# BELLE FONTAINE, JACKSON COUNTY, MISSISSIPPI: HUMAN HISTORY, GEOLOGY, AND SHORELINE EROSION

Stephen M. Oivanki Editor

## **BULLETIN 130**

St. Andrews on the Gulf

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY, OFFICE OF GEOLOGY S. CRAGIN KNOX, Director Jackson, Mississippi 1994

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1. Coastal Zone Management--Mississippi--Jackson County.

2. Shore Protection--Mississippi--Jackson County. 3. Mississippi--History. I. Oivanki, Stephen M.



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July 15, 1994

Mr. R. B. Flowers, Chairman, and Members of the Commission Commission on Environmental Quality

Commissioners:

The Office of Geology is pleased to transmit to you Bulletin 130, entitled "Belle Fontaine, Jackson County, Mississippi: Human History, Geology, and Shoreline Erosion," edited by Stephen M. Oivanki of my staff.

This publication is the culmination of a co-operative, multi-year study of the Belle Fontaine area by the Office of Geology and the Department of Marine Resources to determine the human history and development of the area, its geology, and the causes of and possible solutions to the coastal erosion problems there. The papers included in this publication will provide a valuable resource for the citizens of the area and coastal planners in understanding and solving this and other similar erosion problems along the Gulf coast.

Respectfully submitted,

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S. Cragin Khox Director & State Geologist

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## **BELLE FONTAINE, JACKSON COUNTY, MISSISSIPPI: HUMAN HISTORY, GEOLOGY, AND SHORELINE EROSION**

#### **INTRODUCTION**

## Stephen M. Oivanki Mississippi Office of Geology

The Belle Fontaine area is located on the gulf coast in Jackson County, Mississippi, between the towns of Ocean Springs and Gautier (see Figure 1). On a Mississippi mainland shoreline that is over 56% altered by seawalls, artificial beaches, harbors, and other development, the beach at Belle Fontaine is one of the few natural scenic areas on the Mississippi coast, and the only remaining natural beach on the Mississippi mainland. Since the mid-1850s, when the first reliable coastal maps were made by the U.S. Coast Survey, the Belle Fontaine area has shown a steady trend of erosion along the shoreline. Over the 136-year period from the 1850s to 1986 the area has lost 473 acres due to erosion of the shoreline. Since the first settlement at Belle Fontaine in the late 1600s the area has been developed into several communities with numerous homesites located along the shoreline. Continued erosion now threatens many of these homes with destruction.

I first became acquainted with the Belle Fontaine area in the mid-1960s, when my family visited for vacations during the summer months. At that time, prior to most of the development of the beach area, there were few roads and many opportunities to observe the natural beauty of the shoreline. A wide sand beach fronted most of the shoreline, and erosion was not a concern. Development was limited to only a handful of vacation homes scattered along the beach.

As more people became aware of this natural scenic landscape, development increased, and soon permanent dwellings were established and the shoreline gradually filled with homes. Hurricane Camille in 1969 destroyed all but a couple of these homes, but post-hurricane development again filled the shoreline with houses. As the houses provided a permanent reference for the shoreline position, erosion became more noticeable, and many residents began to express public concern about the problem. Since all of the shoreline is privately owned, public officials were limited in their response. Aside from placing riprap and fill to prevent access roads from being eroded away as the beach retreated, public aid to solve the erosion problem was not forthcoming. This report is designed to address the erosion problem at Belle Fontaine, and to provide some scientific basis for the residents there to enact shore protection measures which will have a reasonable chance of success.

The Mississippi Office of Geology, under a grant from the U. S. Geological Survey, and the Mississippi Bureau of Marine Resources, under a grant from the U. S. Environmental Protection Agency, initiated this joint research project to study the erosion problem at Belle Fontaine and to aid in

future coastal management policy development along the coast. Several tasks are addressed in this report: Dr. Klaus J. Meyer-Arendt, a professor in the Department of Geosciences at Mississippi State University, was retained to document the history of human development and impacts in the area; the geologic history and framework of Belle Fontaine as well as the current physical setting were researched by myself and Dr. Ervin G. Otvos, the head of the Geology Section at the Gulf Coast Research Laboratory; Dr. Joseph N. Suhayda, a professor in the Civil Engineering Department at Louisiana State University, developed a physical processes model of the Belle Fontaine shoreline to predict future erosion and evaluate possible shore protection measures in response to processes predicted by the model; and Cathy Z. Hollomon, with the Mississippi Bureau of Marine Resources, provided a summary of coastal management policies and regulations in Mississippi as a reference for those who might be interested in pursuing some of the remedial suggestions in this report.

Field research for this report was conducted during the winter, spring, and early summer of 1992 and the first half of 1993. A wave meter was deployed by Joseph Suhayda from February 14th to May 3rd, 1992. Beach profiles, sediment sampling, and bathymetric surveys were done by the Office of Geology Coastal Section staff in April of 1992, and vibracores were collected in June 1992. A current shoreline position was measured with Global Positioning System (GPS) equipment in June of 1993. The Office of Geology will continue to monitor the area to document future changes.

This Bulletin is composed of four reports prepared by different authors for inclusion here. Each report deals with the individual authors' specialty field of interest concerning the Belle Fontaine area. The conclusions and suggestions presented in these reports are based on the best scientific evidence available; however, the reader is cautioned to use appropriate judgement and not rely solely on this report when attempting to remedy any of the erosion problems addressed here. It is hoped that this report will serve as a catalyst for future research and a basis for future efforts to preserve this area in as close to a natural state as possible.

#### ACKNOWLEDGMENTS

The research and results presented in this report were funded in part by grants from the U. S. Geological Survey and the U. S. Environmental Protection Agency. The contents of this publication do not necessarily reflect the views and policies of the U.S. Government, nor does the mention of trade names or commercial products constitute their endorsement by the U. S. Government. Final drafts of the illustrations in this report were done by Barbara Yassin at the Office of Geology.



## HUMAN SETTLEMENT OF THE "ISLAND OF BELLE FONTAINE," JACKSON COUNTY, MISSISSIPPI

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#### THE STUDY AREA

The "Island of Belle Fontaine" (a.k.a. the study area) comprises a convex-shaped landmass of marsh-fringed uplands approximately 9 miles long and 2.5 miles wide located between Ocean Springs and Gautier in Jackson County (Figure 1). The core of the landmass--perhaps 75% of the total surface area--consists of a barrier ridge complex which ranges from about 8 to 20 feet above sea level, and can readily be delineated by the +10 ft. contour. The beach ridge complex has been truncated by wave action at the eastern end, where a narrow sand beach occupies the base of eroded cliffs. More recent dune ridges over 10 feet high extend westward from this zone of truncation along the shoreline for about 3 miles. A low-elevation beach/dune complex, highly susceptible to erosion, extends northeastward to the mouth of Graveline Bayou. The name Belle Fontaine Beach is now used for the entire convex beach area of which Belle Fontaine Point marks the southernmost point. The western end of the beach ridge pinches off in a trailing spit which recurves northward into marsh (the eastern end of the Marsh Point peninsula). Historically, the westernmost beach ridges (Pointe aux Chênes) were fronted by a narrow strip of salt marsh, but over the past several decades waves have eroded the marshes and encroached upon the dunes directly. As a result of this erosion, a narrow beach has been created in this area as well as along the front of the highly erosive Marsh Point peninsula immediately to the west.

The "Island of Belle Fontaine" is separated from the "mainland" by a sinuous depression occupied by cypress swamp forest and brackish-to-saline marshes and drained by Simmons Bayou which empties westward into Davis Bayou, an embayment of Biloxi Bay, and Crossway Bayou, which drains eastward into Graveline Bay and on into Graveline Bayou and Mississippi Sound. In addition to the extensive wetlands flanking these waterbodies, tidal marshes are found north of the Belle Fontaine Point dune ridge complex and into the Marsh Point peninsula. Natural springs flowed profusely in numerous locations during historic times, especially along upland/wetland contact zones where aquifers discharged their flow. Although the original springs that gave rise to the name 'la belle fontaine' ('good fountain' or 'good spring') have long ceased to flow permanently, several lesser known springs, especially immediately north of the Simmons Bayou/Crossway Bayou depression, flowed freely until the 1980s (Lawton, personal communication, 1992).

The use of the geographic placenames of Belle Fontaine, Belle Fountain, and Fontainebleau has been a source of confusion. The original name of Belle Fontaine was adopted by Jean Baptiste LeMoyne, Sieur de Bienville (brother of d'Iberville) in 1719 during a move of the headquarters of French operations along the Gulf Coast from Mobile back to Biloxi. At the entrance to Biloxi Bay (incorrectly identified as Bay St. Louis) about 5 leagues WNW of Round Island, Bienville referred to the fountain of water that flowed from "the hills" as "the best water on the coast" (Bilbo, 1941). From Bienville's measured distance and geographic description, that location is identified as the present Pointe aux Chênes (Oak Point), from which spring water flowed freely to the beach as recently as the late 1920s (White, 1986). The name Belle Fontaine referred to Pointe aux Chênes throughout the 18th century, and references to a Baudreaux residence at the "presque isle" (peninsula or sand spit) called Belle Fontaine are numerous. (Because the Belle Fontaine uplands were surrounded entirely by marsh or water, the word "Ile" or island became used in conjunction with Belle Fontaine early in the colonial period.)

A second, and later, theory holds that the name Belle Fontaine stems from springs that flowed until the early 1900s at the zone of truncation, along present-day Belle Fontaine Beach, where an estate called Belle Fontaine was built in the 1890s (Walsh, 1937). In any case, the name Belle Fontaine subsequently became applied to the entire area south of the Simmons Bayou/Crossway Bayou depression, both in its French or Anglicized (Belle Fountain, Bell Fountain) forms.

The first significant Anglo settlement in the region (in the 1830s and 1840s, on the higher ground extending from Pointe aux Chênes to north of the Simmons Bayou/Crossway Bayou depression) was known as Belle Fountain. When the first railroad was built in the late 1870s (along the approximate route of the old Fort Road, which ran from Fort Louis in Mobile to Fort Maurepas in Old Biloxi), Belle Fountain became the first flag stop east of Ocean Springs. By 1892, a post office was established. Inspired by the town of Fontainebleau, France, as well as a variation of nearby Belle Fontaine, the name Fontainebleau was adopted for the post office by the community's first and only postmistress, Louise Richter (Hines, 1988). When the railroad built a depot the name Fontainebleau was used, and it soon replaced Belle Fontaine in referring to the entire region. The post office was closed in 1912 and the railroad station shut down in 1934, yet the name Fontainebleau remains on the map, mostly associated with the dispersed community astride the Old Spanish Trail (in 1918 the first motor road through the area) and U. S. Highway 90 (see Figure 1).

Subdivisions began appearing in the Belle Fontaine region in the 1950s, and today the western portion of the study area is increasingly being absorbed into a rapidly expanding Ocean Springs. The older regional toponyms (Belle Fontaine, Belle Fountain, Fontainebleau) increasingly are being replaced by subdivision names such as Gulf Park Estates and St. Andrews, and the placename Belle Fontaine now is used almost exclusively to refer to the Belle Fontaine Beach area.

#### **ABORIGINAL OCCUPANTS**

Little is known of Indian occupation of the Belle Fontaine region in the pre-European times. At the time of establishment of the first French outpost, Fort Maurepas in Old Biloxi (present-day Ocean Springs), in 1699 under direction of the authorized French-Canadian explorer/colonist Pierre LeMoyne, Sieur d'Iberville, Indians (whose name was interpreted as "Biloxi") were frequenting the coast to harvest abundant seafood resources, notably oysters (Sullivan et al., 1985). Initial European contacts were with three (and perhaps four) politically distinct Indian groups (not truly tribes, although they are often referred to as such) within a broader Choctaw cultural realm: the Bayougoula ("people of the bayou"), the Pascagoula ("bread nation"), and the Biloxi ("first people") (Kniffen et al., 1987; Sullivan et al., 1985; WPA, 1938). Except for the Bayougoula, who had entered the area on hunting expeditions from their home along the Mississippi River, the other two groups lived in a series of villages along the Pascagoula River about 12 leagues upriver from the mouth (WPA, 1938). Within two years of contact, the Biloxi had abandoned their village and moved westward. It is quite likely that any of the Indian groups or their cultural predecessors also frequented the Belle Fontaine region on hunting, fishing, or shell-gathering expeditions.

At least six known prehistoric Indian sites have been identified, although most are minor and are characterized by small shell or dirt middens and/or a small assemblage of tools, arrowheads, or fragments of ceramic pottery. An interesting find was made along Belle Fontaine Beach in the mid-1980s when a "bucketful" of projectile points became exposed as a consequence of wave erosion of the shore. The only prominent ceremonial midden complex is found at Pointe aux Chênes (although often incorrectly shown on maps to be elsewhere in the region) where two mounds were found to contain extensive potsherds of Tchefuncte age (Morgan, personal communication, 1992). Numerous areas, especially in the beach ridges, are potential Indian midden sites, but official archeological surveys have uncovered no more.

#### THE COLONIAL PERIOD, 1699-1810

Throughout the French (1699-1763), British (1763-1780), and Spanish (1780-1810) colonial periods (Sullivan et al., 1985) the Island of Belle Fontaine remained sparsely settled and most closely associated with a Jean Baptiste Baudreaux dit (French for alias, although "de" is sometimes substituted) Graveline, a colorful character who had several descendants of the same name and equally colorful disposition. This close association would form the basis of land claims following the acquisition of this territory by the United States in 1811.

On the second of d'Iberville's trips to what is now the Mississippi coast, in 1700, he was accompanied by about sixty Canadians, including a Jean Baptiste Baudreaux (alternately spelled Baudreau, Beaudreaux, Beaudreau, Baudro, Boudraux, or Budreau) dit Graveline (Giraud, 1974). Born into a wealthy merchant family in Montreal in 1671 and a well-to-do merchant himself at the time of his arrival in the new Louisiana territory, J. B. Baudreaux helped at Fort Maurepas and accompanied d'Iberville on explorations of the Indian settlements of the Pascagoula River. Employed by the French colonial government until 1701, Baudreaux was let go due to his "crafty buying and selling" (Higginbotham, 1977). By the time Ft. Louis was established near present-day Mobile, Baudreaux was a wealthy businessman who had built one of the finer homes in the city. Subsequent business ventures, including trading with Veracruz and acquiring ships to establish trade with Canada, got him into some trouble with French authorities, and in 1709 he moved to Massacre Island (Dauphin Island).

The enterprising Baudreaux imported "horned cattle" from Cuba to raise on the barrier island for subsequent sale to both the French as well as the Spanish at Pensacola (Higginbotham, 1977). By 1710, only sixteen residents lived on Dauphin Island, but by that time Baudreaux had built the "finest home in the colony" on the bay side, facing what is today called Graveline Bay. Baudreaux soon became regarded as one of the few merchants to profit from the French Louisiana colony (Higginbotham, 1977). By 1715, Baudreaux had obtained a French land grant (Sullivan et al., 1985) to "all lands between the Pascagoula River and Biloxi Bay, including the 'Ile de Bellefontaine'," although the original deeds were later not found. Apparently these lands, perhaps along with Horn Island, were used for grazing cattle (vâcherie) prior to 1718.

