile of each site considered. Radius should extend from the outside boundaries of the proposed development. Include type and extent of existing use and any planned future uses, if known.
7. Identify the current zoning of the site and indicate if any zoning variances will be required prior to development.
8. New port projects often create operational bottlenecks in supporting infrastructure such as access roads, warehouses, and yard spaces. Identify all the components necessary

to derive the benefits stated. Go from a logical terminus, through the port to another logical terminus. For example, the discussion of the necessary project components may begin in the Gulf, go through the navigational channels to the port, unload at the port, reload at the port onto a railroad car, and from the rail spur to a main line. A trucking operation may terminate at a state highway that is capable of handling the added traffic satisfactorily. Indicate whether these components are existing or proposed. For all existing components, discuss the adequacy of the components.

9. Explain how the use will affect existing infrastructure, including evacuation and identify any additional permits required (ex. DOTD driveway permit).
10. Secondary impacts that may be necessary but fall outside the scope of the proposed development also must be considered as part of the overall development project. Secondary impacts include, but are not limited to, the construction of power, water, sewer, cable, internet and telephone lines as well as roads or access channels to which the development will be connected with existing infrastructure. These secondary impacts may be permitted separately, but because they are dependent on the development project and vice versa, the impacts associated with them must be evaluated as part of the whole project. Describe any secondary infrastructure that may be required to service the development. Include location and/or route of the needed infrastructure and type and extent of impacts associated with installation of that infrastructure. For all proposed components, indicate what is proposed, by whom, when, and what is the estimated cost. Verifying documentation should be included.

Once the least damaging feasible site has been identified, alternate configurations/methods and/or reduction in scope should be considered in an attempt to avoid or minimize adverse impacts on coastal resources at the selected site.

Justification Analysis

Once adverse impacts to coastal resources have been avoided to the maximum extent practicable through the Alternatives Analysis process outlined above, justification for the project at the selected site must be demonstrated. The below items must be addressed when developing a Justification Analysis for new Port developments. Please note that a market analysis done for other reasons, such as to secure financial backing for the proposed development, can be used as the Justification Analysis if the below information is addressed within that analysis (see also DOTD Port Priority Program below).

1. **Demonstration of Need for Project:** Provide a demonstration of the need for the project and supply supporting documentation. This portion of the Analysis is extremely important. Most of the information provided in this section consists of forecasts and estimates. Therefore, sufficient attention should be given to adequately communicate and document the need for the proposed port project through detailed market analyses and commitments by port users to utilize the project facilities.
2. **Market Analyses:** Forecast the industries and cargo which will use the project for the next ten (10) years. List the types of cargo and volumes expected, along with the market analysis and estimate of the market share. Cargo forecasts and market analyses must be complete with detailed underlying assumptions and justifications. If

cargo forecasts exceed historical trends, provide justification in terms of significant economic and technological developments occurring in the ports service area. If the port facility is in response to increased demand from new industries locating in the area, these location decisions have to be substantiated by comparative cost analyses.

If the port or a portion of the port is expected to be leased to a tenant which does not specialize in cargo movement, then the market analyses is done for the tenant's business and not the port's cargo. This also applies to the following: Extrapolation from past trends, Diverted cargo, Generated Cargo, Origins and Destinations, and Cargo Handling Revenue.

- a. **Extrapolation From Past Trends:** The simplest method of cargo forecasting is to extrapolate from past trends, making whatever adjustments that may be necessary to take into account changes that are likely to modify these trends. National projections for waterborne commerce, by major commodity types, can be used. These growth estimates are to be used to forecast traffic growth unless adequate justification is provided to support any deviation. If a particular commodity is not included, then use the total waterborne commerce trend.
 - b. **Diverted Cargo:** Cargo may be diverted to a port facility either from other modes of transportation or from other routes. As cargo diversion can occur due to cost differentials in competing modes or routes, comparative cost studies must be presented to justify these cargo flows. If cargo diversion occurs due to establishment of new industries at the waterfront, these location decisions have to be analyzed and justified.
 - c. **Generated Cargo:** New industrial and agricultural developments in an area can increase output and these developments may translate into new traffic. In such cases, these sources must be identified and new cargo must be analyzed in terms of volumes, origins and destinations. The total traffic generated must be distributed to different transport modes based on cost considerations.
 - d. **Origins/Destinations:** Identify the major origins, routes, and destinations of the forecasted cargos which will use the project. Indicate what route the goods would move if the project is not built. Would the cargo be routed to another facility at the port, via another port in Louisiana, via a port outside of Louisiana, or via a non-water transport means?
3. **Industrial Development:** What new industrial development would result from the project; without the project, where would this development otherwise occur?
 4. **Prospective Industrial Tenants:** List prospective industrial tenants and indicate if confidential. If tenants are to be located at the waterfront, provide sufficient reasons why such a location is critical to their operations.
 5. **Letters of Commitment:** Include letters of commitment from users and indicate if confidential. Discuss whether commitments have already been made in terms of investments and planning and what other assurances (for example, executed lease agreements) are available to the port that the commitments will be met.

6. Determination of Benefits:

Benefits from the proposed project will be evaluated from the taxpayer's point of view and the port's point of view. All of the benefits will not be derived until the investment for the total project has been made and all of the necessary components are adequate.

Estimating these benefits is a key element in the Analysis. Sufficient attention should be given to substantiate procedures adopted in quantifying benefits and in providing supporting documents. Overall, benefit estimates should be logical, verifiable, and based on sound judgment and acceptable industry norms. Claimed benefits will be adjusted to conform to industry norms unless adequate justification is provided.

In order to determine adequate justification for the proposed activities, it is necessary to have a clear understanding of the project's expected net benefits. The term "net benefits" means the difference in the benefits to be derived "with the project" and those to be derived "without the project".

For example, when port facilities are constructed, there is usually a higher level of facility costs, mostly for construction. This is offset by the benefits including a reduced level of other costs (vessel operating costs, cargo handling costs, maintenance costs, etc.). There may also be an increase in economic activities, improved (or worsened) environmental consequences, etc.

All of these benefits are relative, i.e., they are based on the spread between what would happen with the new project vs. what would happen without the new project. In other words, to determine the benefits, it is necessary to evaluate the cargo flow projection, transportation cost savings, impact on other Louisiana ports, etc., without the project as well as with the project. Only then can the costs and gains under both scenarios be compared. The difference is the net benefits to be derived.

- a. **Number of Jobs:** Indicate the number of permanent new jobs that would be created and/or existing jobs saved from implementing the project. How many of these jobs are port related and how many are industrial jobs, what is the total payroll for each; without the project, where would these jobs otherwise be created? Do not include temporary jobs created by construction activities. The estimate of number of new jobs created shall conform to industry norms such as capital investment/worker and volume of cargo handled/worker and number of employees per firm. If jobs are displaced elsewhere in the state, these jobs shall be subtracted from the jobs created or saved by the project.
- b. **Shipping Costs:** If the proposed project will alter shipping costs, identify these costs with and without the project. Cost estimates should conform to general industry norms.
- c. **Other Benefits:** Identify any other benefits that would result from the project.

- d. **Benefits-Costs Tabulation:** Tabulate the project's benefits and costs over the project's life. Remember that all the benefits will not be derived until all of the components are implemented and are adequate.

7. Impacts of Implementing Proposed Project:

An assessment of the impacts associated with the implementation of the proposed project shall be submitted. The economic, environmental, and other impacts shall be identified. A detailed environmental assessment is recommended.

The economic impacts may be indicated by the number of permanent jobs created or saved and the annual payroll resulting from the proposed port improvement. This information is reported in Section 7, "Determination of Benefits to the State".

If a potential risk of flooding is created for the surrounding or downstream area, a hydrologic study to assess the flooding or drainage impacts of the project may be required (see Drainage Analysis guide).

The environmental impacts shall be identified as to the effects on the following:

- Water Quality
- Habitat Modification
- Fish and Wildlife Resources
- Cultural, Historical and Archeological features

Any other impact(s) shall also be identified. The impact of the proposed project on other ports in the state, (e.g., diversion of cargoes or industrial activities, etc., from other state's ports) shall be stated.

If the project is expected to generate over 100 inbound and outbound trips in an hour or more than 750 trips a day then a traffic impact study with comments from the Metropolitan Planning Organization and/or the Regional Planning Commission is required. Said study is to identify adverse impacts on the transportation network and to mitigate negative impacts.

The assessment is to indicate whether the impacts are short-term or long-term, direct or indirect, and adverse or beneficial. Applicants may seek comments from appropriate state and federal agencies.