Because of the 1717 hurricane that destroyed the French settlement at Dauphin Island, Baudreaux moved his permanent residence to his west bank property by 1718. The main house was built on the bluffs above Lake Farragut, just south of Martin's Bluff (near the present-day westbound rest area of Interstate 10, where a historical marker has been erected). He had by that time two children, including Jean Baptiste Baudreaux II (about age 8) and Magdelaine. There



Figure 1. The Island of Belle Fontaine and vicinity.

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is still debate as to the mother of Baudreaux II. In his will, dated 1750, the senior Baudreaux states that Baudreaux II was the result of an illegitimate union with an Indian woman (apparently the daughter of a Mactobi warrior, or "chief") whom he later married. However, Baudreaux had brought back a Protestant wife, Suzanne, from a trip to France in 1708. Allegedly pregnant soon after arrival at Dauphin Island, she died in 1713, and little more mention of child or children was made. In any case, Jean Baptiste II was the son of Jean Baptiste Baudreaux I.

After his 1734 marriage in Mobile (he was listed as a "Creole of Dauphin Island"), Jean Baptiste Baudreaux II and Mary Catherine Vinconneau settled on the west bank of the Pascagoula, near the home of his father. They had four children, including a Jean Baptiste Baudreaux III, born in 1736. Unlike the gentlemanly wheeler-dealer Baudreaux I, the son Baudreaux II was a lawless scoundrel who "drank too much, gambled, and was a libertine" (Adkinson, 1987). In 1752, Baudreaux II and his wife were divorced, and much of the common property was assigned to Mary Catherine. Also, the senior Baudreaux disinherited his son at about the same time, and a few years later, Baudreaux II was imprisoned and put to death for his part in the unlawful salvaging of a Spanish ship at Cat Island and a subsequent insurrection (MCHGS, 1983).

During the late 1700s, Mary Catherine Baudreaux amassed a considerable amount of real estate. Following the 1762 death of Baudreaux I at age 91 (the last survivor of the original colonists that arrived with d'Iberville), Mary Catherine and her children inherited the family lands along the Pascagoula as well as the adjoining Island of Belle Fontaine to the south. Although few formal French land grants were ever made, Mary Catherine Baudreaux petitioned the Spanish crown for formal title during the Spanish period (1780-1810, although Spanish West Florida was not a formal political entity until after the 1783 Treaty of Paris [Sullivan et al., 1985]). In 1781 she was granted Horn Island, and in 1786, in recognition of the previous French grants, Spanish land grants were awarded for 10,000 arpents of the Island of Belle Fontaine and 40,000 arpents on the west bank of the Pascagoula River. In addition to the grants, Mary Catherine bought much land near the mouth of the Pascagoula River, at present-day Gautier, where homes were subsequently built. Mary Catherine Baudreaux apparently maintained residence at various locations, including at the former home of her late father-in-law at Pointe aux Chênes on the Island of Belle Fontaine.

When the United States government took formal control of coastal Mississippi in 1811 (following a brief independence as part of the Republic of West Florida), the burden of proving ownership of Belle Fontaine and other family lands fell to Jean Baptiste Baudreaux III. Baudreaux III had a deep feeling for the land of his forebears and spoke fondly of his youth spent on the bluffs of the Pascagoula River and along the shining white beaches of Belle Fontaine (probably Belle Fontaine Beach rather than Pointe aux Chênes). Following the death of his mother circa 1790, Baudreaux III took over possession of the family property. However, in his petition to claim his land on the basis of both family occupancy and the Spanish land grants, the latter were not found. Several documents dated in the early 1800s attested to the Baudreaux claims.

The fight with the U.S. government dragged on for decades, and after Baudreaux III's death in about 1812, his son-in-law Edwin A. Lewis pursued the land claims on behalf of the heirs of Jean Baptiste Baudreaux. The 10,000 arpent Belle Fontaine property was claimed on the basis of: 1) French land donations, legitimized by the Spanish land grant of February 21, 1786, 2) no other prior inhabitation of or claims to the property, 3) historic use of the lands for cattle grazing, and 4) the existence of "several homes and dwellings" dating to the 1720s (Lewis, 1829). Although no maps of the period verify any actual houses on Belle Fontaine in the 1700s, circumstantial evidence does seem to indicate that at least seasonally occupied dwellings were found on the site. In his last will and testament of J. B. Baudreaux I, dated September 16, 1750, he listed his address as "la Bellefontaine at old Beloxy" (MCHGS, 1983). The Land Claims Office of the U.S. Government, not recognizing any Spanish land grants on the basis of insufficient documentation, nonetheless allowed the heirs of Jean Baptiste Baudreaux to petition for deeds to the property, but these petitions could be only for a maximum of 1280 acres (two sections of the township-and-range system, or two square miles).

#### THE EARLY AMERICAN PERIOD, 1811-1890

So far as determined by deeds on file at the Jackson County courthouse in Pascagoula, the Belle Fontaine land claims finally recognized by the United States government between the 1820s and 1840s consisted of multiple parcels assigned to various heirs of J. B. Baudreaux I, including E. A. Lewis and his son A. E. Lewis. These parcels include: 1) a 1238-acre piece of land containing Pointe aux Chênes and comprising the present Sections 9, 10, 11, and 14 of T.8S./R.8W. was awarded to the J. B. Baudreaux heirs (E. A. Lewis, agent), 2) Sections 3 and 4 of T.8S./R.8W. (comprising mostly the Marsh Point peninsula) was deeded to E. A. Lewis and a Mr. Krebs, 3) a 1226.35-acre piece containing the entire Belle Fontaine Beach and now identified as Section 19 of T.8S./R.7W. was awarded to J. B. Baudreaux, presumably J. B. Baudreaux IV, the son of J. B. Baudreaux III (in a letter dated Sept. 14, 1818, J. B. Baudreaux's sisters Marie Angelique and Margaret relinquished their inherited land claims to their brother), 4) a 1067-acre parcel consisting of most of Sections 7 and 8 and all of 17 and 18 of T.8S./R.7W. was recognized in 1824, 5) Section 13 of





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Figure 3. The Island of Belle Fontaine, 1851 (USCS, 1850-51).

T.8S./R.8W., a Baudreaux claim, was acquired by A. E. Lewis, and 6) Sections 1 and 12 of T.8S./R.8W., also a Baudreaux claim, were acquired jointly by A. E. Lewis and a Mr. McRae in 1854 (Figure 2).

The Island of Belle Fontaine was apparently used for little more than cattle grazing lands throughout the remainder of most of the nineteenth century. According to deed books at the Jackson County courthouse in Pascagoula, there was frequent turnover of property in the region, and increasing landownership by newer Anglo arrivals. In addition to E. A. Lewis, who had married Margueritte Baudreaux and (at least temporarily) settled down on the Pointe aux Chênes family property, settlers by names of Ramsay, Davis, Webb and Bilbo moved into the region. The Ramsays bought property from Lewis and settled at Pointe aux Chênes, where they built a home and where their grave markers remain today (White, personal communication, 1992). The Bilbos, who settled along the Pointe aux Chênes Road north of Simmons Bayou, later built the Baptist church which they named Belle Fountain.

The only reliable large-scale map is the coastal survey map of 1850-51 (U. S. Coast Survey, 1850-51). Aside from two properties at Pointe aux Chênes containing houses and cleared land (the Ramsay estate and possibly a relict Lewis or Baudreaux structure) and two small houses along Belle Fontaine Beach (former Baudreaux properties?), few signs of other land use are evident (Figure 3).

Little is known of the Civil War and Reconstruction periods in the Belle Fontaine region, but the Louisville & Nashville Railroad, connecting New Orleans with Mobile, opened the region to potential development in 1870. By 1890, J. B. Lyon of Chicago, "a large landowner in five states," had purchased a tract of 93,000 acres in the area for purposes of lumbering and agricultural improvement. Somewhere near the springs of Belle Fontaine Beach, Mr. Lyon built a home, where his daughter Caroline remembered growing up (Walsh, 1937).

#### THE LAND DEVELOPMENT AND SPECULATION ERA, 1890-1950

Because of the railroad and a good national economic climate at the time, Mr. Lyon (and his Gulf of Mexico Land & Improvement Co., later incorporated into the Lyon Company) was able to bring prosperity to the Belle Fontaine area largely on the basis of lumbering and cattle grazing. It was during this time of increased commerce that the Fontainebleau post office (1892-1912) and the Fontainebleau train depot were established (Hines, 1988). (As stated earlier, this marked the beginning of the discarding of the names "Bellefontaine" and "Belle Fountain" in favor of the newer "Fontainebleau," especially north of the Simmons Bayou/Crossway Bayou depression.) Lyon apparently used most of his Belle Fontaine holdings as cattle range.

Lyon Company bookkeeper Robert W. Hamill (also a Chicagoan) married Caroline Lyon and continued to develop the region after J. B. Lyon's death in 1910. Between his acquisitions and his wife's inheritance, Hamill (and the Hamill Corporation) acquired 57,000 acres of the former Lyon property (Hines, 1988) and converted much of the cutover land to pecan, citrus, and tung (for tung oil) production. Also, general truck farming was begun, and even turtle farms were allegedly established to supply the demand for turtle soup, which was popular at the time. Most of the development and land use changes were in the vicinity of Fontainebleau, just north of the Island of Belle Fontaine, which still remained mostly cattle range. Exceptions include some pine lumbering and agricultural conversion (mostly pecan orchards) in the area just south of Simmons Bayou and limited exclusive residential development along the beaches of Belle Fontaine. In 1912 the Hamills built a new residence at the Belle Fontaine Beach springs (at the exact site of one of the structures shown on the 1851 map). The rambling Hamill Estate, named Belle Fontaine, consisted of 15 rooms and 9 fireplaces in addition to tennis courts and a nearby lodge for parties and outof-town guests (Hines, 1988).

In spite of some grandiose plans, only limited construction took place on the Island of Belle Fontaine in the 1920s and 1930s. During the Roaring 20s, the Hamills contemplated improving the highway to the beach and developing a new townsite complete with a "modern hotel" (Anonymous, 1925). These plans never materialized, and a few years later the national economic depression led to financial ruin of the Hamill Corporation. Parts of the agricultural operations of Hamill Farms were reorganized as Fontainebleau Farms, of which a Henry Flateau was overseer in the 1930s. In 1929, the 2000-acre Pointe aux Chênes Estate was sold by the Ramsays and bought by an L. L. Cook, described as "a Chicago capitalist," and several associates (Walsh, 1937; White, 1992). In 1930, nine 15-acre lots were carved out of the giant tract as the Pointe aux Chênes Subdivision. One of these associates, the Chicago banker James Leavell, built a rambling pink stucco Spanish-style house called Doonesgate on the site of the old Ramsay house near the Indian mounds and the 19th-century graves of the Ramsays. Henry Flateau built a lodge, "a most delightful bachelor's retreat," at the water's edge near Doonesgate, where a pier jutted out into the sound (Walsh, 1937). Both Leavell and Flateau made significant improvements to their properties (Walsh, 1937), perhaps including the "oak alley" that was planted from Pointe Aux Chênes Road to the waterfront. Also, nearby marshes on the Marsh Point peninsula and south of Pointe aux Chênes were ditched in the early 1930s as part of a federal conservation project to reduce mosquito breeding grounds (White, personal communication, 1992; Figure 4). Flateau's home and pier succumbed to hurricanes, primarily the Hurricane of 1947, but





Figure 4. The Island of Belle Fontaine, 1940 (Tobin Research, Inc., 1940).

the decaying Doonesgate estate still stands.

The incipient regional affluence that began in 1890 had more or less ended by the early 1930s, because of both a major freeze in 1918 that wiped out most of Hamill Farms' citrus (satsuma) and vegetable farms and also the Great Depression that followed the infamous Stock Market Crash of 1929. Banks took over the property in 1934, and by the late 1930s they began cutting the remaining pine forests on Belle Fontaine, including the largest (at 3,000 acres) stand of virgin yellow pine in the state. A sawmill complex with several workers' cottages, operated by Barnes and Davis of Meridian, was constructed near the present site of the grocery store at the entrance to St. Andrews (Hines, 1988), and by 1940 most of the Belle Fontaine pine lands had been cut over (Tobin Research, Inc., 1940). One of the few properties not cut was the remnant 58-acre Hamill Estate property which still today remains under control of the Chicago-based Hamill Corporation (Germany, personal communication, 1992).

#### SUBDIVISION AND SETTLEMENT OF BELLE FONTAINE, 1950-PRESENT

Following World War II, land speculation and subdivision activity began anew, and this time the Island of Belle Fontaine witnessed a substantial change in patterns of settlement. After the first wave of pre-subdivision beach cottage construction began about 1950, real estate developers (individual as well as corporate) became aware of the demand for homesites on the Island of Belle Fontaine. They quickly set out to provide a supply, and most of the big tracts of land on the Island were subdivided by the later 1970s. Although demand existed for seasonal vacation homesites, the greatest demand was for permanent homesites. This was made possible by a greatly improved postwar economic climate, specifically the development of Pascagoula shipyards such as Ingalls and the growth of military bases such as Keesler Air Force Base in Biloxi. As both Pascagoula and Biloxi contained little open land for residential expansion, communities such as Ocean Springs and Gautier on the fringes of vast tracts of formerly productive farm land witnessed record levels of population growth and areal expansion. Belle Fontaine was well situated to attract increasing numbers of residents. The types of residential subdivisions that were developed after 1950 may be grouped into three broad categories: 1) beachfront, 2) suburban, and 3) golf-oriented.

Even before the first formal beachfront subdivisions appeared, several private individuals had acquired small parcels of property and built beach cottages, mostly along Belle Fontaine Beach immediately east of the old Hamill Estate. (The only other non-marsh beachfront real estate was at Pointe aux Chênes, but this was already subdivided into large, exclusive estates.) In 1951, a total of four cottages, or camps, faced the Belle Fontaine Beach (Germany, personal communication, 1992). In 1954, Bacot Beach was platted east of this small cluster of camps, and to the west of the present St. Andrews water tower/lighthouse, the elongate Belle Fontaine Beach Subdivision began Phase I of construction in 1956. The construction of mostly simple beach camps accelerated during the 1960s (up to 32 houses by 1970, according to the 1970 General Highway Map), at least until the onslaught of Hurricane Camille in 1969. Only three or four structures survived total destruction by this storm, including the now famous piling-reinforced 6-sided house just west of the St. Andrews water tower designed by Kaarlo Oivanki and owned by Mr. Bob Erie of Baton Rouge (Erie, personal communication, 1992). Although the hurricane temporarily slowed beachfront development, the final phases of construction in the Belle Fontaine Beach subdivision began in 1970, and soon bigger and fancier homes were being built. This trend has continued to the present day.

The second category of subdivision is classed as suburban. This is typified by Gulf Park Estates, a huge subdivision just east of Pointe aux Chênes, in which lots were first sold in 1958. Regarded as a southeastern extension of Ocean Springs (Beach View Drive was built to provide a more direct access road), Gulf Park Estates was essentially completely subdivided by 1968 and is today almost completely filled in with houses. One smaller subdivision to the east, Treasure Acres, was platted in 1967, but it remains undeveloped today. Also, the entire Section 12 of T.8S., R.8W. has been cleared of pine trees but it remains undeveloped. It is unclear whether this entire section is part of Gulf Park Estates. In any case, the land is not suitable for development without extensive drainage improvements. The old Pointe aux Chênes subdivision, which dates to 1930, may now be regarded as a high-class suburb, the residents of which mostly commute to jobs in nearby cities. A less successful suburban subdivision is West Ocean Beach Estates. Not as closely linked to a city (as Gulf Park Estates), the vast subdivision has experienced only limited residential construction. A newer (1973) subdivision, Pinehurst, has been more successful in terms of development.

The final category of subdivision is one oriented around a golf course. The prime example of that in the Belle Fontaine region is St. Andrews on the Gulf, which was first platted in 1978 just to the west of West Ocean Beach. Consisting of both residences and condominiums built around an 18-hole fairway, St. Andrews has been popular since it first opened, and the placename "St. Andrews" has almost replaced "Belle Fontaine" in popular usage. A second golf course, although not residentially oriented, is the Pine Island Golf Club built upon small upland outliers within the marsh just south of Simmons Bayou off of Beach View Drive. The westernmost outlier, west of the golf course, was platted as Banana Island Subdivision in 1976, but by 1992 only two homes had been built.

There are still subdivisions that have many vacant lots

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Shoreline Segment	Piers	Groins	Bulkheads
Pointe aux Chênes	9	8	6
Belle Fontaine Beach Subdivision	11	7	10
Belle Fontaine (east of water tower)	15	10	20
TOTAL	35	25	36

Table 1. Beach structures along the shores of Belle Fontaine.

(especially West Ocean Beach), and there is still much undeveloped land on the Island of Belle Fontaine. The greatest amount of growth in the early 1990s is still along the beachfront (along the western two-thirds of Belle Fontaine Beach Subdivision, the number of homes directly on the beach has increased from 10 to 38 over the past 10 years), but it is anticipated that even interior portions of the island will gradually fill in with houses as long as the Mississippi Coast economy remains relatively healthy.

#### HUMAN RESPONSE TO STORMS AND SHORE-LINE EROSION

The general erosive nature of the Belle Fontaine/Pointe aux Chênes shoreline, coupled with the human predilection for building homes along the beachfront, has stimulated much shoreline modification since Hurricane Camille struck in 1969. Prior to the storm, most beachfront structures were piers (used for fishing, boat docking, or partying), although a combination jetty/groin had been built at the western end of the Belle Fontaine Beach Subdivision. Since 1970 (and especially since 1982, the date of the most recent USGS topographic map), increasing numbers of groins and bulkheads have been built. The 1982 topographic map showed only 6 piers, 3 east of the St. Andrews water tower and 3 to the west. By 1992, a total of 35 piers were identified from 1) U. S. Army Corps of Engineers 1:24,000 color infrared photographs of 20 Jan. 1992, 2) oblique slides taken from rented aircraft in mid-Dec. 1991, and 3) field inspection on May 18-19, 1992. Also, a total of 25 groins (built to trap longshore-drifting sands) were identified, and at least 35 lots had been bulkheaded. In addition, about 1000 feet of riprap "bulkhead" have been built and backfilled at a public park south of Gulf Park Estates, where a public fishing pier now extends 400 feet into the Sound. If we divide the study area into three coastal segments, the distribution of these human modifications is as shown in Table 1.

While most of the shorefront of the Island of Belle Fontaine is eroding because of natural conditions, the human modifications also have contributed to the severity of the problem. Locally, individual groins have contributed to erosion of the downdrift property. Construction of bulkheads along naturally eroding (especially cliffed) shorelines temporarily reduces the potential supply of sand for downdrift beach nourishment. The greatest single negative impact appears to be the jetty/groin at the west end of the Belle Fontaine Beach Subdivision. At least 8000 feet of shoreline to the west of the groin have experienced accelerated erosion since the 1960s. This shoreline consists mostly of marsh, and except for the riprap/fishing pier construction at the public park, little development has been affected by this accelerated erosion.

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## GEOLOGIC FRAMEWORK, EROSION HISTORY, AND PHYSICAL SETTING OF THE BELLE FONTAINE AREA

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#### INTRODUCTION

Belle Fontaine, the only remaining natural beach on the mainland Mississippi coast, provides a unique opportunity for harmonizing man's desire to stabilize the shoreline with the natural processes that have shaped that shoreline. An understanding of the geologic framework of the area that has been modified in time to form the present setting provides insight into the geological processes active today. The geological history of this area from the Pliocene through the present time was reconstructed from cores and drillholes as well as from offshore seismic records.

Since 1970, the Gulf Coast Research Laboratory has recovered numerous drill cuttings and cores from the area, and 10 shallow vibracores (core numbers 1-10) were taken by the Mississippi Office of Geology in 1992 for this study. The U. S. Geological Survey drilled three continuous deep coreholes in the area in 1990. Conventional analyses of the granulometric and microfossil composition of the cores were performed at the Gulf Coast Research Laboratory. Shallow seismic surveys were conducted offshore of Belle Fontaine in 1991 and 1992 as part of a joint U. S. Geological Survey/ Office of Geology cooperative study. All of these data have been incorporated into the present account of the geologic framework.

Offshore bathymetric data of the area were collected by the Office of Geology, as well as nearshore beach profiles and sediment distribution along the beach and nearshore. Historical shoreline positions were reconstructed from U. S. Geological Survey and National Ocean Survey digitized T-sheets and recent aerial photographs. The purpose of this report is to present the development history of the Belle Fontaine area as completely as possible by using all available data. Our purpose was to understand the natural processes that have shaped the shoreline and aid in developing shoreline stabilization techniques which are in harmony with the natural evolution of the area.

### **GEOLOGIC FRAMEWORK**

#### **Undifferentiated Upper Neogene Sequence**

The Pleistocene units of the Mississippi-Alabama coast are underlain by a maximum 900-1500 m (3000-5000 ft.) thick sequence of dominantly light and dark green-gray and gray muds and clays, and sandy mud and clay beds,

interspersed with sand beds and gravelly sand zones. Marine Upper Miocene and Pliocene units are recognizable only in offshore Mississippi-Alabama and eastward beneath the Florida Panhandle coastal plain (Table 1). The sediment interval between the Lower Miocene and basal Citronelle unconformities was designated as the (expanded) Miocene-Pliocene Pensacola Formation (Otvos, in press). In the absence of stratigraphic means to subdivide the shallowest datable marine intervals (Middle and Upper Miocene) in southern Mississippi, previously employed Miocene and Pliocene formation names, such as the Hattiesburg, Pascagoula, and Graham Ferry, are used here (Table 1) as members of the Pensacola Formation (Otvos, 1994). When assignment of a certain sediment interval to the Pensacola is not feasible, the term undifferentiated late Neogene is being used instead (Otvos, 1985, 1988, 1991).

The Neogene units are better consolidated than the younger deposits. Recognizable lower Upper Miocene marine deposits under the coastal plain occur only in Harrison County (Otvos, unpublished data). The youngest datable, paralic-terrestrial (late Middle?-) late Miocene units contain discontinuous scattered lenses with the small, generally low-salinity bivalve Rangia johnsoni (Campbell and Otvos, 1992). The interval which contains this bivalve is not sharply defined by stratigraphic boundaries and readily identifiable in the subsurface. Named the "undifferentiated Late Neogene" (Upper Miocene-Lower Pliocene) interval by Otvos (1985), the landward portion of the Upper Neogene sequence was deposited mostly in various fresh water, alluvial environments. Interspersed thin brackish (estuarine) intervals are also common. The thick sandy horizons are artesian aquifers, suppliers of residential and commercial water for communities on the coast.

The likely Pliocene age of the upper part of the sequence (Otvos, 1988, in press) is also supported by the presence of *Pterocarya* tree pollen at 26.6 m (87.3 ft.) depth in the U.S.G.S. Belle Fontaine No. 1 drillhole. Dinoflagellate dinocysts of *Impagidinium fenestroseptatum* were found nearby in the U.S.G.S. Ocean Springs Police Dept. Corehole No. 1 in Ocean Springs at 51.2 m (168 ft.) depth, and in the U.S.G.S. corehole on Horn Island (Willard and Edwards, in press). The species has also been reported on two occasions from Lower Pliocene sediments elsewhere (Dr. Lucy Edwards, U.S.G.S., personal communication). Pliocene pollen spectra from Belle Fontaine and Ocean Springs corehole samples closely resemble certain local Mississippi

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EPOC	СН	AGE	Ма	SEA LEVEL STANDS	<b>GEOLOGICAL EVENTS / FORMATIONS</b>
HOLOCENE		0.01	Gradual rise of sea level to current high	Formation of barrier islands, coastal sedimentation after c. 6 ka: Marine, fluvial, and lagoon deposits	
			0.01		
ш				Wisconsinan glacial	Time of non-deposition and erosion
z				but rising since 18 ka	along whole Gulf coast
ш			0.08		
ပ				Sangamonian inter-	Prairie Fm alluvial complex
0				glacial highstand (+6m)	<u>Biloxi</u> <u>Fm</u> inshore & offshore marine <u>Gulfport Fm</u> coastal barrier
			0.13	not represented	Time of non-denosition and erosion in
-		-	in Mississippi	Mississippi	
ш		?	probably an early	Alluvial deposits in Big Ridge terrace	
		?	interglacial high		
۵.			not represented in Mississippi	Time of non-deposition and erosion on Mississippi coast	
		1.6			
ш Z		Calabrian		low sea level coastal uplift	<u>Citronelle</u> <u>Fm</u> regional alluvial deposition (redbeds), subtronical climate
ш					time of regression
ပ () ()		Piacenzian		Numerous sediment	Upper units of Pensacola Fm. (Graham
-				cycles; low and	Ferry muds and clays), paralic and
بر ۲		Zanclean		nighstands, alternating fluvial, deltaic, estuarine sediments	terrestrial deposition, no marine beds in Mississippi
		Messinian	5.3	major lowstand	Middle units of Pensacola Fm.(Pascagoula
	-			numerous sediment	member) deltaic, estuarine, and alluvial
	e			Uyuleo	αεμοδίζδ
-	d.	Tortonion		menine history in	
	D	Tortoman		lower Tortonian	
		10.0			
0	e	Serravallian	10.0	regression, numerous	Lower intervals of <u>Pensacola</u> Fm. incl.
_	_			sediment cycles	regressive <u>Amos</u> sand member
Σ	ס			major marine high-	Inner-to-outer neritic marine deposition
				stand, peak of	
	Σ	Langhian		lower Serravallian	
		I	17.0		

ŧ



and Atlantic coastal assemblages, with oak and pine as the most common taxa (Willard and Edwards, in press).

In the coastal uplands area, above elevations of approximately 9-15 m (30-50 ft.), the terrestrial-paralic Pliocene beds are overlain by alluvial Citronelle Formation beds across a sharp unconformity. The Citronelle consists of orange-red, occasionally gravelly, silty-sandy redbeds that were deposited in coalescing flood plains under warm, perhaps subtropical, climate conditions. Petrified logs are often eroded from the Citronelle beds into present creek beds. The Citronelle Formation and its bounding summit plain occur several miles north of the Belle Fontaine area and extend far north, as well as into coastal Louisiana and Alabama.

#### **Early Pleistocene Alluvial Unit**

Big Ridge Scarp, a 5-6 m (16-20 ft.) high, 20 km (12.4 mi.) long, seaward-facing feature in Harrison and Jackson counties, probably formed along a long-inactive fault (Otvos, 1985). It is located just south of the Interstate 10 highway at Highway 57, from where it runs westward north of Biloxi Bay and the Back Bay of Biloxi, past Ocean Springs. The Scarp separates a higher coastal surface to the north from the Sangamonian Prairie surface, coastward, north of the Belle Fontaine area (Figure 1). The higher surface lies approximately 6-7.5 m (20-25 ft.) above the adjacent Prairie land surface.

The Pleistocene unit north of the Scarp consists of siltysandy stream overbank deposits, including peaty-woody lenses in organic-rich clays, with cones of yellow pine and branch fragments, probably relics of ancient stream logjams. The flora is similar to the extant flora of the area, indicating climate conditions not unlike those present today (Otvos, 1985, in press). The terrace surface and the deposits that underlie it may be correlative with one of the pre-Sangamonian coastwise terraces in the Louisiana coastal plain.

#### Sangamonian Interglacial Sedimentary Cycle

High sea level stages during the last (Sangamonian) interglacial (approximately 128 to 82 thousand years ago) resulted in the deposition of transgressive, fossil-rich, marine-paralic inshore sediments seaward of alluvial coastal plain units. The high sea level stage along many Gulf shoreline sectors produced seaward progradation of sets of subparallel beach ridges separated by low swales. The Prairie Formation is the alluvial, coastal plain facies, and it is time-equivalent to the beach ridge facies, called the Gulfport Formation. These Gulfport beach ridge segments occur Gulfwide in a discontinuous chain, except in Louisiana (Otvos, 1985, 1991). Marine and nearshore equivalent facies of the Prairie and Gulfport are present in the Biloxi Formation. All of the major Sangamonian units occur at Belle Fontaine (Table 1).

#### **Biloxi Formation**

The unconsolidated, gray, muddy-sandy, fossil-rich sediments of the Biloxi Formation represent a set of depositional facies which existed in shelf-to-nearshore/inshore environments (Otvos, 1985). The Biloxi interfingers with alluvial beds of the Prairie and overlies early Pleistocene deposits. Highly to moderately brackish deposits with *Crassostrea virginica* oyster reefs characterize the landward "feather edge" of the formation. Agglutinated foraminifer species and *Ammonia beccarii* dominate this facies. These deposits were laid down in estuaries, bays and lagoons, and in fresh water runoff-influenced, reduced salinity, nearshore water bodies.

As the transgression continued and the shoreline shifted farther northward, highly saline, open marine conditions developed along the present Mississippi Sound shoreline. At this time the Gulf stood about 6-7.5 m (20-25 ft.) higher than today, and lapped directly against the Mississippi mainland shore. In Drillhole No. 16 (Figures 1 and 2) this open-marine environment is characterized by a foraminifer fauna of great species diversity, dominated by Rosalina columbiensis, Nonion depressulum matagordanum, Elphidium galvestonense, Elphidium incertum mexicanum, and two subspecies of Ammonia beccarii. The fauna also includes Buliminella elegantissima, Nonionella atlantica, Nonionella opima, Brizalina lowmani, Hanzawaia strattoni, Cribroelphidium poeyanum, eight Quinqueloculina (planktonic) species, and many others. This interval also contains a pine/oak-dominated pollen assemblage with modern analogues in the adjacent modern coastal area. A similar flora was found at 5.7 m (18.7 ft.) depth in Prairie Formation clays in the U.S.G.S. Ocean Springs corehole (Willard and Edwards, in press).

#### **Prairie Formation**

The Prairie Formation consists of a highly variable, sandy, muddy, and clayey deposit with sandy and gravelly alluvial deposits, and forms the wide, level coastal plain landward of the Sangamonian coast in Jackson County. Depositional environments included flood plains, river channels, oxbow lakes, and natural levees (Otvos, 1985). Vertebrate fossils are much rarer in this formation than in its Texas equivalent. A characteristic yellowish-brown and orangeyellow oxidized color typifies the top few feet of the formation. Interfingering with brackish Biloxi deposits occurs at shallow depths. The pollen spectra from peaty coastal plain Prairie swamp deposits also reflect current flora and climate conditions on the coast (Otvos, in press), with yellow pine and oak species predominant. Locally, as along the Harrison County Industrial Seaway, gravel- and sandfilled Prairie stream channels cut into Biloxi deposits.

The Prairie Formation crops out in the study area between the Graveline and Davis Bayou marsh on the south



Figure 2. Geologic cross section A - A'. (location in Figure 1)



Figure 3. Geologic cross section B - B'. (location in Figure 1)

and Old Fort Bayou and the Big Ridge Scarp on the north (Figure 1). In the subsurface it was found underlying Holocene muds in Core No. 4, just south of the Graveline marsh adjacent to the Gulfport outcrop (Figure 3).