8. Other Factors: Discuss other factors not addressed above that may justify the proposed project.

Much of the above section is taken from the *Louisiana Port Construction and Development Priority Program Rules and Regulations* version dated June 2008. The Office of Coastal Management appreciates the cooperation and assistance of the Louisiana Department of Transportation and Development.

Recreation Facilities

Introduction

Recreation facilities include, but are not limited to, parks; visitor centers; picnic areas; ball fields; playgrounds; public golf courses; community swimming pools, tennis courts and basketball courts; and nature, hiking and bike trails. If, in OCM's opinion, adverse impacts to coastal resources will occur during construction, maintenance and/or operation of a proposed recreation facility, Alternatives and Justification Analyses will be required. The level of detail needed in the Analyses is dependent on whether the activity is maintenance of existing features, expansion of existing features or installation of new features. Please note that a feasibility study done during the course of project development can be submitted as the Alternatives and Justification Analyses. If a feasibility study has not been done, the below information will assist in the development of Alternatives and Justification Analyses. OCM encourages applicants to avoid adverse impacts to coastal resources to the maximum extent practicable and will provide assistance with identifying alternate sites, minimizing impacts and developing a Justification Analysis. Please note that residential and/or commercial developments associated with recreation facilities should follow the appropriate Alternatives and Justification Analyses Guides.

Maintenance of Existing Recreation Facilities

Maintenance of existing recreation facilities includes upkeep, repair and/or replacement of existing equipment, upkeep of existing landscaping and fencing; replacement of existing decking on elevated trails; replacement of existing paving materials on at-grade trails, roads and parking lots as long as the material is not stacked higher, wider or longer than original design specifications; and refilling of existing play areas as long as final fill height is no more than original design specifications. Please note that, in some cases, normal repairs and the rehabilitation, replacement or maintenance of existing structures do not require a Coastal Use Permit provided that:

1. the structure or work was lawfully in existence, currently serviceable, and in active use during the year preceding the repair, replacement or maintenance; and
2. the repair or maintenance does not result in an encroachment into a wetland area greater than that of the previous structure or work; and
3. the repair or maintenance does not involve dredge (the removal by excavation or any other means of native material, including soil, sand, mud, clay and semisolid sediment, regardless of whether the material supports or is supporting vegetation, from any lands or water bottoms in the Louisiana coastal zone) or fill activities; and
4. the repair or maintenance does not result in a structure or facility that is significantly different in magnitude or function from the original.
5. the activity is not located within one-quarter mile of a barrier island; or on a chenier, barrier beach, dune, salt dome or other similar isolated, raised landform.

Access to the maintenance site may require OCM review if the access route requires dredge or fill or if coastal resources will be adversely impacted by access, even if the maintenance activity itself is exempt. Maintenance activities that do not qualify for the above exemption will require a Coastal Use Permit; if, in OCM's opinion, adverse impacts to coastal resources may

occur from non-exempt access or maintenance activities, brief Alternatives and Justification Analyses also will be required. The information required is dependent on the nature of the maintenance activity and is outlined in the below sections. Please note that an exemption determination from OCM is exclusive to OCM and does not relieve the applicant from obtaining other local, state or federal permits, as required by law.

Alternatives Analysis

OCM recognizes that maintenance activities have a limited range of alternatives; therefore, the Alternatives Analysis need not address alternate sites. The Analysis instead should address alternate methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should be a narrative that includes an explanation of the nature and objectives of the proposed maintenance activity(ies); an identification and discussion of any available feasible options for the proposed activity that minimize adverse impacts to coastal resources; and an explanation of why less damaging feasible options were not selected. The Analysis also should include information related to access, methods and equipment, and work space size however, only those aspects of the project that adversely impact coastal resources need be addressed.

Access

Every effort should be made to minimize impacts to coastal resources resulting from access to the work site. Existing access routes or roads, or other practical means of access, should be used in lieu of constructing new access routes or roads. Low impact equipment should be considered in lieu of wheeled or tracked vehicles, where feasible. If it is necessary to construct new access, or existing access requires improvements or involves adverse impacts to coastal resources, the narrative outlined above also should include the following:

1. An explanation of the route(s) and conveyance method(s) to be used to access the work site. Identify and discuss all possible options and explain why each was eliminated. If a new access route is required, please explain why.
2. A map showing the access route(s) to the work site(s). This can be included on the vicinity map and/or plan view used for the JPA. If multiple alternatives are available, please show all alternatives on the map (a separate map may be required if there are many alternatives).

Method(s) and Equipment

Every effort should be made to minimize adverse impacts to coastal resources that may result from the maintenance work. Again, low impact equipment should be considered in lieu of wheeled or tracked vehicles, where feasible. If adverse impacts to coastal resources cannot be avoided during the maintenance activities, the narrative outlined above also should include the following:

3. An explanation of the method(s) to be used to perform the maintenance work. Identify and discuss all possible options and why each was eliminated. If using economics as

justification for method and/or equipment selection, include cost comparisons for each option considered.

Work Space Size

The work space needed to perform the maintenance activities should be of the minimum size necessary to safely do the work. It should include any excavation and dredged material placement areas, equipment staging areas, travel areas, work areas, etc. If adverse impacts to coastal resources cannot be avoided during the maintenance activities, the narrative outlined above also should include the following:

4. An explanation of the size(s) of the work space(s) needed to perform the maintenance activities. Include a discussion of any limitations that may be present on site and a discussion of any special equipment requirements. Illustrations and site layout plans may helpful in demonstrating space requirements and limitations.

Justification Analysis

The Justification Analysis should be a brief narrative that clearly explains the reason(s) for the proposed activity(ies) and the consequences of not implementing the proposed activity(ies).

Expansion of Existing Recreation Facilities

Expansion of existing recreation facilities includes, but is not limited to, increasing the usable area of the recreation facility and adding new equipment or features to previously unutilized areas. Expansion activities that, in OCM's opinion, have adverse impacts on coastal resources will require Alternatives and Justification Analyses.

Alternatives Analysis

Expansion of existing facilities includes an increase in the size and/or capacity of existing features and/or level of service provided. Expansion activities that, in OCM's opinion, have adverse impacts on coastal resources will require Alternatives and Justification Analyses as outlined below.

OCM recognizes that expansion activities have a limited range of alternatives. If the expansion activities are not limited to a location immediately adjacent to existing facilities, please refer to the Construction of New Utility Facilities, Alternatives Analysis section below for an outline of the Alternatives Analysis required. If the expansion activities must be located adjacent to existing facilities, please refer to the following outline for the Alternatives Analysis.

For expansion activities immediately adjacent to existing facilities, the Alternatives Analysis should address all feasible locations surrounding the existing facility as well as methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should include the following:

1. A narrative explaining the project objective(s) and identifying the proposed features required to meet the objective(s). The narrative also should identify any project objectives or features that may limit the range of alternatives to be considered.
2. A description of each location considered. Include general topography, water/wetland features, habitat type(s) present, if known, and estimate of impact to each.
3. A narrative explaining the reasons for the elimination of each location considered but not selected for development. Please note that the factors used to compare each location should be identified and should be consistent among locations.

Justification Analysis

The Justification Analysis for existing facility expansion activities must demonstrate the need and/or demand for the enhanced goods and/or services to be provided by the expansion. The analysis should include a narrative explaining the enhanced goods and/or services to be provided by the expansion, why these services are in need or demand and the consequences of not implementing the proposed expansion. Supporting documentation may be required depending on the extent of coastal resource impacts and can be in the form of a facility master plan or feasibility study, but need not be a formal study if one is not otherwise necessary. If no formal study has been done, documentation that clearly demonstrates the need for the proposed activity should be presented.

New Recreation Facilities

New recreation features include the construction of previously non-existent recreation facilities. If, in OCM's opinion, adverse impacts to coastal resources may occur during or after construction, Alternatives and Justification Analyses will be required. Please note that a feasibility study done during the course of project planning can be submitted as the Alternatives and Justification Analyses as long as less damaging alternatives have been evaluated to the extent practicable.

Alternatives Analysis

Every effort should be made to site recreation facilities such that adverse impacts to coastal resources are avoided or minimized to the maximum extent practicable. The goal of an Alternatives Analysis is to find a feasible location for the proposed facility which results in the least amount of adverse impact to coastal resources while allowing the project to fulfill its main objective(s). The Alternatives Analysis provides an objective method of performing a fair and thorough consideration of feasible options for the location, construction, operation and maintenance of the proposed recreation feature. OCM encourages applicants to utilize locations that avoid or minimize both direct and indirect adverse impacts to coastal resources to the maximum extent practicable. **Feasible sites** are defined as any site that can support the main objective(s) of the proposed development. Current aerial photography and/or specific knowledge of the area can be used to identify feasible sites. Project objective(s), surrounding land use, total project impact and type and extent of coastal resource impacts should be considered when selecting feasible sites.

Feasible sites can be identified using current aerial photography. Landowners can be identified through clerk of court records and contacted to determine availability of the land for purchase. Local newspapers also provide a source of available real estate offerings. A drive-by search for lots posted for sale in the general development vicinity also can be an effective method of finding available sites. Several websites offer listings of large tracts of land (see "Available Sources" below). Multiple Listing Real Estate Searches (MLS) also can be used to determine the availability of property for development and also can be used to assess the current housing/real estate market in the development area. MLS or other real estate search results provided for site identification purposes must include the parameters used for the search. If no available alternate sites can be identified, documentation demonstrating such (letters of refusal from landowners to sell property (or chronology and summary of attempts), MLS or other real estate searches resulting in no matches - include search parameters and full results; aerial photos showing no available undeveloped land, any other documentation showing an attempt to find less damaging properties) must be provided.

Documentation will be required that clearly demonstrates that each site was compared equally and explains why each site was eliminated or chosen. Documentation that supports the reasons for elimination should be included with the analysis. All alternate sites and the preferred site must be compared using, at a minimum, the factors identified below. If other factors not identified by OCM are used to compare sites, please define those factors and explain how they were used to evaluate each site. Table 1 can be used to determine the minimum range of alternatives that should be considered when developing an Alternatives Analysis.

Table 1 – Determining the Range of Alternatives that should be considered when proposing a new recreation facility.

	Resource Impacts (% of total project impacts)		
Scope of Development	Low (<10%)	Med (10.01-30%)	High (>30.01%)
Small (less than 10 acres)	Category 1	Category 2/3*	Category 3
Large (10 acres or more)	Category 2/3*	Category 2/3*	Category 3

* If more than 5 acres of resource impact will occur, higher level of detail is required.

A minimum of two (**Category 1**), three (**Category 2**) or five (**Category 3**) alternate feasible sites must be considered. Each route should be compared using the same parameters and should, at a minimum, include the items listed below.

1. Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered. Identify the area(s) to which the proposed facility will provide service.
2. Identify, on a map, each site considered. If less than the minimum number of sites, as specified above, have been considered, please explain why and provide documentation demonstrating the efforts made to find alternate sites.
3. Describe each site considered. Include topography, water/wetland interface, habitat type(s) present and amount of impact to each and cost. If access to the property is limited or unavailable, explain the limitations and provide any information that can be

gained about the site using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.

4. Identify the availability and capacity of existing infrastructure (roads, utilities, water, sewer, etc.). Explain how the use will affect existing infrastructure and identify any additional permits required (e. g., DOTD driveway permit). Describe any new infrastructure required and include location and/or route of the needed infrastructure and type and extent of impacts associated with installation of that infrastructure.
5. Describe the surrounding land use(s) within one quarter mile (**Category 1**) one-half mile (**Category 2**) or one mile (**Category 3**) of the site. Include type and extent of existing use and any planned future uses, if known.
6. Identify the current zoning of the site and indicate if any zoning variances will be required prior to development.
7. Provide a narrative explaining the reasons for the elimination or selection of each site. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Justification Analysis

Once adverse impacts have been avoided to the maximum extent practicable through the Alternatives Analysis process outlined above, justification for the project at the selected site must be demonstrated. The goal of a Justification Analysis is to ensure that there is a public need and demand for the product(s) to be provided by the development. The below items must be addressed when developing a Justification Analysis for recreation facilities. Table 2 can be used to determine the level of detail required in the Justification Analysis.

Table 2 – Determining the level of detail required in the Justification Analysis.

	Resource Impact (% of total impact)			
Size of Development	Low (≤20%)	Med (20.01-70%)	High (>70.01%)	Surrounding Land Use †
Small (less than 10 acres)	S	S/M *	M	High (dense residential, commercial and/or industrial)
	S	S/M *	M	Moderate (light residential/commercial, agriculture)
	M	M	C	Low (no development)
Large (10 acres or more)	S	S/M **	M/C **	High
	S/M **	M/C **	M/C **	Moderate
	M/C **	C	C	Low

* If more than 1 acre of resource impact will occur, higher level of detail is required.
** If more than 5 acres of resource impact will occur, higher level of detail is required.
† Refers to the type and extent of the uses occurring on lands in the vicinity of the proposed development

Simple Justification (S)

1. State the objective(s) of the recreation facility (what activities will the facility provide) and describe or identify on a map the service area (the area from which the majority of the anticipated users will be drawn).
2. Provide a narrative explaining how the proposed development will introduce or enhance the existing availability of recreation opportunities in the service area.

Moderate Justification (M)

Provide information for 1-2 above plus:

3. Identify on a map all other recreation facilities within the identified service area.
4. Describe the activities available at each facility identified in #3 above and provide the capacity, current level of usage and anticipated future level of usage of each.

Complex Justification (C)

Provide information for 1-4 above plus:

5. Provide population trend data for the identified service area.

Residential Subdivisions

Introduction

OCM defines **residential subdivisions** as multi-house/unit residential developments. These types of developments require Alternatives, Justification, Drainage and Coastal Hazard Analyses regardless of the amount of wetland or coastal resource impacts. The complexity of the development, surrounding land use, type and level of resource impact and coastal use objectives are used to determine the range of alternatives to be considered in the Alternatives Analysis and the type of information and level of detail required for the Justification, Drainage and Coastal Hazard Analyses.

Other factors that must be identified when developing the Alternatives and Justification Analyses are project objective, site description, infrastructure needs (roads, powerlines, sewerage, water, drainage) proximity to needed services (grocery, pharmacy, bank, hospital) and the development's effects on evacuation and existing infrastructure. Secondary impacts that may be necessary but fall outside the scope of the proposed development also must be considered as part of the overall development project. These secondary impacts may be permitted separately, but because they are dependent on the development project and vice versa, the impacts associated with them must be evaluated as part of the whole project. Secondary impacts include, but are not limited to, the construction of power, water, sewer, cable, internet and telephone lines as well as roads and access channels by which the development will be connected with existing infrastructure.

Because the level of detail required in the Justification-Analysis depends largely on the type and level of surrounding land use and the type and level of coastal resource impacts, **alternative sites should be addressed first**. All feasible sites, as defined below, should be considered and the least damaging site selected as the preferred site. Once the site has been selected, justification of the project should be prepared for that site. Please keep in mind that the type of information and level of detail required for the Justification, Drainage and Coastal Hazard Analyses, as requested by the OCM Permit Analyst, are dependent on the level of resource impact, level of surrounding land use and the size of the development. These parameters may change depending on the location, scope and configuration of the development ultimately determined to be the least damaging. Please check with your OCM Permit Analyst to determine if the level of detail originally requested still is required. If you would like to schedule a pre-application meeting in order to discuss the information required and efforts to be undertaken to minimize adverse impacts resulting from the proposed development, please contact our office at (800) 267-4019 or OCMinfo@la.gov.

Alternatives Analysis

The goal of an Alternatives Analysis is to find a location for the proposed development which results in the least amount of adverse impact to coastal resources while allowing the project to fulfill its main objective(s). The Alternatives Analysis provides an objective method of performing a fair and thorough consideration of feasible options for the location, construction, operation and maintenance of a proposed coastal use. OCM encourages applicants to utilize areas that avoid or minimize both direct and indirect adverse impacts to coastal resources. If a

selected project location, construction, operation or maintenance method may result, in OCM's opinion, in adverse impacts to coastal resources, an Alternatives Analysis will be required.

Feasible sites are defined as any available parcel of land within the general vicinity of the proposed site (+/- 1 hour drive; within same Parish/geographic area; near preferred features such as waterways, parks, wildlife areas; offers the same amenities within the same driving distance of market area) that can support the main objective(s) of the proposed development. Project objective(s), surrounding land use, total project impact, availability of existing infrastructure and type and extent of coastal resource impacts should be considered when selecting feasible alternative sites.