#### **Gulfport Formation**

The Gulfport Formation represents shallow subtidal, intertidal, and supratidal Gulf barrier/strand plain deposits, composed of moderately well- to very well-sorted fine- and medium-grained sands. The oldest of the strand plain ridges formed over alluvial deposits along the Prairie-fringed mainland shoreline. The Gulfport is unusually thick (c. 21 m, 70 ft.) in Drillhole No. 15. White sands of the lower 9-12 m (30-40 ft.) interval in the drillhole may have accumulated in submarine bars and shoals. They are time-correlative with the muddier Biloxi interval in adjacent Drillhole No. 16 (Figure 2). Horizontal, subparallel and gently inclined ripple-sand wave cross stratification characterizes the sand that, except for *Ophiomorpha* trace fossils (shrimp burrow pipes) (Figure 4) and infrequently encountered molluscan bivalve molds, is devoid of fossils.

As at numerous other Sangamonian-age barrier locations elsewhere on the northern Gulf coast (Swanson and Palacas, 1965), the Gulfport at Belle Fontaine also exhibits postdepositional cementation by downward percolating humic acids. The cemented zones form multiple semiconsolidated, erosion-resistant, dark yellow-orange to dark brown-black sandstone horizons. Some of the ledges and lenses within the white sand beds extend 2-2.5 m (6-8 ft.) above present sea level (Figures 5 and 6). Abrupt and often irregular lateral and vertical termination of the semiconsolidated humate sandstone lenses against white and oxidized, dark and light yellowish-orange sand bodies in the bluff at Belle Fontaine indicates selective precipitation of humic acids and/or subsequent selective leaching of the humate cement. The presence of a poorly sorted humate barrier sand lens 2.5 m (8.2 ft.) below sea level in Core No. 6 offshore of Central Belle Fontaine indicates that the Gulfport extends at least half a mile seaward below the Holocene muds. Highly brackish, transitional, muddy fine sands of the Biloxi, rich in *Ammotium salsum* foraminifers, occur beneath the Gulfport.

The Gulfport plain formed through progradation, steadily covering previously deposited nearshore marine Biloxi sands and muds. By successive addition, new generations of beach-dune ridges grew on the seaward side. One Gulfport ridge reaches 6.4 m (21 ft.) elevation at Pointe aux Chênes, southeast of Marsh Point in the northwestern strand plain area. More than a dozen semi-parallel, gently arcing ridges accreted at Belle Fontaine, and these are plainly visible on aerial photographs of the area. Younger ridges occasionally truncate older ridge sets. Construction of new beach ridges on the Gulfport strand plain gradually shifted the Sangamonian shoreline seaward by at least 2 km (1.3 mi.).

#### **Holocene Deposits and Development History**

Worldwide warming at the end of the Wisconsinan resulted in the rise of Gulf sea level from a low stage of approximately -107 m (-350 ft.). At this time, approximately 18,000 years ago, the shore was located about 110-130 km (70-80 mi.) south of Belle Fontaine. The rising Holocene sea converted the Gulfport strand plain with its marshy Holocene fringe zones (Marsh Point and Graveline areas) into the "island" of Belle Fontaine, surrounded almost completely by water and marshland. The transgression turned the 1.2 km (3/4 mi.) wide Graveline Bayou valley and the present Simmons and Davis Bayou area between the Prairie and Gulfport areas into an embayment. It was subsequently colonized by tidal marshland that today fringes Graveline Bayou and surrounds Graveline Bay.

Core No. 4 penetrated nearly 1.2 m (4 ft.) of organicrich, very poorly sorted, late Holocene, silty, fine sand and muddy, medium sand marsh-creek deposits. This hole was drilled at the bottom of the 2.4 m (8 ft.) deep Graveline Bayou immediately north of the Gulfport Formation distribution area. The Holocene deposits overlie slightly oxidized, fossil-free, muddy, medium-fine Prairie sands, sandy muds, and moderately to well sorted, medium-grained, stream channel sands (Figure 3).

Holocene sandy muds and muddy sands, including

some rare ripple sand lenses and laminae, cover Biloxi deposits in the Sound offshore of West Belle Fontaine Beach. In Core No. 7, about 0.5 km (0.3 mi.) offshore from Drillhole No. 16, the Holocene is 2.7 m (8.9 ft.) thick. Near Marsh Point, Core No. 9 bottomed in 4.1 m (13.5 ft.) thick dark greenish-gray, very soft, Holocene muds. Core No. 8, south-east of No. 9, is identical. It contains 6.7 m (22 ft.) of muds that probably fill an early Holocene stream channel. Nearshore, in Core No. 6, the Holocene interval is only 1.3 m (4.2 ft.) thick, and in Core No. 5 the Holocene muds are more than 4 m (13 ft.) thick.

Most of the Holocene was deposited in highly brackish environments, as shown by the presence of Ammotium salsum dominated (80-100%) faunas, with only small percentages of Ammonia beccarii, Nonion depressulum matagordanum, Elphidium galvestonense, and other species. Miliammina fusca, Arenoparella mexicana, Ammoastuta inepta, Haplophragmoides, Trochammina, and Ammobaculies agglutinate foram species are found in fewer samples or in very small quantities.

In rare shallow marsh sediment samples (Core Nos. 1 and 10) Arenoparella mexicana was represented by high concentrations (45 - 83%). Foram faunas within the top 0.6-1.5 m (2-5 ft.) interval in Core Nos. 1 and 5 through 9 display a thin zone with somewhat higher depositional salinities than reflected by the Ammotium salsum faunas predominant in the rest of the core intervals. The assemblages of this highest salinity interval found in the Holocene deposits are dominated by Ammonia beccarii tepida, Ammonia beccarii parkinsoniana, Elphidium galvestonense, and Ammotium salsum. Less abundant calcareous species include Palmerinella gardenislandensis, Elphidium latispatium pontium, Nonion depressulum matagordanum, and miliolid species.

A Holocene interval, dominated by *Ammonia beccarii* subspecies, not by agglutinate foraminifers of the highly brackish facies, was encountered between 3.6 to 4.3 m (12 to 14 ft.) below sea level in Core No. 1 and between 2.7 and 3.1 m (8.8 and 10.2 ft.) below sea level in Core No. 9. These relatively higher salinities may have been produced by occasional opening and/or widening of passes between the islands. This would allow a more intensive influx of the more saline nearshore Gulf waters to penetrate the Mississippi Sound. An alternate hypothesis would explain these salinities by a reduction in rainfall and fresh-water runoff, which would have increased salinities in Mississippi Sound.

Despite the close spacing of these core locations, it is clear that the record of these high-salinity episodes was not preserved equally at different localities, possibly due to different rates of seafloor erosion in the past. Microfossil data of high-salinity facies in island chain and other Mississippi Sound drillholes indicates the absence of barrier islands and higher salinity to marine depositional conditions in the present Sound area when the transgression reached this area



Figure 4. *Ophiomorpha* trace fossils in the Gulfport Formation, Central Belle Fontaine. (scale is in inches and centimeters)



Figure 5. Humate-cemented portion of Gulfport Formation, Central Belle Fontaine. (scale is in inches and centimeters)



Figure 6. Humate sandstone ledge in the Gulfport Formation, Central Belle Fontaine. (scale is in feet)

in the Late Holocene times (Otvos, 1981). Abundant stream runoff at this stage kept salinities still fairly low in the nearshore area. The absence of higher salinity facies in Holocene deposits offshore of Belle Fontaine and elsewhere along the mainland shoreline of the Sound (Otvos, 1981, 1985) suggests the brevity of this episode and points to seafloor erosion which removed these thin units from the sediment record.

Prior to the Late Holocene development of a protective barrier island chain and the Mississippi Sound landward of it (Otvos, 1981), the southeast-facing Gulfport barrier shore area was subjected to powerful open-Gulf wave erosion. Sand produced from this receding shoreline was transported westward by longshore drift. It constructed the present narrow Belle Fontaine barrier spit. The spit enclosed the shallow nearshore area behind it, which was soon converted into marshland. Spit development was terminated by the reduction of wave energy following separation of the Mississippi Sound from the Gulf by the emerging barrier island chain. Nearshore waters along Belle Fontaine Beach are very shallow and muddy, reflecting this protected environment and the lack of higher energy waves to systematically remove mud from the sediment and leave sand behind as happened earlier on the open Gulf shore.

#### HISTORICAL SHORELINE CHANGE AND DEVELOPMENT

The first official maps of the Mississippi coastal zone and shoreline position were made by the National Coast Survey in the 1850s. Belle Fontaine shoreline positions were digitized from these maps and entered into ARC/Info to provide a starting point for measuring shoreline change. T-sheets constructed by the U. S. Coast and Geodetic Survey and the U. S. Geological Survey approximately in 1917 and 1950 were also digitized to provide additional shoreline position data. A 1986 aerial photo set was interpreted for the high tide line and digitized also. A 1993 high tide shoreline interpretation was made from a Global Positioning System (GPS) survey of the area in the summer of 1993. All of these data were corrected to the North American Datum of 1983 for projection and overlay to determine changes between surveys.

For analysis purposes, based on similar physical setting and history, the Belle Fontaine shoreline was divided into four segments (Figure 7). The East Belle Fontaine segment extends from the east end of the Gulfport Formation scarp to the Graveline Bayou channel. Central Belle Fontaine includes the area fronted by the Gulfport Formation scarp line. West Belle Fontaine stretches from the west end of the Gulfport scarp line, at the St. Andrews water tower, to the western end of Belle Fontaine Beach. The Pointe aux Chênes sector is the western part of the study area from Belle Fontaine Beach to Marsh Point.

Table 2 illustrates area changes and average shoreline retreat rates for these four segments between 1850 and 1986. Total area changes were computed by comparing the difference between two overlaid shoreline data sets and noting the changes from land to water and vice versa during the time period studied. Average retreat distances of the shoreline were determined by measuring the shore-perpendicular distance between overlaid shorelines of different survey periods at random points within each segment and averaging the results. All of the measurements were made in ARC/Info.

Overall, the Belle Fontaine area has lost 473 acres to shore erosion since the 1850s. Erosion of the Central Belle Fontaine shore provided sand for the construction of beaches east and west of this segment. However, all beach sectors show a general erosive trend.

#### **East Belle Fontaine**

East Belle Fontaine shows the only positive shoreline addition. This change occurred between 1917 and 1950. A sand spit that fronts the Graveline Bayou marsh was built during this period by sand eroded from the Gulfport scarp to the west. Given the current predominant southeasterly wave incidence direction and westward longshore drift, this former spit progradation may be best explained by a change to a southerly or southwesterly predominant wind direction during that time period. The result was a net eastward-directed longshore drift. Between 1950 and 1986 this trend was reversed and the large sand spit area removed by erosion, leaving a broad underwater shoal immediately offshore. A low, narrow, sand beach remains in front of Graveline Bayou marsh (Figure 8). This beach is occasionally overwashed into the marsh as shoreline retreat continues.

East Belle Fontaine has the lowest relief in the area. The shoreline is easily overwashed by late winter and spring storms, and the marsh is retreating landward as sand is eroded and thrown over the berm during high tides. A marsh root mat crops out just in front of the diminishing sand beach along this shoreline. Most of the property owners along the built-up shore zone have bulkheaded their shorefronts. Several have constructed small timber groins to trap what little sand is moving eastward along the shore (Figure 9). Without a significant change in predominant wind direction and sand availability, this area will continue to experience rapid erosion.

#### **Central Belle Fontaine**

Central Belle Fontaine has been eroding since late Holocene time. The height of the erosional scarp ranges from only a few feet high near the east and west ends of the area, to about 3 m (10 ft.) near the center (Figure 10). Erosion here is caused by undercutting of the scarp by wave action during periods of especially high tides. This occurs during the spring, or at any time when prolonged strong onshore winds blow in the area. The eroding sand is distributed along the beach sectors.

Significant shore retreat is primarily caused by occasional hurricane impact. According to reports by owners of shore property, Hurricane Camille in 1969 caused as much as 10 m (33 ft.) of scarp retreat. A piling located in 1993 about 26 m (85 ft.) offshore of the property of Mr. James N. Germany stood at the scarp face before Camille. This change translates into an average annual retreat rate of over 1 m (3 ft.) between 1969 and 1993. Hurricane erosion associated with temporarily elevated sea levels has also cut a narrow terrace into the bluff east of the St. Andrews water tower.

Additional factors that contribute to erosion at Central Belle Fontaine include the presence in the foreshore of indurated humate sandstone cobbles and blocks which may aid in breaking up the scarp during wave attack. During wet, rainy periods, fresh-water springs are common in the scarp face as ground water flows through the Gulfport sand over the humate-cemented layers, which act as an aquiclude. These springs loosen sand in the scarp face and erode the fronting beach with outflow channels prior to the erosive high spring tides.

Many property owners along this segment have bulkheaded the scarp face to prevent further erosion and shore retreat (Figure 11). While this temporarily saves their property from the waves, it also decreases the amount of sand being released from the Gulfport Formation to the longshore drift system, and thus contributes to increased erosion of the East and West Belle Fontaine areas.

#### West Belle Fontaine

West Belle Fontaine is a 4 km- (2.5 mi.-) long, narrow (90-275 m, 300-900 ft.) sand spit which accreted as a result of longshore transport of Gulfport sand eroded from the Central Belle Fontaine area. Both in Drillhole No. 16 and in the adjacent 1990 U.S.G.S. corehole near the western end of the spit, the Holocene is 6 to 7 m (20 to 23 ft.) thick. A 2540 year B.P. radiocarbon date, reported from subtidal deposits at 3.7 m (12 ft.) depth in the U.S.G.S. corehole (J. Reinhardt, personal communication) indicates that the top 1.8 m (6 ft.) sand interval accumulated quite recently. Two older spit generations bifurcate landward (northward) into the marsh from this barrier spit.

The beach at West Belle Fontaine is experiencing moderate erosion along its entire length, except adjacent to the groin at the west end, where sand has collected on the updrift side. Dunes of 3 m (10 ft.) elevation have formed behind certain foreshore sectors. As evidenced by homes and pine


Figure 7. Belle Fontaine shoreline location map.

Time Periods	1850-1917	1917-1950	1950-1986	1850-1986			
Avg. Shore Retreat (meters)							
E. Belle Fontaine	-129.6	46.2	-35.8	-118.9			
C. Belle Fontaine	-48.3	-0.7	-10.7	-60.9			
W. Belle Fontaine	-15.1	-4.4	-5.7	-25.2			
Pointe aux Chênes	-84.3	-36.2	-45.6	-166.3			
Total Area Change (acres)							
E. Belle Fontaine	-88.1	29.2	-19.5	-78.3			
C. Belle Fontaine	-36.9	0.4	-9.2	-45.7			
W. Belle Fontaine	-10.9	-4.1	-6.3	-21.2			
Pointe aux Chênes	-183.9	-64.1	-79.7	-327.6			

Table 2. Average shore retreat rates and total area change for Belle Fontaine.

trees in the surf zone (Figure 12), portions of the beach show rapid erosion and retreat. Storm erosion has threatened the access road at several points, and Jackson County has installed riprap protection along those sections (Figure 13). Numerous homeowners have bulkheaded their property where erosion threatens to undermine their foundations. Without additional sand sources to replace the sand lost due to stabilization of the Gulfport scarp at the Central Belle Fontaine sector, this area will experience continued erosion and shoreline retreat.