Feasible sites can be identified using current aerial photography. Landowners can be identified through clerk of court records and contacted to determine availability of the land for purchase.. Local newspapers also provide a source of available real estate offerings. A drive-by search for lots posted for sale in the general development vicinity also can be an effective method of finding available sites. Several websites offer listings of large tracts of land (see "Available Sources" below). Multiple Listing Real Estate Searches (MLS) also can be used to determine the availability of property for development and also can be used to assess the current housing/real estate market in the development area. MLS or other real estate search results provided for site identification purposes must include the parameters used for the search. If no available alternate sites can be identified, documentation demonstrating such (letters of refusal from landowners to sell property (or chronology and summary of attempts), MLS or other real estate searches resulting in no matches - include search parameters and full results; aerial photos showing no available undeveloped land, any other documentation showing an attempt to find less damaging properties) must be provided.

Please note that a residential development does not need to be located on a waterway in order to serve its primary function (i.e. houses are not coastal water dependent). Also, ownership of a parcel of land is NOT adequate justification for selecting that site over other, less damaging sites. However since site purchase is a large part of development costs, ownership of a parcel of land can affect the economics of a project such that purchasing another parcel of land would make a proposed coastal use economically infeasible to a reasonably financed applicant. The applicant will need to provide documentation of both project cost differentials and applicant/project financing that clearly demonstrates that purchase of additional land will make the proposed coastal use economically infeasible. Table 1 can be used to determine the minimum range of alternatives that should be considered when developing an Alternatives Analysis.

Table 1 –Level of detail required for an Alternatives Analysis.

Size of Development	Resource Impacts (% of total impact)		
	Low (≤20%)	Med (20.01% - 70%)	High (>70.01%)
Small (less than 5 acres and 3-10 houses with no new access)	Category 1	Category 1	Category 2
Med (less than 5 acres and 3-10 houses with new access)	Category 1	Category 1/2 *	Category 2
Large (more than 5 acres or >10 houses)	Category 2	Category 2/3 **	Category 3

* If more than 1 acre of resource impact will occur, higher level of detail is required.
** If more than 5 acres of resource impact will occur, higher level of detail is required.

Category 1: A minimum of 3 sites should be considered, however OCM reserves the right to suggest consideration of other sites not identified by the applicant. The following information should be provided for each site considered.

1. Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered.
2. Identify, on a map, the location of each site considered for development. If no alternate locations were identified, provide an explanation of the efforts undertaken to find alternate sites.
3. Describe each site considered. Include parcel size relative to development size, general topography and water/wetland features, habitat type(s) present, if known, and estimate of impact to each. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the site using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.
4. Identify the availability and capacity of existing infrastructure (roads, utilities, water, sewer, etc.). Describe any new infrastructure required (excluding tie-in from individual units to existing infrastructure).
5. Describe the surrounding land use within one-quarter (1/4) mile of each site considered. Radius should extend from the outside boundaries of the proposed development. Include type and extent of existing use and any planned future uses, if known.
6. Provide a narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Category 2: A minimum of 4 sites should be considered, however OCM reserves the right to suggest consideration of other sites not identified by the applicant. Items 1-6 above plus the following should be provided for each site considered.

7. If no alternate sites were identified, provide supporting documentation for item #2 above. Documentation can include letters of refusal from landowners to sell property or written chronology/summary of attempts to contact landowners, MLS or other real estate searches resulting in no matches (include search parameters and full results), aerial photos showing no available undeveloped/unused land, etc.
8. Describe the surrounding land use within one-half (1/2) mile of each site considered. Radius should extend from the outside boundaries of the proposed development. Include type and extent of existing use and any planned future uses, if known.

Category 3: A minimum of 5 sites should be considered, however OCM reserves the right to suggest consideration of other sites not identified by the applicant. Items 1-8 above plus the following should be provided for each site considered.

9. Describe the surrounding land use within one (1) mile of each site considered. Radius should extend from the outside boundaries of the proposed development. Include type and extent of existing use and any planned future uses, if known.
10. Identify the current zoning of the site and indicate if any zoning variances will be required prior to development.
11. Explain how the use will affect existing infrastructure, including evacuation and identify any additional permits required (ex. DOTD driveway permit). Describe any secondary infrastructure (excluding tie-in from individual units) that may be required to service the development. Include location and/or route of the needed infrastructure and type and extent of impacts associated with installation of that infrastructure.

Once the least damaging feasible site has been identified, alternate configurations/methods and/or reduction in scope should be considered in an attempt to avoid or minimize adverse impacts to coastal resources located on the selected site. Be aware that some parishes and municipalities, depending on the size of the development, require set asides for green space, park, recreation areas and possibly detention or retention ponds. These requirements for set asides must be taken into consideration when selecting a site and configuring the development.

Justification Analysis

Once adverse impacts have been avoided to the maximum extent practicable through the Alternatives Analysis process outlined above, a Justification Analysis for the project at the selected site must be demonstrated. The goal of a Justification Analysis is to ensure that there is a public need and demand for the goods and/or services to be provided by a residential development, thereby reducing the chances that a site will be developed only to fall into disrepair due to lack of public interest in the goods and/or services to be provided. The Justification Analysis should include but not necessarily be limited to, the objective(s) of the coastal use (what goods and services will this development provide, are these goods and services available now and if so at what level), population trends (is the area gaining residents by growth, migration, etc.), existing residential real estate trends and competitor development comparisons (what is available for sale now, what is the sale rate or turnover rate within the same price range as the proposed development, etc.). The availability and capacity of existing infrastructure such as utilities, sewerage, community services, etc also must be addressed (are there existing roads and/or utilities or will new access and/or utilities be required).

Table 2 can be used to determine the appropriate level of detail that a Justification Analysis may require in order to demonstrate that the potential benefits to be realized from the proposed project clearly outweigh the potential adverse impacts. Please keep in mind that if a site other than the site applied for is selected, the level of detail for the Justification, Drainage and Coastal Hazard Analyses, as requested by the OCM Permit Analyst, may change. Please check with your Permit Analyst to determine if the level of detail originally requested still is required for the site ultimately selected for development.

Table 2 – Level of detail required for a Justification Analysis

	Resource Impact (% of total impact)			
Size of Development	Low (≤20%)	Med (20.01-70%)	High (>70.01%)	Surrounding Land Use †
Small (5 acres or less and 3-10 houses, no new access)	S	S	S/M *	High (dense residential/commercial/industrial)
	S	S/M *	M	Moderate (light residential/commercial, agriculture)
	S	M	M/C *	Low (no development)
Med (5 acres or less and 3-10 houses w/new access)	S	S/M *	M	High
	S	S/M *	M	Moderate
	S	M/C *	M/C *	Low
Large (5 acres or more or >10 houses)	S	S/M **	M/C **	High
	S/M **	M	M/C **	Moderate
	M/C **	C	C	Low

* If more than 1 acre of resource impact will occur, higher level of detail is required.
** If more than 5 acres of resource impact will occur, higher level of detail is required.
† Refers to the type and extent of the uses occurring on lands in the vicinity of the proposed development

Simple Justification (S)

1. Provide the name of the development and the name and address of the developer(s)
2. Describe the development. Include the number and type of units proposed (single family detached, single-family townhouse, duplex, multi-family, mobile/manufactured home, elderly housing, etc.) and other proposed amenities (marina facilities, boat docks, wharves/piers, bulkheads, neighborhood park, etc.).
3. Provide the objective(s) of the development (fishing and/or hunting camps, primary homes, vacation homes, etc.)
4. Describe the development site and any physical limitations of the development and/or site. Include total project impacts in acres and the type and extent, in acres, of any anticipated coastal resource impacts.
5. Describe the type and level of current surrounding land use in the proximity of the proposed project site. If the proposed site is surrounded by development, please describe the types of developments/current land use surrounding each alternative site. If surrounding properties may be impacted in any way as a result of the proposed project being constructed, operated or maintained, please describe those impacts and how they will be addressed. If the applicant owns the surrounding property, future plans for that property must be provided.
6. Describe the availability of existing utilities and the need for any necessary utilities. If additional utilities will be required, describe the type, source and impacts associated with installation of these utilities. Indicate the party responsible for installing those utilities. Any impacts resulting from installation of utilities are considered secondary impacts to the proposed development and must be considered during review of the development application.

7. Describe the current roadway access to the project location. If improvements to the existing roadways will be required to accommodate the proposed development, describe the required improvements and indicate the party responsible for making those improvements. Any impacts resulting from roadway improvements are considered secondary impacts to the proposed development and must be considered during review of the development application.
8. Explain how you believe there is a public need and demand for your development at the proposed site. (No formal documentation is necessary.)
9. Discuss any future plans for expansion of the proposed development into adjacent properties or for other types of development on adjacent properties.

Moderate Justification (M): Address 1-9 above plus:

10. Provide any additional available documentation such as letters from realtors regarding local housing trends, lot purchase agreements or letters of intent to purchase, etc. that demonstrate a demand or need for the proposed development.

Complex Justification (C): Address 1-10 above plus:

11. Provide any available documentation, in addition to that provided in #10 above that supports the public need and demand for this development, as described in #8 above. Additional documentation can include, but is not limited to, MLS results demonstrating current real estate stock, sale rate (average days to sell) of existing housing stock, residential building permit trends over a relevant time period, etc.

OR

If surrounding land use is low, existing real estate information for that area will not be available. In this case, provide real estate information for a minimum of 2-3 existing similarly situated developments in another location. For example, if the purpose of the development is to provide access to a specific area, look for other developments in areas of low surrounding land use that focus on providing access to a specific area and provide the information requested in item #11 above for those developments. If no similarly located developments are available for comparison, provide a statement explaining such and include any available documentation that demonstrates a demand for the proposed development.

12. Provide average price range of the proposed residential units and the average price range of residential units within the same region as the proposed development. (If using item #11 part 2, provide the information for the development used for comparison). Explain how this development will meet current housing demands. Include sales projections of the proposed development.
13. Provide the average annual change in the number of households and civilian labor force in the development area in the last 10 years. (If using item #11 part 2, provide

the information for the development area used for comparison and compare that to the proposed development area).

14. Provide an analysis of the population trends in the development area over the last 10 years. Include any available data that clearly supports the results of the analysis. (If using item #11 part 2, provide the information for the development area used for comparison and compare that to the proposed development area).

Transportation

Introduction

Transportation features include roads, bridges and ferries, construction and maintenance of which typically are undertaken by state or local governmental bodies, or in the case of ferries, private companies. This guide is focused more transportation features constructed by municipal entities. For the purposes of application processing, air and rail developments should refer to our commercial or industrial developments guides depending on the nature of the activity; boat traffic should refer to our Marinas, Ports or Recreational Facilities guides depending on the nature of the activity; and bike and foot trails should refer to the Recreational Facilities guide.

If, in OCM's opinion, adverse impacts to coastal resources will occur during construction, maintenance and/or operation of a proposed activity, Alternatives and Justification Analyses will be required. The level of detail needed in the Analyses is dependent on whether the activity is maintenance of existing features, expansion of existing features or installation of new features. Please note that a feasibility study done during the course of project development can be submitted as the Alternatives and Justification Analyses. If a feasibility study has not been done, the below information will assist in the development of Alternatives and Justification Analyses. OCM encourages applicants to avoid adverse impacts to coastal resources to the maximum extent practicable and will provide assistance with identifying alternate sites, minimizing impacts and developing a Justification Analysis.

Maintenance and Expansion of Existing Transportation Features

Maintenance of existing facilities includes activities such as resurfacing of existing roads, cleanout of existing roadside ditches replacement of existing bridge support structures and repair and/or replacement of existing ferry docks and loading ramps. In some cases, normal repairs and the rehabilitation, replacement or maintenance of existing structures do not require a Coastal Use Permit provided that:

1. the structure or work was lawfully in existence, currently serviceable, and in active use during the year preceding the repair, replacement or maintenance; and
2. the repair or maintenance does not result in an encroachment into a wetland area greater than that of the previous structure or work; and
3. the repair or maintenance does not involve dredge (the removal by excavation or any other means of native material, including soil, sand, mud, clay and semisolid sediment, regardless of whether the material supports or is supporting vegetation, from any lands or water bottoms in the coastal zone of Louisiana) or fill activities; and
4. the repair or maintenance does not result in a structure or facility that is significantly different in magnitude or function from the original; and
5. the activity is not located within one-quarter mile of a barrier island; or on a chenier, barrier beach, dune, salt dome or other similar isolated, raised landform.

Please note, however, that an exemption determination from OCM is exclusive to OCM and does not relieve the applicant from obtaining other local, state or federal permits, as required by law.

Cold planing, resurfacing and restriping of existing roads; installation of signage; replacement of existing bridge/dock support structures (fenders, pilings and bulkheads if no dredge or fill is required); maintenance of road-side ditches and drainage features (if the material is removed from the site and disposed of at an approved facility); or replacement of existing surface features (dock planks, railings, loading ramps, approach/deck resurfacing) do not require a Coastal Use Permit unless dredge or fill is required, work will extend outside of the existing footprint and/or staging areas are located outside of existing rights-of-way. Maintenance activities that do not qualify for the above exemption, including, but not limited to, maintenance of revetments, embankments and banklines; installation of erosion control material; and location of staging areas outside of existing, constructed rights-of-way will require a Coastal Use Permit.

Expansion of existing transportation facilities includes any activity that increases the footprint of the existing feature and will require a Coastal Use Permit. Activities such as, but not limited to, road/bridge widening, turn lane installation, installation of new drainage features on existing roads/bridges; and ferry dock expansion are considered expansion activities. If, in OCM's opinion, adverse impacts to coastal resources may occur from proposed non-exempt maintenance activities or expansion activities, brief Alternatives and Justification Analyses will be required. The information required in the analyses is dependent on the nature of the maintenance activity and the extent of resource impacts.

Alternatives Analysis

OCM recognizes that maintenance and expansion activities are site-specific, therefore, an Alternatives Analysis for maintenance and expansion activities need not address alternate sites for performing the activity. The analysis instead should address the methods and equipment to be used to perform the maintenance or expansion activity and a location of the staging area(s) that minimize adverse impacts to coastal resources to the maximum extent practicable. Only those aspects of the proposed maintenance activity that result in adverse impacts to coastal resources need be addressed. The analysis can take the form of a brief narrative that identifies all practical options for performing the work and locating staging areas.

Method(s) and Equipment

OCM understands that the methods and equipment used to perform maintenance and expansion activity may be limited by the type of activity to be done. If the methods and/or equipment used to perform the maintenance or expansion activity will result in adverse impacts to coastal resources, and options exist, the Alternatives Analysis should include:

1. An explanation of the method(s) to be used to perform the maintenance or expansion work. The narrative should identify and discuss all practical options for performing the work and explain why each was eliminated or chosen. The narrative should identify and explain any limiting factors. If using economics as a deciding factor in method selection, provide cost comparisons of all methods considered.

Staging Areas

The staging area(s) needed to perform the maintenance and expansion activities should be of the minimum size necessary to safely store and access equipment and should be located to avoid adverse impacts to coastal resources. If staging area location will be determined by the contractor performing the work, those areas outside of the permitted construction right-of-way must be approved by OCM. A separate permit or a revision to the construction permit will be required prior to preparation and use of the staging area. If coastal resources will be impacted by staging areas, the above narrative should include:

2. A discussion of all practical staging area locations and an explanation of why each was eliminated or chosen. The narrative also should explain the need for the size(s) of the staging area(s); any limitations that may be present on site; and include a discussion of any special equipment requirements. Illustrations and site layout plans may helpful in demonstrating space requirements and limitations.

Justification Analysis

The Justification Analysis should be a narrative that explains the nature and extent of the proposed maintenance or expansion work and why the maintenance or expansion is required (i.e. what are the consequences of not performing the maintenance activities). A purpose and need statement can be provided as justification for maintenance and expansion activities. If coastal resource impacts account for 20.0% or more of total project impacts for expansion activities, the feasibility study done during the normal course of project planning should be provided. How expansion activities will affect existing evacuation capacity also should be addressed.

Construction of New Transportation Features

New transportation features include the construction of previously non-existent roads and bridges and the lengthening of existing roads. If, in OCM's opinion, adverse impacts (including impacts from secondary development) to coastal resources may occur during or after construction, Alternatives and Justification Analyses will be required.

Alternatives Analysis

The goal of an Alternatives Analysis is to find a route for the proposed road which results in the least amount of adverse impact to coastal resources while allowing the project to fulfill its main objective(s). The Alternatives Analysis provides an objective method of performing a fair and thorough consideration of feasible options for the location, construction, operation and maintenance of the proposed transportation feature. OCM encourages applicants to utilize routes that avoid or minimize both direct and indirect adverse impacts to coastal resources to the maximum extent practicable. **Feasible routes** are defined as any route that can support the main objective(s) of the proposed development. Current aerial photography and/or specific knowledge of the area can be used to identify feasible routes. Project objective(s), surrounding land use, total project impact and type and extent of coastal resource impacts should be considered when selecting feasible alternative routes.