#### Pointe aux Chênes

The Pointe aux Chênes sector has lost the greatest acreage (328 acres) to erosion on the Belle Fontaine coast since the 1850s. This in part was due to the greater length of this shoreline segment. However, the sector also has the highest average shoreline retreat rate for the study period. This area is farthest from the main Gulfport Formation sand source at Central Belle Fontaine, and therefore did not receive as much sand supply as the other areas do. A significant portion of the acreage loss since 1950 was caused by the construction of a large timber groin at the west end of Belle Fontaine Beach in the 1960s to protect the outlet of a dredged canal from being blocked by sand migration (Figure 14). This groin halted further westward longshore sand movement. The marsh area immediately west of the groin has suffered severe erosion. The only other sand source for the Pointe aux Chênes sector is a Gulfport bluff (Pointe aux Chênes) near the center of that sector. However, most of that outcrop has been bulkheaded by landowners to prevent further erosion. This sand source was also isolated from the beach.

The Pointe aux Chênes sector is divided into two segments. The eastern half of the section consists of a marsh shoreline, with minor amounts of sand in the immediate shoreface. This segment is experiencing the most rapid rate of retreat. Sand that previously drifted westward to reach this shoreline section has been diverted offshore by the groin at the west end of Belle Fontaine Beach and by ebb tides from the dredged channel just west of the groin. That sand is now deposited in a shoal area about 600 m (2000 ft.) offshore where there is insufficient shore-normal wave transport to bring it back into the surf zone in a down-drift direction. As a result, the marsh has been significantly eroded, causing a major shoreline offset (Figure 15). In an attempt to slow shore retreat, a county park and pier area in the eastern part of this section was recently filled and protected by riprap (Figure 16).

The western half of the Pointe aux Chênes sector extends from the narrow Gulfport outcrop on the beach, westward to Marsh Point (Figure 1). Erosion of this outcrop in the past has provided a limited amount of sand to the westward-directed drift. However, many homeowners have built bulkheads and small groins to protect their property from continued erosion, thus eliminating this sand source. Erosion is now threatening the marsh shoreline as far west as Marsh Point. A small recurved sand spit has been built into Davis Bayou at Marsh Point. The remaining minor sand volumes are transported westward into Biloxi Bay.

#### **Offshore Bathymetry**

Off the Belle Fontaine area the Mississippi Sound is very shallow. Water depths of 0.6 to 1.2 m (2 to 4 feet) occur as far as 1.2 km (3/4 mile) from the shore. The bottom sediments consist primarily of mud, with varying amounts of sand and shell material. This shallow lagoon bottom causes wave energy to impact the bottom far from the shoreline during times of normal tide levels. The result is a very cloudy, muddy water column.

Bathymetric profiles were surveyed between Belle Fontaine and Horn Island in 1992 by the use of a Lowrance X-16 chart depth recorder with GPS position equipment, deployed in a small boat. Once the data were compiled, they were compared with the most recent NOAA navigation chart of the area (November 1991). After corrections to bring the two data sets into agreement, NOAA soundings were incorporated in the profile data to produce an integrated new bathymetric map (Figure 7). The bathymetric data were used by Joseph Suhayda to construct the Shoreline Evolution Model, discussed in his paper in the present volume.

Twelve beach and nearshore profiles were measured with a total station and prism in 1992 (Figure 7). The slope of the nearshore bottom is fairly consistent and ranges between 0.2 and 0.5 degrees for a distance of about 490 m (1600 ft.) offshore. The foreshore slope above mean tide level varies from 7.5 to 9.5 degrees. The beach profile data were incorporated into the Shoreline Evolution Model by Suhayda and used to calculate beach volumes in the model. Appendix B displays the measured profiles.

#### **Beach Sand Grain Size and Distribution**

Fifteen samples of the Belle Fontaine beach foreshore were collected at evenly-spaced intervals between Graveline Bayou and Marsh Point. Standard sieve analyses were run using half-phi mesh diameter intervals. Results were tabulated and statistical analysis performed in order to obtain kurtosis, skewness, standard deviation, mean, median, and mode for each sample. Statistical methods used are described by Folk (1968). A graphic display of the statistical parameters and their distribution for the samples is shown in Figure 17.

Mean grain size is the average grain size of a sample. Graphic Mean  $(M_{\tau})$  is used for the mean grain size:

$$M_{z} = (\emptyset 16\% + \emptyset 50\% + \emptyset 84\%)/3$$

Median grain size is simply the diameter about which half of the sample is coarser and half is finer. The modal grain size is the most frequently occurring grain diameter. Standard deviation is a measure of uniformity or sorting, and the Inclusive Graphic Standard Deviation ( $\sigma_i$ ) is used:

$$\sigma_{1} = \frac{\emptyset 84\% - \emptyset 16\%}{4} + \frac{\emptyset 95\% - \emptyset 5\%}{6.6}$$

Kurtosis is a quantitative measure used to describe the departure from normality of the size distribution of a sediment sample. It is a measure of sorting. Kurtosis measures used are derived from the formula:

$$K_{\rm G} = \frac{\cancel{0}95\% - \cancel{0}5\%}{2.44(\cancel{0}75\% - \cancel{0}25\%)}$$

where  $K_{\rm g}$  is the Graphic Kurtosis of Folk (1968). Skewness defines the departure from symmetry of the normal distribution curve for sediment size distribution. Samples with excess fine sediment will have positive skewness while excess coarse sediment will exhibit negative skewness. Skewness measure is defined by the formula for Inclusive Graphic Skewness (Sk<sub>r</sub>) where:

$$Sk_{1} = \frac{\cancel{0}16\% + \cancel{0}84\% - 2\cancel{0}50\%}{2(\cancel{0}84\% - \cancel{0}16\%)} + \frac{\cancel{0}5\% + \cancel{0}95\% - 2\cancel{0}5\%}{2(\cancel{0}95\% - \cancel{0}5\%)}$$

Although the statistical values show little variation between individual samples, certain trends are discernible in Figure 17. Samples 5 and 6 were obtained immediately adjacent to the Gulfport Formation bluffs. The mean, median, and modal grain size values of these samples are higher, reflecting the composition of the Gulfport source sand. At sample locations east and particularly west of there, these parameter values decrease as sand from the source area is winnowed and spread along the beach. A similar trend occurs at sample numbers 13 and 14, where another Gulfport source is located at Pointe aux Chênes. These results confirm that the Gulfport Formation is the source for all of the sand found on Belle Fontaine beaches. Skewness and kurtosis values show a similar though less obvious trend, reflecting better sorting and winnowing of the finer sediment matter as sand is being transported downdrift from its source areas.

#### SUMMARY AND CONCLUSIONS

The Belle Fontaine area reveals a consistent history of development and erosion during the post-glacial sea level rise. The beach ridge plain, around which Belle Fontaine beach developed, formed at the peak of the Late Pleistocene high sea level stage. Subsequent sea level drop resulted in stream erosion. This drainage network of creeks and rivers during the Late Holocene invasion of the sea was replaced by marine embayments and marshy creeks. The rise of sea level following the end of glaciation in the north has caused erosion of the Pleistocene deposits and evolution of the

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Figure 8. Narrow beach in front of the Graveline Bayou marsh.



Figure 9. Bulkheads and groins along the East Belle Fontaine shoreline.



Figure 10. Erosional scarp along Central Belle Fontaine shoreline. (scale is in feet)



Figure 11. Isolated bulkhead, Central Belle Fontaine. (scale is in feet)



Figure 12. Eroding shoreline in the West Belle Fontaine area.



Figure 13. Riprap protection along the West Belle Fontaine shoreline.



Figure 14. Timber groin at the west end of Belle Fontaine Beach.



Figure 15. Shoreline offset caused by groin construction at the west end of Belle Fontaine Beach.



Figure 16. Park and pier area protected by riprap in the Pointe aux Chênes area.

present Belle Fontaine landscape. The geologically recent emergence of the barrier islands and consequent establishment of the Mississippi Sound reduced wave energy on the Belle Fontaine shoreline and at the same time halted growth of the West Belle Fontaine sand spits. Slow but steady erosion impacted the shore zone. Erosion of the Gulfport Formation sand bluffs in Central Belle Fontaine maintains the beaches today, but with a reduced sand budget and at lower wave energies.

Gulfport Formation bluff erosion contributes sediment to beaches east and west of the bluff outcrops. If homeowners would stabilize the bluffs to prevent erosion, the flank areas would also suffer from sand deficiency and start to erode. Continued placement of groins along the shoreline to trap sand only aggravates the situation, since the problem is the result of sand shortage, and all of the sand is derived from bluff sources at some distance. Addition of sand from the outside to the system is the most logical solution to the problem. This would preserve the natural beauty of the area and take advantage of the natural processes at work there.

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# Appendix A.

**Belle Fontaine Vibracore Descriptions** 

Belle Fontaine Drillhole Descriptions

Core and drillhole locations are shown in Figure 1.

Depths are measured from land surface, seafloor, and creek floor respectively.

# CORE No. 1

Location: Just behind the storm berm at East Belle Fontaine in the Graveline Bayou marsh, about 200 feet east of the end of Beach Blvd.

Latitude: 30° 21.461'N Longitude: 88° 40.611'W Elevation: -0.4 feet Date: 6-02-92

- Depth Description
- 0.0' <u>Holocene</u>, loose plant fragments mixed with sand.
- 0.4' Sand, white to green, fine to medium grained, loose plant fragments.

0.7' Sandy mud and muddy fine sand, brown to black, very organic, abundant plant fragments and fibers. Forams: Arenoparella mexicana-45%, Miliammina fusca-22%, Ammotium salsum-15%, Trochammina inflata-8%, Trochammina comprimata-4%.

0.9' Clay, sandy, dusky brown to black, very organic, scattered sand lenses. Forams: Ammotium salsum-46%, Miliammina fusca-29%, Haplophragmoides subinvolutum-16%, Haplophragmoides sp.(collapsed test)-6%.

2.4' Mud and clay, soft to medium texture, moderate grayish-blue to green, paleo-soil dried clay lumps, scattered plant fragments. Forams: Arenoparella mexicana-41%, Haplophragmoides subinvolutum-33%, Trochammina inflata-12%, unidentified marsh-type sp.-11%.

4.6' Muddy fine sand mixed with sandy-silty mud, dark gray to dark brown, scattered plant fragments, large shell fragment at 6.4'. Forams: Ammonia beccarii tepida-35%, Palmerinella gardenislandensis-26%, unidentified calcareous fragments-23%, Elphidium galvestonense-10%.

- 7.6' Clayey fine sand and mud, poorly sorted, olive gray to dark gray, carbonized plant fragments, scattered light gray sand pockets. Forams: Ammotium salsum-67%, Ammonia beccarii tepida-14%, Nonion depressulum matagordanum-6%, Elphidium galvestonense-3%.
- 9.7' Fine sandy clay and mud, dark gray, scattered shell fragments and plant fragments. Forams (10.4'): Ammonia beccarii parkinsoniana-67%, Ammotium salsum-8%, Ammonia beccarii tepida-7%, Elphidium galvestonense-6%, Nonion depressulum matagordanum-6%, Elphidium latispatium pontium-5%; (12.2'): Ammonia beccarii tepida-35%, Ammonia beccarii parkinsoniana-28%, Nonion depressulum matagordanum-15%, Ammotium salsum-11%, Elphidium galvestonense-6%.
- 13.4' Fine sandy mud, soft, dark gray to dark greenishgray, few sand lenses, scattered plant fragments. Forams: Ammotium salsum-100%.
- 16.3' Total depth.

#### CORE No. 2

Location: Ramsey Bayou, south side of Davis Bayou in the marsh north of Pointe aux Chênes.

Latitude: 30° 22.592'N Longitude: 88° 46.852'W Elevation: -4 feet Date: 6-03-92

Depth Description

0.0' <u>Holocene</u>, mud, very soft, dark greenish-gray, scattered shell fragments. Forams: Ammotium salsum-69%, Miliammina fusca-24%, Haplophragmoides sp.-7%.

3.0' Mud, very soft, moderate greenish-black.

- 6.3' Muddy fine sand mixed with mud, dark gray to black, fine sand lens at 6.5' and at 7.1'.
- 7.5' Fine sandy mud, soft, moderate olive gray, 3/4 inch sand pocket at 8.6'. Forams: *Ammotium salsum*-98%.
- 12.0' Fine sandy mud, moderate olive gray, soft becoming firm at base, sand pocket at 13.6'. Forams: *Ammotium salsum*-100%.
- 14.0' Total depth.

#### CORE No. 3

Location: West end of Belle Fontaine Beach on sand spit west of the terminal groin on the beach.

Latitude: 30° 20.898'N Longitude: 88° 44.915'W Elevation: -1.5 feet Date: 6-04-92

- Depth Description
- 0.0' <u>Holocene</u>, sand, medium grained, mottled light tan to white, grading to medium-fine near base.
- 1.7' Sand, fine-medium grained, light tan to gray, horizontal streaks of black clay concentrations near top grade down to sharp contact with clay at base.
- 3.0' Clay, black, silty, gradational contact with sand at base.
- 3.4' Sand, medium grained, light gray to white, horizontal streaks of black clay, sharp contact with clay at base.
- 4.7' Clay, silty, black, firm, scattered plant fragments.
- 6.0' Total depth.

# CORE No. 4

Location: Graveline Bayou, southwest of Graveline Bay near the north edge of the Gulfport outcrop.

Latitude: 30° 21.970'N Longitude: 88° 42.650'W Elevation: -8 feet Date: 6-30-92

- Depth Description
- 0.0' <u>Holocene</u>, sandy peat and mud, dark gray to black,

abundant plant fragments. Forams: Ammotium salsum-100%, abundant diatoms.

- Sand, medium grained, massive muddy organics, poorly sorted, moderate brownish-gray, wood fragments at 2.8' and 3.2'. Forams: Ammotium salsum-70%, Miliammina fusca-30%, abundant diatoms.
- 3.8' <u>Top of Pleistocene, Prairie Formation</u>, sand, medium grained, muddy, yellowish-gray, becoming brownish-gray at 5.6', forams absent.
- 7.3' Mud, dark gray to black, soft, with light olive gray medium sand pockets, carbonized wood fragment at 7.3', forams absent.
- 8.2' Sand, medium grained, white to light gray, plant fragments, becoming coarse white sand at 9.2', with medium olive gray soft mud lenses, forams absent.
- 9.7' Total depth.

## CORE No. 5

Location: Offshore south of Graveline Bayou marsh area, 2000 feet south of Core No. 1.

Latitude: 30°20.502'N Longitude: 88°41.790'W Elevation: -4 feet Date: 7-01-92

## Depth Description

- 0.0' <u>Holocene</u>, very fine sandy mud, very soft, moderate greenish-gray, scattered shell fragments. Forams: Ammonia beccarii tepida-42%, Elphidium galvestonense-24%, Ammotium salsum-15%, Ammonia beccarii parkinsoniana-13%, Nonion depressulum matagordanum-7%, Palmerinella gardenislandensis-6%, Miliammina fusca-2%, salinity peak indicated at 2.0'.
- 3.0' Very fine sandy mud, very soft, greenish-gray. Forams: Ammotium salsum-100%.
- 6.0' Very fine sandy mud, soft, dark greenish-gray. Forams: Ammotium salsum-99%, Ammobaculites sp.-1%.
- 9.0' Very fine sandy mud, dark greenish-gray. Forams: Ammotium salsum-98%, Ammonia beccarii tepida-1%, Miliammina fusca-1%.
- 13.2' Total depth.