Documentation that clearly demonstrates that each route was compared equally and explains why each route was eliminated or chosen will be required. Documentation that supports the reasons for elimination should be included with the analysis. All alternate routes and the preferred route must be compared using, at a minimum, the factors identified below. If other factors not identified by OCM are used to compare sites, please define those factors and explain how they were used to evaluate each route. Table 1 can be used to determine the minimum range of alternatives and level of detail that should be considered when developing an Alternatives Analysis.

Table 1 – Determining the Range of Alternatives that should be considered when proposing a new transportation feature.

Scope of Development	Resource Impacts (% of total project impacts)		
	Low (<10%)	Med (10.01-30%)	High (>30.01%)
Small (one mile or less)	Category 1	Category 2	Category 3
Large (more than one mile)	Category 2/3*	Category 2/3*	Category 3

* If more than 5 acres of resource impact will occur, higher level of detail is required.

If following the NEPA process, documentation of that process is sufficient to address the Alternatives Analysis. If not following the NEPA process, a minimum of two (**Category 1**), three (**Category 2**) or five (**Category 3**) alternate feasible routes/sites, along with the no-build option must be considered. Each route/site should be compared using the same parameters and should, at a minimum, include the items listed below (for exceptions see #2 and #7).

1. Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered. Identify the area(s) to/from which the proposed transportation feature will provide access and why this access is necessary.
2. Identify, on a map, each route/site considered. If less than the minimum number of routes/sites, as specified above, have been considered, please explain why and provide documentation demonstrating the efforts made to find alternate routes/sites. If some routes/sites were given preliminary consideration only to be eliminated before final review, please list these alternatives and explain why they were eliminated.
3. Describe each route/site considered. Include topography, water/wetland features, habitat type(s) present and amount of impact to each. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the route using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.
4. Describe the surrounding land use(s) within one-half (½) mile of each route/site considered. Include type and extent of existing use and any planned future uses, if known. Identify any known secondary development that may occur along the new transportation feature.
5. Identify the current zoning of the properties along the route(s)/site(s).

6. Explain how the use will affect existing evacuation routes and times.
7. Provide a narrative explaining the reasons for the elimination/selection of each route/site. Please note that the factors used to compare each route/site should be identified and should be consistent among routes/sites, however, if some routes/sites were given preliminary consideration only to be eliminated before final review, please list these alternatives and explain why they were eliminated.
8. Provide a narrative that explains the minimum necessary width of the proposed right-of-way. Include any regulatory requirements and site limitations that affect the width chosen. Illustrations and site layout plans may helpful in demonstrating space requirements and limitations.

Justification Analysis

The Justification Analysis should clearly demonstrate a public need and/or demand for the proposed services. The analysis should include data that identifies current access options and current traffic patterns and volumes. It should explain how the new transportation feature will improve the existing traffic patterns and volumes and how it will affect evacuation capacity. The most common form of Justification Analysis for new transportation features is a feasibility study done during the normal course of planning and should be provided in its entirety.

Utilities

Introduction

Utility activities include potable water facilities and lines, sewerage facilities and lines, gas and electricity facilities and lines, phone lines, cable lines and fiber optic lines. The activities associated with installation and maintenance of these features typically are undertaken by state or local governmental bodies, but can be performed by non-governmental organizations or retail service providers. Activities associated with existing utilities are considered maintenance and/or rehabilitation as long as the proposed maintenance work does not exceed the scope and/or footprint of the original feature at installation. Activities associated with expansion of existing utility features and the installation of new utility features are considered new installation. If, in OCM's opinion, adverse impacts to coastal resources will occur during construction and/or operation of a proposed activity, Alternatives and Justification Analyses will be required.

The level of detail needed in the Analyses depends on whether the activity is maintenance of existing features, expansion of existing facilities or installation of new facilities; and on the level of development in the service area. Proposed coastal uses involving new facility development will require more detailed analyses than proposed uses involving existing facility expansion; proposed uses involving existing facility expansion will require more detailed analyses than proposed uses involving existing facility maintenance. OCM encourages potential applicants to avoid adverse impacts to coastal resources to the maximum extent practicable and will provide assistance with identifying alternate sites and developing a Justification Analysis.

Maintenance of Existing Utility Facilities

Maintenance of existing facilities includes activities such as repair or replacement of existing lines and support structures, trimming branches in existing rights-of-way and repair or replacement of existing plant, station or substation equipment or structures. Please note that, in some cases, normal repairs and the rehabilitation, replacement or maintenance of existing structures do not require a Coastal Use Permit provided that:

1. the structure or work was lawfully in existence, currently serviceable, and in active use during the year preceding the repair, replacement or maintenance; and
2. the repair or maintenance does not result in an encroachment into a wetland area greater than that of the previous structure or work; and
3. the repair or maintenance does not involve **dredge** (the removal by excavation or any other means of native material, including soil, sand, mud, clay and semisolid sediment, regardless of whether the material supports or is supporting vegetation, from any lands or water bottoms in the coastal zone of Louisiana) or fill activities; and
4. the repair or maintenance does not result in a structure or facility that is significantly different in magnitude or function from the original.
5. the activity is not located within one-quarter mile of a barrier island; or on a chenier, barrier beach, dune, salt dome or other similar isolated, raised landform.

Access to the repair site may require OCM review if the access route requires dredge or fill or coastal resources will be adversely impacted by access, even if the repair activity itself is

exempt. Maintenance activities that do not qualify for the above exemption will require a Coastal Use Permit, and if, in OCM's opinion, adverse impacts to coastal resources may occur from non-exempt access or maintenance activities, brief Alternatives and Justification Analyses will be required. The information required is dependent on the nature of the maintenance activity and is outlined in the sections below. Please note that an exemption determination from OCM is exclusive to OCM and does not relieve the applicant from obtaining other local, state or federal permits, as required by law.

Alternatives Analysis

Maintenance activities at plants, stations and substations can include repair or replacement of existing equipment, buildings and infrastructure. Maintenance activities on existing lines can include underground and surface line leak repair, support structure repair or replacement and overhead line replacement. OCM recognizes that these types of maintenance activities have a limited range of alternatives; therefore, the Alternatives Analysis need not address alternate sites. The Analysis instead should address alternate methods or configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. Only those aspects of the proposed maintenance activity that result in adverse impacts to coastal resources need be addressed.

The Analysis should be a brief narrative that includes an explanation of the nature and objectives of the proposed maintenance activities; an identification and discussion of any available feasible options for the proposed activity that minimize adverse impacts to coastal resources; and an explanation of why less damaging feasible options were not selected. For line maintenance, the Analysis also should include information related to access, methods and equipment, and work space size.

Access

Every effort should be made to minimize impacts resulting from access to the work site. Existing access routes or roads, or other practical means of access, should be used in lieu of constructing new access routes or roads. Air boats, helicopters or other low impact equipment should be considered in lieu of wheeled or tracked vehicles, where feasible. If it is necessary to construct new access; or existing access requires improvements or involves adverse impacts to coastal resources, the narrative outlined above also should include the following:

1. An explanation of the route(s) and conveyance method(s) to be used to access the work site. Identify and discuss all possible options and explain why each was eliminated. If a new access route is required, please explain why.
2. A map showing the access route(s) to the work site(s). This can be included on the vicinity map and/or plan view used for the JPA. If multiple alternatives are available, please show all alternatives on the map (a separate map may be required if there are many alternatives).

Method(s) and Equipment

Every effort should be made to minimize adverse impacts to coastal resources that may result from performance of the maintenance work. Again, air boats, helicopters or other low impact equipment should be considered in lieu of wheeled or tracked vehicles, where feasible. If adverse impacts to coastal resources cannot be avoided during the maintenance activities, the narrative outlined above also should include the following:

3. An explanation of the method(s) to be used to perform the maintenance work. Identify and discuss all possible options and why each was eliminated. If using economics as justification for method and/or equipment selection, include cost comparisons for each option considered.

Work Space Size

The work space needed to perform the maintenance activities should be of the minimum size necessary to safely do the work. It should include any excavation and dredged material placement areas, equipment staging areas, travel areas, work areas, etc. If adverse impacts to coastal resources cannot be avoided during the maintenance activities, the narrative outlined above also should include the following:

4. An explanation of the size(s) of the work space(s) needed to perform the maintenance activities. Include a discussion of any limitations that may be present on site and a discussion of any special equipment requirements. Illustrations and site layout plans may helpful in demonstrating space requirements and limitations.

Justification Analysis

The Justification Analysis should be a narrative that explains the nature and extent of the proposed maintenance work and why the maintenance is required (i.e. identify the consequences of not performing the maintenance activities).

Expansion of Existing Utility Facilities

Expansion of existing facilities includes an increase in the size and/or capacity of existing features such as equipment, buildings, storage areas, staging areas, parking areas, and level of service provided. Expansion activities that, in OCM's opinion, have adverse impacts on coastal resources will require Alternatives and Justification Analyses as outlined below.

Alternatives Analysis

OCM recognizes that expansion activities have a limited range of alternatives. If the expansion activities are not limited to a location immediately adjacent to existing facilities, please refer to the Construction of New Utility Facilities, Alternatives Analysis section below for an outline of the Alternatives Analysis required. If the expansion activities must be located adjacent to existing facilities, please refer to the following outline for the Alternatives Analysis.

For expansion activities immediately adjacent to existing facilities, the Alternatives Analysis should address all feasible locations surrounding the existing facility as well as methods or

configurations of implementation that minimize adverse impacts to coastal resources to the maximum extent practicable. The Alternatives Analysis should include the following:

1. A narrative explaining the project objective(s) and identifying the proposed features required to meet the objective(s). The narrative also should identify any project objectives or features that may limit the range of alternatives to be considered.
2. A description of each location considered. Include general topography, water/wetland features, habitat type(s) present, if known, and estimate of impact to each.
3. A narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Justification Analysis

The Justification Analysis for existing facility expansion activities must demonstrate the need for the enhanced goods and/or services to be provided by the expansion. The analysis should include a narrative explaining the enhanced goods and/or services to be provided by the expansion, why these services are in demand and the consequences of not implementing the proposed expansion. Supporting documentation may be required depending on the extent of coastal resource impacts.

New Utility Facilities

New utility features include the installation of previously non-existent utility features and the lengthening of existing utility features. New utility features may require detailed Alternatives and Justification Analyses if, in OCM's opinion, adverse impacts (including impacts from secondary development) to coastal resources may occur during or after construction. The level of detail required for the analyses is dependent on the type and level of land use in the area to which the services will be provided.

Alternatives Analysis

The siting of plants, stations or substations; the route of the utility line; the method of line installation; and the size of the construction and permanent rights-of-way for the line all are adjustable (within reasonable limits) and selection of the least damaging feasible options should be taken into consideration when developing new utility facilities. The goal of an Alternatives Analysis is document the efforts taken to find a location for the proposed development and the route of necessary lines which results in the least amount of adverse impact to coastal resources while allowing the project to fulfill its main objective(s). The Alternatives Analysis provides an objective method of performing a fair and thorough consideration of feasible options for the location, construction, operation and maintenance of a proposed coastal use. OCM encourages applicants to utilize areas that avoid or minimize both direct and indirect adverse impacts to coastal resources. If a selected project location; or construction, operation or maintenance method may, in OCM's opinion, result in adverse impacts to coastal resources, an Alternatives Analysis will be required.

An Alternatives Analysis for a new utility features must not only identify the least damaging location of the plant, station or substation but also the least damaging route(s) for associated lines. The route of a line may limit the location of the plant, station or substation and vice versa. Therefore siting and routing should be considered concurrently in order to identify the overall least damaging feasible option for the utility. If using economics as a selection factor among options, cost comparisons of the options considered should be provided and should include the cost of mitigation associated with each option.

Siting

Siting refers to the location of the plant, station or substation that will generate, boost or serve the utility to be provided. **Feasible sites** are defined as any available parcel of land within the service area that can support the main objective(s) of the proposed development. Project objective(s), surrounding land use, total project impact and type and extent of coastal resource impacts should be considered when selecting feasible alternative sites.

Feasible sites can be identified using current aerial photography. Landowners can be identified through clerk of court records and contacted to determine availability of the land for purchase. Local newspapers also provide a source of available real estate offerings. A drive-by search for lots posted for sale in the general development vicinity also can be an effective method of finding available sites. Several websites offer listings of large tracts of land (see “Available Sources” below). Multiple Listing Real Estate Searches (MLS) also can be used to determine the availability of property for development and also can be used to assess the current housing/real estate market in the development area. MLS or other real estate search results provided for site identification purposes must include the parameters used for the search. If no available alternate sites can be identified, documentation demonstrating such (letters of refusal from landowners to sell property (or chronology and summary of attempts), MLS or other real estate searches resulting in no matches - include search parameters and full results; aerial photos showing no available undeveloped land, any other documentation showing an attempt to find less damaging properties) must be provided.

Documentation that clearly demonstrates that each parcel was compared equally and explains why less damaging parcels were eliminated will be required. Documentation that supports the reasons for elimination should be included with the analysis. All alternate sites and the preferred site must be compared using, at a minimum, the factors identified below. If other factors not identified by OCM are used to compare sites, please define those factors and explain how they were used to evaluate each site. Table 1 can be used to determine the minimum range of alternatives and level of detail that should be considered when developing an Alternatives Analysis.

Table 1 – Determining the Range of Alternatives that should be considered in the Alternatives Analysis for new utility development.

Scope of Development	Resource Impacts (% of total project impacts)		
	Low (<10%)	Med (10.01-30%)	High (>30.01%)
Small (less than 1 acre)	Category 1	Category 2	Category 3
Large (1 acre or more)	Category 2/3*	Category 2/3*	Category 3

* If more than 5 acres of resource impact will occur, higher level of detail is required.

A minimum of two (**Category 1**), three (**Category 2**) or five (**Category 3**) alternate feasible sites for the plant, station or substation must be considered. Each site should be compared using the same parameters and should, at a minimum, include the following items:

1. Define the project objective(s) and identify the proposed features required to meet the objective(s). Identify any project objectives that may limit the range of alternatives to be considered.
2. Identify, on a map, the location of each site considered for development. If less than the minimum number of sites, as specified above, have been considered, please explain why and provide documentation demonstrating the efforts made to find the least damaging site.
3. Describe each site considered. Include parcel size relative to development size, topography, water/wetland features, habitat type(s) present and amount of impact to each. If access to the property is limited or unavailable, explain the limitations and provide any information that can be gained about the site using current photography and topographic and habitat maps. Identify any limiting factors and explain how those factors limit development.
4. Identify the availability and capacity of existing infrastructure (roads, utilities, water, sewer, etc.). Explain how the use will affect existing infrastructure and identify any additional permits required (e. g., DOTD driveway permit). Describe any new infrastructure required and include location and/or route of the needed infrastructure and type and extent of impacts associated with installation of that infrastructure.
5. Describe the surrounding land use within one mile (1) of each site considered. Include type and extent of existing use and any planned future uses, if known.
6. Identify the current zoning of the site and indicate if any zoning variances will be required prior to development.
7. Provide a narrative explaining the reasons for the elimination of each site considered but not selected for development. Please note that the factors used to compare each site should be identified and should be consistent among sites.

Once the least damaging feasible site for the plant, station or substation has been identified, alternate configurations/methods and/or reduction in scope should be considered in an attempt to avoid or minimize adverse impacts to coastal resources on the selected site.

Routing

OCM recognizes that the route a utility line takes is dependent on the location of the plant, station or substation serving the line and the area to which the utility will provide. With this understanding, alternate routes that minimize coastal resource impacts but that still provide services to the intended area must be considered. The habitat through which the utility passes should be considered when selecting a route. Open water, uplands, spoil banks, existing rights-of-way, etc. should be used and coastal resources should be avoided to the maximum extent practicable. The Alternatives Analysis should include the following:

8. Identify the area(s) to which the proposed utility will provide service.
9. Provide a narrative explaining what routes were considered, how they were compared and why each was eliminated. Include in the narrative a description of the habitats impacted and the extent of the impacts for each route.
10. Include a map showing the intended service area and all routes considered.

Method of Installation

The method of installation depends on the type of utility being installed. Utility pipelines typically are buried whereas power, phone, cable and internet lines can be buried or aerial. Buried utilities can be installed either by trenching or horizontal directional drilling (HDD). Trenching and aerial installation will require clearing a right-of-way, HDD will require bore entry and exit sites. The Alternatives Analysis should include the following:

11. Provide a narrative explaining what methods of installation were considered and why they were eliminated. Include in the narrative a description of the habitats and other resources impacted and the extent of those impacts. If using economics as a driving force for selection of the method of installation, include cost comparisons for each option considered, including mitigation costs.