## CORE No. 6

Location: Offshore south of Germany property in Central Belle Fontaine area.

Latitude: 30° 20.502'N Longitude: 88° 41.790'W Elevation -4 feet Date: 7-01-92

#### Depth Description

- 0.0' <u>Holocene</u>, muddy fine sand, very soft, moderate greenish-gray, scattered mud lenses and shells, carbonized wood fragment at 2.0'. Forams (0.9'): Ammonia beccarii parkinsoniana-51%, Ammotium salsum-20%, Ammonia beccarii tepida-14%, Elphidium galvestonense-11%; Forams (2.0'): Ammotium salsum-87%, Arenoparella mexicana-3%.
- 2.8' Muddy medium sand, moderate olive gray. Forams: *Ammotium salsum*-100%.
- 4.2' <u>Top of Pleistocene, Gulfport Formation</u>, humate sand, medium to fine grained, muddy, dusky yellowishbrown to dark yellowish-brown, pale orange sand pocket at 5.0', no forams, diatoms scattered.
- 5.8' <u>Top of Biloxi Formation</u>, fine sand, poorly sorted, dark yellowish-brown, mud lenses. Forams: *Ammotium salsum*-100%.
- 8.8' Muddy medium sand, poorly sorted, bioturbated, very pale orange. Forams: Ammotium salsum-100%.
- 9.6' Total depth.

# CORE No. 7

Location: Offshore of west end of Belle Fontaine Beach, 1800 feet southwest of Core No. 3.

Latitude: 30° 20.722'N Longitude: 88° 45.015'W Elevation: -5.5 feet Date: 7-01-92

- Depth Description
- 0.0' <u>Holocene</u>, muddy fine sand, very soft, greenishblack, scattered small shell fragments, whole molluscan shell at 1.7'. Forams (0.5'): *Ammotium* salsum-42%, Elphidium galvestonense-33%, Am-

monia beccarii parkinsoniana-12%, Ammonia beccarii tepida-6%, Miliammina fusca-4%; Forams (2.6'): Ammotium salsum-85%, Haplophragmoides subinvolute-4%, Haplophragmoides sp.-4%, Arenoparella mexicana-2%.

- 2.9' Muddy fine sand, soft, scattered clay lenses, dark olive gray to dark greenish-gray, grades downward to muddy medium sand at 6.5', moderate brown to dark yellowish brown, scattered limonite nodules at base. Forams: Ammotium salsum-97%, Ammonia beccarii parkinsoniana-2%, Trochammina inflata-1%.
- 8.9' <u>Top of Pleistocene</u>, mud, oxidized, dark yellowish-orange, mottled with light greenish-gray mud, medium sand at base, forams absent.
- 11.6' Total depth.

# CORE No. 8

Location: Offshore south of Pointe aux Chênes area, 3/4 mile southwest of Core No. 2.

Latitude: 30° 20.143'N Longitude: 88° 47.231'W Elevation -6 feet Date: 7-01-92

- Depth Description
- 0.0' <u>Holocene</u>, muddy fine sand, soft, moderate greenish-gray, fragments of *Crassostrea virginica*, becoming fine sandy mud at 2.0'. Forams (0.5'): Ammotium salsum-42%, Ammonia beccarii parkinsoniana & Ammonia beccarii tepida-36%, Elphidium galvestonense-11%, Nonion depressulum matagordanum-3%, salinity peak indicated; Forams (2.0'): Ammotium salsum-92%, Ammonia beccarii parkinsoniana & Ammonia beccarii tepida-7%.
- 3.4' Muddy fine sand, very soft, dark greenish-gray, becoming fine sandy mud at 5.6' with sand lenses. Forams: Ammotium salsum-97%, Ammonia beccarii parkinsoniana-1%.
- 7.6' Fine sandy mud, soft, dark greenish-gray, sand lenses. Forams: Ammotium salsum-73%, Nonion depressulum matagordanum-27%.
- 8.9' Fine sandy clay, dark greenish-gray. Forams: *Ammotium salsum*-100%.

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- 12.5' Medium silt, dark greenish-gray. Forams: *Ammotium salsum*-100%.
- 13.9' Clay, soft, dark greenish-gray. Forams: Ammotium salsum-100%.
- 21.7' Total depth.

# CORE No. 9

Location: Offshore south of Marsh Point.

Latitude: 30° 22.974'N Longitude: 88° 48.663'W Elevation: -4.5 feet Date: 7-01-92

- Depth Description
- 0.0' <u>Holocene</u>, mud, very soft, dark greenish-gray, scattered shell fragments, salinity peak indicated at 1.4'. Forams (0.3'): Ammonia beccarii parkinsoniana & Ammonia beccarii tepida-70%, Ammotium salsum-11%, Elphidium galvestonense-8%, miliolid spp.-6%, Trochammina sp.-2%; (3.5'): Elphidium galvestonense-24%, Ammonia beccarii parkinsoniana & Ammonia beccarii tepida-23%, unidentified calcareous test-20%, Elphidium latispatium pontium-10%, Palmerinella gardenislandensis-9%, Nonion depressulum matagordanum-7%, Ammotium salsum-4%.
- 4.3' Very fine sandy mud, very soft, dark greenish-gray. Forams: Elphidium galvestonense-34%, Ammonia beccarii tepida & Ammonia beccarii parkinsoniana-27%, Ammotium salsum-18%, Nonion depressulum matagordanum-6%, Elphidium latispatium pontium-2%.
- 5.7' Very fine sandy mud, soft, dark greenish-gray. Forams: Ammotium salsum-88%, Nonion depressulum matagordanum-8%.
- 9.3' Very find sandy mud, very soft, dark olive gray. Forams: Ammotium salsum-80%, Ammonia beccarii parkinsoniana-8%, Ammonia beccarii tepida-8%, Nonion depressulum matagordanum-4%.
- 12.9' Very fine sandy mud, very soft, moderate olive gray. Forams: Ammotium salsum-99%, Nonion depressulum matagordanum-1%.

13.5' Total depth.

# CORE No. 10

Location: On beach at Belle Fontaine Beach about 3500 feet east of Core No. 3.

Latitude: 30° 20.689'N Longitude: 88° 44.405'W Elevation: -1 foot Date: 7-02-92

Depth Description

- 0.0' <u>Holocene</u>, sand, medium grained, yellowish-gray to medium light gray. Forams: *Ammotium salsum*-100%.
- 0.7' Mud, soft, dark olive gray, silty. Forams: Arenoparella mexicana-83%, Ammotium salsum-9%, Haplophragmoides sp.-4%, Miliammina fusca-4%.
- 2.0' Sand, medium grained, light gray, forams absent.
- 2.4' Sandy mud, dark greenish-gray, plant fragments, sand pockets and lenses. Forams: Ammotium salsum-71%, Arenoparella mexicana-13%.
- 3.3' Medium silt, dark greenish-gray, sand lenses. Forams: Ammotium salsum-85%.
- 4.2' Muddy fine sand and mud, dark greenish-gray, sand lenses.
- 5.0' Mud and muddy fine sand, intercalated, dark greenish-gray. Forams: *Ammotium salsum*-100%.
- 6.7' Muddy medium-fine sand, dark greenish-gray, shell fragments.
- 7.6' Muddy fine sand, dark greenish-gray, grades down to mud, oxidized light gray with dark yellowishorange mottling at 8.0', possible post-drilling exposure oxidation.
- 8.9' <u>Top of Pleistocene, Biloxi Formation</u>, fine sandy mud, mottled light yellowish-gray and dark yellowish-gray, bioturbated, soil horizon, forams absent.
- 9.4' Fine sandy mud, light to medium gray and pale bluish-green to medium bluish-gray, mottled, forams absent.
- 10.5' Fine sand and fine sandy mud, mottled light gray and dark greenish-gray, soil horizon with light olive brown mottling, some woody material, fine

white sand lenses intercalated from 11.4' to total depth. Forams: *Ammotium salsum*-100%.

12.1' Total depth.

#### Core 12

Location: Offshore of Belle Fontaine Point.

Latitude: 30° 19.8'N Longitude: 88° 40.6'W Elevation: -8 feet

- Depth Description
- 0.0' <u>Holocene</u>, very fine sandy mud, plant fibers, moderate greenish-gray.
- 1.7' Fine sandy mud, plant fibers, few shell fragments.
- 6.0' Clayey fine sand, some clean sand, plant fibers.
- 11.0' Muddy fine sand, scattered gypsum and clean sand.
- 13.6' <u>Top of Pleistocene</u>, clayey fine sand, ferruginous nodules, plant fibers, gypsum, carbonized wood fragments.
- 16.5' Clayey fine sand, yellowish-brown oxidized grains, gypsum crystals at total depth.
- 19.6' Total depth.

## **Drillhole 13**

Location: Sunplex Industrial Complex west of Gautier.

Latitude: 30° 25' 36" N Longitude: 88° 43' 11" W Elevation: 26 feet

- Depth Description
- 0.0' <u>Prairie Formation</u>, very fine sandy mud and clay, dark yellowish-orange.
- 10.0' Fine sand, moderately well sorted.
- 12.0' Fine sandy clay, soft, dark yellowish-orange, iron nodules, sand lenses.
- 13.5' <u>Biloxi Formation with Prairie Fm. lenses</u>, very fine sandy clay, medium dark gray, small shell fragments scattered throughout, carbonized wood fragments, sand lenses.

- 19.0' Clayey fine sand, medium dark gray, bioturbation.
- 23.0' Massive muddy, silty fine sand, poorly sorted, moderate greenish-gray, white sand pockets, carbonized plant fragments.
- 25.0' Muddy fine sand, sandstone fragments, medium gray.
- 30.0' Fine sandy mud, light olive gray with dark yellowish-olive mottles, bioturbation, white sand lenses, carbonized woody plant fragments.
- 35.2' <u>Undifferentiated fluvial Pleistocene</u> and/or <u>undif</u><u>ferentiated Neogene</u>, very fine sandy, medium silt, pale yellowish-brown, mud stringers.
- 39.5' Fine sand, moderately sorted, very light gray.
- 43.0' Muddy fine sand, poorly sorted, very light gray.
- 45.5' Fine sand, poorly sorted.
- 53.0' Fine sand, well sorted, very light gray, carbonized wood fragments.
- 60.0' Medium sand, moderately well sorted, plant fragments.
- 68.0' <u>Undifferentiated Neogene</u>, muddy fine sand, poorly sorted, very light bluish-gray.
- 82.0' Total depth.

#### **Drillhole 14**

Location: Applewhite/Fontainbleau area.

Latitude: 30° 22' 39" N Longitude: 88° 44' 53" W Elevation: 20 feet

- Depth Description
- 0.0' <u>Prairie Formation</u>, clayey fine sand, poorly sorted, pale yellowish-brown with dark yellowish-orange mottles.
- 7.0' Fine sand, poorly sorted, very pale yellowishbrown.
- 10.0' Muddy fine sand, poorly sorted, very light gray.
- 12.0' Fine sand, moderately well sorted, shell fragments,

yellowish-orange with pale mottles.

- 14.0' Fine sandy medium silt.
- 14.5' Fine sand, well sorted, very light gray, carbonized plant fragments.
- 17.5' Very fine sandy mud, mud with very fine sand laminations.
- 21.0' Coarse silt, very sandy, with mud, light olive gray, plant fragments, gypsum crystals.
- 25.0' Biloxi Formation, mud.
- 25.5' Fine sand, white to very light gray, plant fragments.
- 26.0' Mud, moderate greenish-gray, *Crassostrea* fragments, salt lenses, gypsum crystals.
- 32.0' Clay, ferruginous nodules.
- 32.5' Mud, medium stiff, dark greenish-gray.
- 39.5' Fine sandy mud, stiff, dark greenish-gray.
- 42.0' Clayey fine sand, dark greenish-gray, lenses of shell fragments.
- 46.0' Fine sandy mud, moderately dark greenish-gray, few shells.
- 46.5' Coarse silty medium sand, very poorly sorted.
- 50.0' Muddy medium sand, very poorly sorted, greenish-black, abundant shells.
- 52.5' Fine sand, moderately well sorted, white.
- 59.0' Medium sand, moderately sorted, light gray.
- 64.0' Fine sand, poorly sorted, light gray.
- 70.2' <u>Neogene</u>, mud, very stiff, medium greenish-gray with dark yellowish-orange mottles.
- 72.0' Total depth.

#### **Drillhole 15**

Location: Belle Fontaine Point, Germany property.

Latitude: 30° 20' 41"N Longitude: 88° 42' 06"W Elevation: 15 feet Date: 10-25-77

Depth	Description
0.0'	<u>Gulfport Formation</u> , medium sand, well sorted, dark yellowish-orange.
3.0'	Medium sand, well sorted, white with dark yel- lowish-orange streaks.
13.0'	Medium sand, very well sorted, dusky brown, hu- mate cement.
17.0'	Fine sand, well sorted, dusky brown, humate ce- ment.
27.0'	Fine sand, moderately well sorted, grayish-olive.
32.0'	Fine sand, well sorted, grayish-olive.
35.0'	Medium sand, moderately well sorted, grayish-ol- ive.

- 40.5' Fine sand, moderately well sorted, white.
- 46.0' Medium sand, well sorted, white with grayish-orange streaks.
- 51.0' Fine sand, moderately well sorted, white.
- 65.5' Fine sand, very well sorted, white.
- 70.0' <u>Undifferentiated Neogene</u>, medium sand, moderately well sorted, medium light gray with dark greenish-gray mud lenses.
- 85.0' Fine sand, moderately well sorted, medium light gray.
- 104.0' Medium sand, well sorted, white.
- 114.0' Fine sand, moderately well sorted, white.
- 117.0' Muddy very fine sand, poorly sorted, light grayish-blue-green.
- 121.0' Very fine sandy mud, light grayish blue-green.
- 151.0' Total depth.

# **Drillhole 16**

Location: Belle Fontaine Point at the west end of Belle Fontaine Beach Road.

Latitude: 30° 20' 55"N Longitude: 88° 44' 53"W

46

Elevation: 5.0 feet

- Depth Description
- 0.0' <u>Holocene</u>, sand, medium grained, very pale orange to white, moderately well sorted, no forams.
- 5.0' Sand, fine grained, light gray, well sorted. Forams: Haplophragmoides subinvolutum-49%, Arenoparella mexicana-27%, Trochammina inflata-17%, Haplophragmoides manilaensis-6%.
- 7.0' Fine sandy mud, soft, dark gray, sand lenses. Forams: Haplophragmoides subinvolutum-64%, Arenoparella mexicana-28%, Trochammina inflata-7%.
- 10.0' Medium muddy sand, poorly sorted, medium olive black grading to medium dark gray at base.
- 16.0' <u>Top of Pleistocene, Biloxi Formation</u>, muddy medium sand, dark gray.
- 25.0' Fine sand, moderately well sorted, dark greenishgray and white. Forams: Ammonia beccarii tepida-1 specimen; (28'-29'): Buliminella elegantissima-13%, Nonion depressulum matagordanum-11%, Ammonia beccarii tepida-9%, Cibicides floridanus-9%, Elphidium incertum mexicanum-9%, Elphidium galvestonense-7%, Hanzawaia strattoni-7%, Nonionella atlantica-7%, Rosalina columbiensis-7%, Quinqueloculina subpoeyana-4%.
- 33.0' Clay, greenish-black. Forams: Elphidium galvestonense-28%, Ammonia beccarii tepida-22%, Ammonia beccarii parkinsoniana-20%, Neoconorbina orbicularis-7%, Nonionella opima-5%, Cribroelphidium poeyanum-5%, Globigerina bulloides-3%, Hanzawaia strattoni-3%.
- 40.0' Fine sand, moderately well sorted, moderate green-

ish-gray. Forams: Rosalina columbiensis-24%, Nonion depressulum matagordanum-8%, Textularia candeiana-8%, Textularia mayori-7%, Elphidium galvestonense-7%, Hanzawaia strattoni-5%, Buliminella elegantissima-4%, Quinqueloculina fragments-4%, Cribroelphidium poeyanum-4%, Elphidium incertum mexicanum-4%, Ammonia beccarii tepida-3%, Ammonia beccarii parkinsoniana-3%.

- 43.5' Very fine sandy mud, dark greenish-gray. Forams: Ephidium galvestonense-18%, Nonion depressulum matagordanum-18%, Rosalina columbiensis-17%, Buliminella elegantissima-6%, Ammonia beccarii tepida-5%, Ammonia beccarii parkinsoniana-4%, Elphidium incertum mexicanum-4%, Brizalina lowmani-3%, Nonionella opima-3%.
- 55.0' Fine sandy mud and muddy medium sand, dark gray, wood fragments. Forams: Rosalina columbiensis-28%, Elphidium galvestonense-22%, Ammonia beccarii tepida-8%, Elphidium incertum mexicanum-5%, Ammonia beccarii parkinsoniana-5%, Buliminella elegantissima-5%, Nonionella atlantica-4%, Nonion depressulum matagordanum-3%.
- 60.5' <u>Pre-Sangamonian Pleistocene</u>, alluvium, muddy medium sand, dark gray, with wood fragments.
- 63.0' Medium sand, well sorted, white.
- 70.0' <u>Top of definite Neogene</u>, gravel, fine sand, and stiff, light greenish-gray mud.
- 71.0' Fine sand, moderately well sorted, white.
- 74.0' Mud, stiff, light greenish-gray.
- 85.0' Clay, stiff, dark greenish-gray.
- 87.5' Total depth.

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# Appendix B.

Beach and Nearshore Profiles at Belle Fontaine (Location of profiles in Figure 7)

# BELLE FONTAINE, JACKSON COUNTY, MISSISSIPPI



FEET



FEET







# BELLE FONTAINE, JACKSON COUNTY, MISSISSIPPI







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**Belle Fontaine Profile 11** 





# **BELLE FONTAINE SHORELINE EROSION PROJECT: DEVELOPMENT OF SHORELINE EVOLUTION MODEL AND EVALUATION OF EROSION CONTROL ALTERNATIVES**

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# **INTRODUCTION**

This paper is a summary of the final report for the Belle Fontaine Shoreline Erosion Project (Contract CZM NA 170Z0363-01/4.3) and presents the recommendations for controlling shoreline erosion at Belle Fontaine. The scope of work for the project consisted of three main tasks: Task 1, wave climate data acquisition; Task 2, data analysis and assimilation; and Task 3, a technical evaluation of erosion control measures for the Belle Fontaine site.

### Methodology

The method used to achieve the project objectives was to quantify the coastal processes controlling beach erosion and develop a computer model which simulates beach evolution at the site. The model, called SEM (Shoreline Evolution Model), is described in detail later in this report. It assimilates geologic data into a quantitatively predictive tool that can be used to evaluate alternatives for erosion control. The model can also be used to assess the future of the area under a no-action alternative. The data needed to set up the model include wave parameters, shoreline orientation, offshore and nearshore water depths, beach sediment size and distribution, and historical wind statistics.

# WAVE CLIMATE DATA ACQUISITION

#### Objective

Wave data were acquired to allow the wave climate at the site to be documented. The duration of the data collection was to be limited to the time period from late winter and early spring of 1992. This amount of time was used so that the wave action associated with frontal passages could be observed. Previous experience with coastal processes along the northern Gulf of Mexico has indicated that most of the longshore transport of sediments was associated with winter storms. While not as severe as hurricanes, the winter storms occur frequently enough to be the dominant source of energy causing beach erosion.

# **Wave/Tide Data Collection**

The instrument used to collect the hydrodynamic data was a Sea-Bird Electronics SBE 26 SEAGAUGE Wave and Tide Recorder. The instrument is self-contained in a water-

Episode	Start	End	
BMR01	2/12/92	2/21/92	
BMR02	2/26/92	3/06/92	
BMR03	3/06/92	3/13/92	
BMR04	3/13/92	3/22/92	
BMR05	3/23/92	3/31/92	
BMR06	3/31/92	4/08/92	
BMR07	4/08/92	4/16/92	
BMR08	4/16/92	4/25/92	
BMR09	4/29/92	5/03/92	

Table 1. Wave and tide data collection.

proof cylinder which houses electronics to measure and record water pressure and temperature. From these measurements water elevation and wave heights can be determined. The pressure measurements made by the instrument are absolute pressures and are measured to an accuracy of 0.0001 psi (pounds per square inch), representing a resolution of about 0.5 mm in water height. The pressure is measured continuously and the mean pressure over 15 minutes is recorded. Waves were measured every 3 hours by taking bursts of 1200 samples taken at 0.25-second intervals. The instrument was located near the southernmost point of Belle Fontaine, at beach segment 15, shown in Figure 1. The instrument was about 138 m (450 ft.) southward from the shoreline and was deployed into a water depth of about 1 m (3.3 ft.). Water level varied at the site with tides and wind set-up, and the instrument became exposed upon one occasion. The wave and tide measurements were initiated on February 12, 1992, and were concluded on May 3, 1992. Nine data collection episodes were obtained, each lasting about 7 to 8 days. The data collection episodes are summarized in Table 1.



Figure 1. Belle Fontaine study area map showing location of shoreline segments.

Site	Shoreline Bearing (deg.)	Breaker Height (feet)	Breaker Crest Bearing (deg.)
1	286	0.7	273
2	280	0.8	256
3	270	1.1	241
4	270	1.0	256
5	235	1.4	232
6	237	1.4	237

Table 2. Nearshore wave observations on April 19, 1992. Wind direction is from the southeast.

The complete set of tide data is presented in Appendix C, giving for each episode the pressure and temperature measured. The vertical scale is in pounds per square inch absolute (psia), with each small division equaling an elevation change of about 10 cm (4 in.). The astronomical and wind-driven tides are clearly delineated. The highest water level was recorded during the BMR08 episode at hour 99 (about noon on April 20, 1992). The water level was about 1 meter (3.3 ft.) above normal water level.

Shoreline longshore current and breaker data were collected on April 19, 1992. These data are listed in Table 2. The measurement sites were spaced along the entire Belle Fontaine beach system. Site 1 was at the extreme western end of the Belle Fontaine beach near beach segment transect number 8. Site 2 was at beach segment transect number 10. Site 3 was at the location of the wave/tide instrument at beach segment transect 15. Site 4 was at beach segment transect 16. Site 5 was at beach segment 18. Site 6 was about 6.4 km (4 mi.) east of the instrument site at beach segment 22. These data were collected to document the breaker angle variation along the Belle Fontaine beach, which is one of the parameters controlling the magnitude and direction of sediment transport. This also provided data to verify the predicted breaker angles in the computer program used to make an evaluation of the erosion control alternatives.

### **Meteorological Data**

Meteorological data for the period of January 1 to April 30, 1992, were obtained from Keesler AFB. These data consist of hourly readings of wind speed and direction, as well as other data. The wind speed is recorded to 1-knot precision and the wind direction is recorded to 10 degrees precision. Several fronts were recorded in this data set, as indicated in Table 3. The table gives the time period and maximum wind recorded at Keesler. The frontal passages were characterized by a wind vector which rotated clockwise starting with a direction of about 45 degrees. The wind speed increases as the direction changes through 90, then 180, and generally decreases as the wind swings to the north. The direction of the wind at maximum wind speed varied among the frontal passages. In some cases it occurred early, producing strong easterly winds, while in other cases the time of maximum wind was delayed until the wind direction had swung to the west.

Several fronts were selected for use in calibrating the wave forecasting portion of the shoreline evolution model. The wind speed and direction for these fronts are listed in Table 4. Each of the frontal passages showed a wind speed and wind direction variation, with winds initially out of the east and, in most cases, changing in a clockwise manner to winds from the north. The first front on March 9, 1992, lasted about 21 hours and had a prolonged period of eastward winds. The wind was from the east-southeast and southeast for 15 hours and then intensified and changed to the south and west within 6 hours. The second front was also about 21 hours in duration and had the strongest winds from the east, having an 8-hour period of winds over 10 knots. The third front had a duration of about 5 hours, and included a 4-hour period of winds over 10 knots from the southeast. A fourth pre-frontal event was also used; it had a prolonged wind from the southeast on April 17 through April 21, 1992 (Table 5). The wind was from the southeast for about 84 hours, varying in speed between 8 and about 18 knots.

Wind statistics for the central Gulf of Mexico were also developed from several sets of long term observations in the area, i.e., the U. S. Navy's Summary of Synoptic Meteorological Observations data. The wind speed and direc-

Date	Maximum Wind Speed (knots)	Direction Maximum Wind (deg. from)	
January 13-14	15	220	
January 18-19	18	45	
February 25-26	14	240	
March 9-10	15	200	
March 22-23	15	350	
March 30-31	12	340	
April 6-7	13	110	
April 17-20	16	120	
April 22	13	140	

Table 3. Fronts and strong winds during the period of January 1 through April 30, 1992.

tion statistics for the area are given in Table 6. The table gives the percent of an average year that winds occur in various speed and direction ranges. The most frequently occurring wind is from the southeast at a speed of 9-21 mph (8-18 knots). Winds from the southeast, south, and southwest account for about 47% of the observations. These wind statistics reflect the average number and intensity of the frontal passages which occurred over several years during the period of ship observations, and are therefore more representative of the expected long term wind patterns than are the short term data which covered the period of wave observations during the first few months of 1992.

## DATA ANALYSIS

#### Wave Data

The wave data collected at the site were analyzed for the periods of high wave heights which occurred during frontal passages. Wave records were analyzed for the significant wave height and period. Four frontal passages were selected as given in Tables 4 and 5. For each frontal passage, the observed wave heights and periods were determined from the pressure sensor data. The wave height and period time series for the prolonged winds on April 17 through 20 are given in Table 7. The wave period and height increase in response to the wind speed and still-water elevation. The highest observed wave heights occurred on or near high tides. The observed wave periods ranged from 2.2 to 3.4 sec. These waves have deep-water wavelengths in the range of 6-18 m (20-60 ft.). The waves reach shallow water at water depths from 0.6 to about 1.8 m (2-6 ft.). Therefore, for most of the Mississippi Sound, which has water depths in the range of 4.5-6 m (15-20 ft.), the waves are propagating in deep water. This means that the bathymetry of the Sound does not substantially control wave heights and directions through wave refraction, shoaling and bottom interactions, and that the wind speed and direction will control wave properties. A typical wave meter output is illustrated in Appendix D.

To assess the wave generation process, the observed wave heights were compared with values forecast using the shallow water graphs in the Shore Protection Manual (U.S. Army Corps of Engineers, 1984). These graphs predict wave height and period based upon a wind speed, open water fetch, and duration. The fetch for various directions of approach to the instrument site varied from essentially unlimited to the west of the site to 12.2 km (40,000 ft.) to the east, 18.3 km (60,000 ft.) to the southeast, 9.1 km (30,000 ft.) to the south, and 15.2 km (50,000 ft.) to the southwest. The forecasting graphs in the Shore Protection Manual indicate a duration of about 2 hours for the wind speed and fetch which occurred during the storm conditions. Thus, the wave field around Belle Fontaine can be defined as fetch limited, since wind duration is much greater than 2 hours. The forecast wave height was corrected for wave shoaling and refraction, but was not corrected for bottom friction, since this is accounted for in the forecasting graphs. The comparison for the prolonged period on April 17 through 20 indicates

	Storm 1		Storm 2		Storm 3	
Time (hr)	Dir. (deg.)	Speed (knots)	Dir. (deg.)	Speed (knots)	Dir. (deg.)	Speed (knots)
1	120	3	60	5	70	4
2	140	10	40	5	50	3
3	130	10	30	7	170	4
4	130	10	350	6	150	9
5	130	8	330	8	160	11
6	130	10	20	9	140	13
7	120	8	60	10	160	11
8	130	9	90	4	150	10
9	120	7	100	20	170	7
10	130	10	90	10	150	4
11	130	10	100	10	140	4
12	130	8	100	13	160	2
13	150	7	100	12		
14	160	10	110	10		
15	160	10	110	10		
16	180	15	110	12		
17	210	10	110	8		
18	190	15	100	8		
19	200	15	120	6		
20	230	18	110	10		
21	250	12	110	7		
Storm 1 starts at 09:00 (ST) on March 9, 1992 Storm 2 starts at 00:00 (ST) on April 6, 1992 Storm 3 starts at 09:00 (ST) on April 22, 1992						

Table 4. Storms selected for detailed wave analysis.

Time (day/hr)	Wind Dir. (deg.)	Wind Time Speed (day/hr) (knots)		Wind Dir. (deg.)	Wind Speed (knots)	
17/8	90	5	19/8	130	10	
10	120	10	10	140	8	
12	130	10	12	140	12	
14	110	10	14	130	10	
16	130	8	16	130	12	
18	150	9	18	120	10	
20	120	8	20	110	10	
22	120	7	22	130	8	
24	130	9	24	130	10	
18/2	140	12	20/2	130	13	
4	130	9	4	140	10	
6	110	7	6	140	12	
8	100	8	8	130	12	
10	110	17	10	150	16	
12	110	19	12	200	16	
14	120	14	14	160	10	
16	120	10	16	130	12	
18	90	8	18	150	9	
20	100	7	20	160	13	
22	110	8	22	150	16	
24	110	8	24	160	6	
19/2	130	6	21/2	330	7	
4	130	10	4	330	10	
6	150	10				
Note: Data start at 08:00 on April 17, 1992.						

Table 5. Prolonged high wind period on April 17-20, 1992.
			Wind Sp	eed (mph)		
Wind Dir.	0-8	9-21	22-35	36-51	51+	Total %
N	1.4 %	5.6 %	4.4 %	1.2 %	0.1 %	12.7 %
NE	2.0 %	7.1 %	2.4 %	0.3 %	-	11.8 %
E	3.7 %	13.2 %	2.8 %	0.1 %	-	19.8 %
SE	4.1 %	19.5 %	6.7 %	0.3 %	-	30.6 %
S	2.5 %	8.3 %	2.5 %	0.2 %	-	13.5 %
SW	0.9 %	1.4 %	0.3 %	-	-	2.6 %
W	0.7 %	1.1 %	0.4 %	0.1 %	-	2.3 %
NW	0.8 %	2.2 %	1.6 %	0.4 %	-	5.0 %
Calm	1.7 %	-	-	-	-	1.7 %
Total %	17.8 %	58.4 %	21.1 %	2.6 %	0.1 %	100 %

Table 6. Percentages of long term wind statistics for the Belle Fontaine area.

that the SPM graphs overestimate the wave heights at the recording site by about 30%. This is probably due to the effect of the nearshore muds providing an additional energy loss due to the forcing of mud motion.