Right-of Way Width and HDD Entry and Exit sites

The right-of way width can vary depending on the type of utility line being installed and the method of installation. The HDD entry and exit site sizes also can vary depending on the size of the equipment used, the type of line being installed and the distance of the bore. The right-of-way and HDD entry and exit sites should be limited to the minimum size and/or number of sites necessary to safely install, operate and maintain the services being provided. The Alternatives Analysis should include the following:

12. Provide a narrative that explains the minimum necessary width of the proposed right-of-way and/or HDD entry and exit sites. Include any regulatory requirements and site limitations that affect the sizes chosen. Illustrations and site layout plans may helpful in demonstrating space requirements and limitations.

Justification Analysis

The Justification Analysis should explain the nature of the proposed services and provide documentation that clearly demonstrates a public need or demand for the proposed services. The level of detail required for the analysis depends on the level of development in the service area. Developed areas will not require complex documentation in order to demonstrate a public need or demand for the proposed services whereas an undeveloped area would require detailed documentation to demonstrate a public need or demand. For the purposes of this guide, an undeveloped area is defined as an area that is not under moderate to dense residential, commercial or industrial use.

Developed Areas

1. Describe the proposed services to be provided.
2. Identify the service area to which the proposed services will be provided and the anticipated number of users and/or level of usage within that service area.
3. Describe the existing services available to the service area and how the proposed services will enhance and/or replace the existing services. Include in your discussion the maximum capacity and current level of usage for the existing services and the anticipated maximum capacity and level of usage for the proposed services.

Undeveloped Areas

Answer 1-3 above plus:

4. Provide documentation that supports the position that the new services are needed in the service area. This documentation can take the form of data demonstrating population trends (migration, growth, etc.); building permit trends in the service area; type and number of proposed developments in the service area and status of federal, state and local approvals.

Appendix A

Available Sources

Real Estate Data

Real estate information can be obtained from realtors and/or building associations in the development area. Multiple Listing Searches provide a listing of all available parcels of land that meet criteria specified by the searcher and can be performed by real estate agents and/or online. The search results will provide a picture of the current real estate stock and the demand on that stock as well as assist in identifying the availability of feasible alternatives. Please note that documentation and data gathered for other purposes, such as to obtain financial backing or to attract development partners, that demonstrate the demand or need for the proposed development also can be included as part of the Justification Analysis.

The following websites also may be useful sources of information:

<http://louisianalandsource.com/>
http://www.westslopeproperties.com/land_sale/?filter=LA
http://www.landwatch.com/Louisiana_land_for_sale
<http://www.landandfarm.com/>
<http://www.landsofamerica.com/america/?Search=region>
<http://www.unitedcountry.com/realestate/search-state/index.htm>
<http://www.farmlandsearch.com/view.aspx?sc=louisiana&p=0-8-0>
<http://www.wredcoland.com/Default>
<http://www.ldaf.state.la.us/portal/News/MarketBulletinCurrent/tabid/165/Default.aspx>

Population Data

<http://www.huduser.org/portal/datasets/socds.html>
<http://www.reis.com/index.cfm>
<http://www.census.gov/econ/census07/>
http://www.bls.gov/cew/map_application.htm

Economic Data

The US Army Corps of Engineers offers waterborne commerce statistics at
<http://www.ndc.iwr.usace.army.mil/wcsc/wcsc.htm>.

The US Bureau of Labor Statistics (<http://www.bls.gov>) and the US Census Bureau (<http://www.census.gov/econ/>) offer employment statistics.

The LA DOTD, Port Priority Program offers several reference manuals and documents. The “PortRule 2008” document details how to determine the benefits/economics for a port program project and can be found at <http://www.dotd.la.gov/multimodal/portpriority/>.

Appendix B

MEMORANDUM OF UNDERSTANDING

BY AND BETWEEN

**LOUISIANA DEPARTMENT OF TRANSPORTATION AND
DEVELOPMENT
OFFICE OF MULTIMODAL PLANNING
(Hereinafter referred to as "DOTD")**

AND

**LOUISIANA DEPARTMENT OF NATURAL RESOURCES
OFFICE OF COASTAL MANAGEMENT
(Hereinafter referred to as "OCM")**

WHEREAS, the State and Local Coastal Resources Management Act of 1978 ("Act") establishes that it is the policy of the State to: Protect, develop, and where feasible, restore or enhance the resources of the state's coastal zone; Enhance opportunities for the use and enjoyment of the recreational values of the coastal zone; Support and encourage multiple uses of the coastal resources consistent with the maintenance and enhancement of the renewable resource management and productivity; and Provide for adequate economic growth and development with the minimization of adverse effects of one resource use upon another (La. R.S. 49:214.22); and

WHEREAS, a regulatory framework was developed pursuant to those policies and the Department of Natural Resources was given the responsibility to administer the review and permitting of activities occurring in the coastal zone of Louisiana (La. R.S. 49:214.26); and

WHEREAS, a specific purpose of the Coastal Management permit process is to ensure timely and predictable decisions on permit applications (La. R.S. 49:214.27(C)(7)); and

WHEREAS, the Louisiana Constitution provides that the DOTD has the authority to coordinate and assist in the Port's infrastructure development; and

WHEREAS, it has been demonstrated with a working group of cooperating agency and port personnel, that multi-agency pre-application meetings can reduce permitting delays and costs associated with a permit application; AND

WHEREAS, it is the purpose of this Memorandum of Understanding between the Louisiana Department of Natural Resources, Office of Coastal Management (OCM) and the Louisiana Department of Transportation and Development, Port Priority Program (DOTD) to establish a process to coordinate applications for port improvement activities occurring within the coastal zone of Louisiana, as defined in RS 49.214.24.

NOW THEREFORE, In order to assist OCM and DOTD in meeting their respective lawful responsibilities, reduce conflicting decisions, eliminate duplication of effort, expedite application processing and assure conformity of action with the Louisiana Coastal Resources Program, **IT IS AGREED THAT:**

- 1) OCM and DOTD will encourage port applicants located within the coastal zone of Louisiana to initiate interagency coordination with OCM, DOTD and other interested regulatory and/or resource agencies prior to application for funding from DOTD or application for a Coastal Use Permit from OCM. This pre-application coordination will include, but not be limited to, a discussion of the project features; possible alternative approaches, configurations or sitings that would result in a reduction in adverse impacts to coastal resources; beneficial use of dredged material; and mitigation requirements as outlined in LAC 43:I.723 and 724. The coordination meeting will 1) provide the port applicant with the information necessary to develop proposed activities such that project modifications necessary to ensure conformity with the LCRP are identified early and can be incorporated into project design and cost estimates prior to application for funding; and 2) provides OCM an opportunity to review the proposed activities and suggest alternatives to project design and/or siting that minimize adverse impacts to coastal resources, as required by the LCRP. Follow up pre-application meetings may be necessary depending on the complexity of the issues raised during the initial meeting, and will be determined on a case-by case basis.
- 2) For port improvement activities which have undergone the above described pre-application coordination, the economic justification review done by DOTD during the normal process of application review for funding will serve as economic justification review for OCM. DOTD shall forward to OCM, upon completion of economic justification review, a document indicating eligibility status for funding for the proposed port activities. A determination of "eligible for funding" from DOTD shall be interpreted by OCM as demonstrating adequate economic justification for adverse impacts to coastal resources that may result from the proposed port activities. Pre-application meetings referenced in Section 1 above will be utilized to ensure that adverse impacts to coastal resources are avoided and/or minimized to the extent practicable. Be advised it could take three months after an Application to the DOTD Port Priority Program is submitted to have an approved construction program. A determination of "ineligible for funding" by DOTD shall be interpreted by OCM as lacking adequate documentation necessary to demonstrate justification for adverse impacts to coastal resources that may result from the proposed port activities. Projects classified as "ineligible for funding" may still be considered for regulatory permit authorization, but the justification and needs will be reviewed under the OCM program guidelines.
- 3) For the purposes of beneficial use of dredged material, OCM considers the placement of dredge material for building property for Port expansion and development a beneficial use

provided that the use of the dredged material is in conformance with the Port's plan of development and serves the public purpose.

- 4) OCM will work with the Ports and DOTD to complete a public notice ready draft OCM General Permit for routine port maintenance and improvement activities within 90 days of the effective date of this Memorandum of Understanding. That process will include specifying the types of activities to be authorized and implementing procedures for obtaining such authorization. This General Permit will allow expedited review of Coastal Use Permit applications for covered port activities. OCM and DOTD will collaborate with the U.S. Army Corps of Engineers to facilitate Corps timely approval of items along federally maintained navigation channels.

IN WITNESS WHEREOF, this Memorandum of Understanding has been signed in duplicate originals by the undersigned duly authorized representatives, in the presence of the undersigned competent witnesses, on the dates indicated below.

To view the signed document, [click here](#).