Some tendency for the wave heights to be limited by water depth is also indicated in the wave data. This again can be caused by wave/sea bottom interactions which increase for shallow water conditions. The wave height to water depth ratio for areas having muddy bottom sediments has been observed to be in the range of 0.3 to 0.4, which is close to the observed ratio at Belle Fontaine. This is considerably less than the breaking criteria, and suggests that the muddy sediments in front of the Belle Fontaine beach may be providing some beach protection.

#### **Geologic Data**

The geologic data for the area consist of beach and bathymetric profiles, a bathymetric map generated from the profiles, and sediment data at selected sites. The bathymetric profiles indicate that the nearshore zone is a relatively flat, low sloping bottom, with the beach and beach sediments forming a scarp at the shoreline. The beach sediment size is about 0.3 mm. These beach sands are concentrated at the shoreline and do not extend into Mississippi Sound. At the eastern central portion of Belle Fontaine, a section of cliffs with heights to 15 feet backs a narrow beach.

The geological data have an important bearing on the sediment budget and transport rates at the site. For Belle Fontaine, the sediment budget appears to be relatively simple. Sand is primarily confined to the beach face and backshore in the form of a berm or cliff. The primary source of the sand appears to be the cliffs of Belle Fontaine, with a secondary source along Pointe aux Chênes. There are no sources of sand from nearby rivers. The sand is transported in both westward and eastward directions and accumulates at the western end of Belle Fontaine Beach, due to the presence of a groin at that location. The groin, which protects an inlet, prevents sediment from reaching the beaches to the west. Some beach sands are transported into Mississippi Sound as sediments bypass the inlet mouth. Much of the sand contained in the beach berm is unavailable for transport during normal water levels. The mechanism for initiating and continuing sediment movement is wave action. The transport mechanism is longshore transport of sand driven by waves which move sand in both directions from the cliffs, but primarily in a westward direction. Little sand appears to be transported offshore and dune accretion is not taking place.

This sediment budget is determined by the shape of the Belle Fontaine shoreline and the prevailing wind patterns. Belle Fontaine is a broad point having an east/west bearing at

Date/Time	Sig. Wave Height (cm)	Wave Period (sec)
18/0	13	2.2
3	14	2.5
6	14	2.5
9	25	3.0
12	30	3.3
15	19	3.0
18	15	3.0
21	14	2.7
19/0	19	2.7
3	30	3.3
6	19	3.3
9	19	3.0
12	13	2.9
15	14	2.6
18	16	2.9
21	14	2.7
20/0	19	3.0
3	20	3.1
6	25	3.1
9	25	3.0
12	30	3.4

Table 7. Observed wave height and wave period duringApril high winds.

its southern point and flanks that sharply turn in a northerly direction. Sediments that are eroded from the point are moved into areas of increasing longshore transport and so are moved northward away from the point area. Even with the wide variations in the wind and wave direction occurring in the area, the longshore transport returns little sediment to the point area. At the extreme eastern and western ends of Belle Fontaine, the shoreline trends northeast and northwest so the longshore transport is reduced. Sediments are deposited at the extreme eastern and western ends of Belle Fontaine.

#### DATA ASSIMILATION - SHORELINE EVOLUTION MODEL

A computer model, Shoreline Evolution Model (SEM), was developed for this study to assimilate the geological data and evaluate erosion control alternatives. The model quantitatively describes the sediment budget at the site and allows the effects of erosion control alternatives on the sediment budget to be quantitatively evaluated. The model accomplishes these objectives by computing the sediment longshore transport rate and the change in the shoreline position along Belle Fontaine. These calculations are based upon the current shape of the shoreline and the variations in the amount of wave energy occurring along the shoreline. The dominant coastal process controlling sediment transport at Belle Fontaine is longshore transport of sediment, and therefore it was incorporated into the simulation model.

#### **Longshore Transport of Sediments**

The longshore transport of sediments is determined by the amount of wave power exerted in a longshore direction, given by the formula:

$$Pls = 1/16 \gamma Hb^2 Cgb Sin (2 \alpha b)$$

where *Pls* is the longshore wave power,  $\gamma$  is the unit weight of water, *Hb* is the breaking wave height, *Cgb* is the breaking wave group velocity, and  $\alpha b$  is the breaking wave angle. The breaking wave angle is the angle between the wave crest and the shoreline. The units of *Pls* are energy per unit length per unit time. The longshore transport of sediment is related to the longshore power by the formula:

$$Is = K Pls$$

where Is is the longshore transport rate of sediments and K is an efficiency coefficient. The value of the efficiency factor K has been estimated from field studies to be a function of sediment grain size; it has a value of 0.4 when Hb is the significant wave height. Due to the fact that only a fraction of the beach profile is occupied by sand at Belle Fontaine, a reduced value of 0.2 was used in the program. The units of Is are weight per unit time. The longshore sediment transport can be expressed as the volume of sediment moved per unit time by the formula:

$$Q = Is / (\rho s - \rho w) G a$$

where Q is the longshore volume transport,  $\rho$ s is the density



Figure 2. Shoreline segments scheme used in the Shoreline Evolution Model.

of the sediment grains,  $\rho w$  is the density of water, G is the gravitational acceleration, and a is the volume concentration of the sediment. The units of Q are volume per time. This relationship between wave action and sediment transport is the physical basis for beach erosion and, therefore, must be incorporated into the evaluation of erosion prevention alternatives.

The concept underlying the SEM is the conservation of beach sediment; that is, that the volume of beach sediment along a section of coast will vary depending upon the net amount of addition or removal of sediment. If more sediment comes into a beach area than leaves, then the beach accretes. If more sediment leaves than comes in, then the beach volume decreases and the beach erodes. Sediment can be supplied to a beach by rivers, longshore transport, or from offshore. Likewise, sediment can leave a beach by longshore transport, movement offshore, and/or movement inland.

The equation that expresses this balance or conservation of beach sediment is

$$dVol/dT = S - d(U Vol)/dx$$

where Vol is the volume of beach sediment for a section of beach, T is time, S is a source (or sink) of sediment, and U is the longshore transport velocity of the sediment. The last term on the right hand side of this equation shows that it is the gradient of the longshore movement of sediment that controls beach erosion.

#### **Shoreline Evolution Model**

The above equations form the basis for a beach evolution model for Belle Fontaine. The change in the volume of sand along sections of the Belle Fontaine beach through either erosion or accretion is due to changes in the longshore transport. As indicated by the sediment samples and cores taken at Belle Fontaine, there is a small amount of sand transported into the Mississippi Sound and there is little overwash to the backshore. Also, there are no rivers currently supplying sediment to the Belle Fontaine beach system. Thus, it appears that the amount of beach sediment along each section of Belle Fontaine depends upon the net amount of longshore transport occurring at that section. If the gradient of the transport flux is positive, that is the flux increases over the section, then erosion will occur. If the gradient is negative, then accretion will occur. A stable beach system will occur when there is no change in the longshore transport along the beach, that is, when the transport is a constant.

Unfortunately, the Belle Fontaine beach system is not in equilibrium because the shoreline geometry dictates that the longshore transport will vary. The geometry of the shoreline along Belle Fontaine is that of a broad point with the direction of the shoreline changing. When waves from a particular direction strike the shoreline the breaking wave angle, that is the angle that the wave crest has with the shoreline, will be different for different locations. Therefore, the longshore transport power, *Pls*, will be different and Q will be different. From the present depositional patterns of beach sediment it appears that there is a net westward transport of sediment along the Belle Fontaine shoreline. This is in response to the predominant wave direction having an easterly approach angle.

#### **Computer Model**

In order to allow for a quantitative evaluation of erosion control alternatives, a computer model was developed to predict the changes in the beach volume of sediment along Belle Fontaine. The model is called SEM (Shoreline Evolution Model). The listing of the model is given in Appendix A. The model incorporates the geometry of Belle

Wind Speed (mph)	Wind Dir. (deg)	Duration (days)
10	140	2
10	145	2
20	145	0.5
10	150	2
20	150	1
30	155	0.25
30	155	0.25
10	165	0.5
20	165	0.5
10	180	1
20	180	0.5
10	195	0.5
20	195	0.5
10	210	0.5
20	210	0.5
10	220	0.5

Table 8. Wind speed variations associated with a frontal event. Wind direction is the angle from which the wind blows.

Fontaine and computes the amount of sediment in each of several beach segments along the shoreline. Changes in the amount of sediment in each segment are controlled by longshore transport, as illustrated in Figure 2. As beach segment volume changes, the shoreline geometry in the model changes and this causes additional changes in the longshore transport rate. Thus, the model describes the evolution of the Belle Fontaine beach and shoreline geometry.

The energy source for the longshore transport comes from waves and so the model incorporates the generation of wave energy by winds. Formulas were developed for forecasting wave heights and periods for each major compass direction of approach, based upon the assumption of fetch-limited waves. Wave conditions are predicted for each beach segment based upon these forecast wave heights and the processes of wave shoaling and wave refraction. Because the waves are in deep water for most of the wave fetches involved, and because the wave generation was calibrated as the net wave height produced by wind, bottom friction was not separately treated.

The wind speed variations for an average frontal event were defined, as given in Table 8. These wind speed and direction variations are associated with a pre-frontal and frontal wind system. The duration of each wind speed is given in days and fractions of days, i.e., the wind before the front is from the southeast at a speed of 15 mph (13 knots) and blows for several days. As the front approaches, the wind speed increases and swings to the south. As the front initially moves into the area, the wind speed increases and swings to the west. Later, of course, the wind is from the north after the frontal passage, but these winds do not generate waves which cause longshore transport along Belle Fontaine, and so are not included in the model. Twelve frontal events are assumed to occur in each year.

The shoreline along Belle Fontaine is represented by shoreline segments, each having a length of 0.5 km (1640 ft.). The segments start at a position corresponding to the Universal Transverse Mercator easting of 330,500 for Zone 16. The average position of the shoreline for each segment was determined from the map position. There are 24 segments defined for the area, covering the coast from westward of the Pointe aux Chênes area to the eastern end of Belle Fontaine near the mouth of Graveline Bayou. The height and width of the beach for each segment were taken from the nearest beach profile data. The initial beach segment data are given in Table 9.

The model computes the breaking wave height and direction for each beach segment, based upon wave refraction and wave shoaling. These values are used to compute the magnitude and direction of longshore transport. The existing groin at the western end of the central part of Belle Fontaine causes sediments to be moved into deeper water and makes them subject to the inlet currents. To account for a loss of sediments into Mississippi Sound, 30% of the sediment moving westward past the inlet was removed from the longshore transport.

A typical output from the model is shown in Table 10. The output gives the segment number, position of the shoreline, beach segment sediment volume, volume change from the initial conditions, beach volume change over previous year, beach width, shoreline position change from the initial position, an alternative indicator, and an alternative parameter.

#### EVALUATION OF EROSION CONTROL MEASURES

#### Methodology

The effectiveness of various erosion control alternatives was evaluated by incorporating these alternatives into the SEM and then forecasting the future evolution of the system with the alternative in place. This approach gives a quantitative assessment of the effect of the particular alternative. The erosion control alternatives are incorporated into the model by simulating their effect on the longshore sediment transport process. Several alternatives were considered: no action, structural protection, process control, and process augmentation. The no action alternative describes the future beach changes if no erosion control is attempted. The structural protection alternative describes methods to immobilize beach sediments. The process control alternatives describe methods to reduce adverse wave action and longshore sediment transport. The process augmentation alternatives describe methods for increasing beneficial wave action and sediment transport.

Each alternative is expressed as an effect on one or more of the parameters in the SEM, as described in Table 11. The alternatives for beach erosion control are incorporated into the model as follows:

No Action - This is evaluated using the SEM with no modifications to any parameters.

Process Augmentation - This is accomplished by beach nourishment and is represented in the model as an addition of sediment that changes the volume and shoreline position of a beach segment.

Structural Protection - This is accomplished using bulkheads and revetments. Revetments are represented in the model as a reduction in the amount of beach sediment available for transport. Bulkheads are represented in the model as a constraint on the shoreline position of a beach segment.

Process Control - This is accomplished using groins and offshore breakwaters. The groins are represented in the model as a threshold beach width for longshore transport The offshore breakwaters are represented in the model as a reduction of the breaking wave height.

Each of these approaches has its own advantages as far as engineering effectiveness and aesthetics. The aesthetical considerations should not be ignored in making the final decision about which alternatives to implement; however, it is beyond the scope of this study to deal with the aesthetics issue.

#### **Evaluation of Alternatives**

#### Alternative 0 - No Action

The model was run with no control alternatives in place to determine the no action future condition. The model

Seg. No.	Beach Pos. (ft)	Beach Width (ft)	Beach Hgt. (ft)
1	13465	30	5
2	12771	30	5
3	11804	30	6
4	10514	50	5
5	9083	40	4
6	7485	40	4
7	6057	40	4
8	4764	40	4
9	4030	30	4
10	3435	40	4
11	2976	50	4
12	2692	60	6
13	2545	70	7
14	2538	80	7
15	2597	60	6
16	2664	50	11
17	2939	40	15
18	3680	70	17
19	4643	70	17
20	5866	50	11
21	7078	40	7
22	8055	30	6
23	8733	30	6
24	9276	30	6

Table 9. Beach segment data.

Seg No.	Shore Pos. (ft)	Beach Vol. (cyd)	Vol. Change (cyd)	Annual Change (cyd)	Beach Width (ft)	Shore Change (ft)	Alt. No.	Par.
1	13321	52903	43792	8306	174.2	144.2	0	0.0
2	12775	7842	-1270	-22	25.8	-4.2	0	0.0
3	11807	9686	-1247	-12	26.6	-3.4	0	0.0
4	10526	11563	-3623	-1134	38.1	-11.9	0	0.0
5	9095	6726	-2992	-202	27.7	-12.3	0	0.0
6	7493	7808	-1910	-1239	32.1	-7.9	0	0.0
7	6075	5331	-4388	-78	21.9	-18.1	0	0.0
8	4728	18508	8790	1847	76.2	36.2	2	0.0
9	4030	7336	47	-2	30.2	0.2	0	0.0
10	3439	8626	-1093	-226	35.5	-4.5	0	0.0
11	2989	8958	-3191	-626	36.9	-13.1	0	0.0
12	2703	17691	-4176	-842	48.5	-11.5	0	0.0
13	2558	24358	-5405	-1058	57.3	-12.7	0	0.0
14	2545	30984	-3031	-609	72.9	-7.1	0	0.0
15	2600	20812	-1054	-416	57.1	-2.9	0	0.0
16	2686	18459	-14948	-3977	27.6	-22.4	0	0.0
17	2960	17642	-18802	-1953	19.4	-20.6	0	0.0
18	3693	58884	-13397	-3296	57.0	-13.0	0	0.0
19	4653	62079	-10202	-2024	60.1	-9.9	0	0.0
20	5865	33967	559	138	50.8	0.8	0	0.0
21	7057	25828	8821	1708	60.7	20.7	0	0.0
22	8034	18545	7612	1480	50.9	20.9	0	0.0
23	8733	10982	48	79	30.1	0.1	0	0.0
24	9252	19816	8882	1749	54.4	24.4	0	0.0
		Tot	al Sediment Year =	Volume (c 5 Mont	yd) = 50533 h = 12	3.2		

Table 10. Sample output from SEM program.

Alternative	Effect	Parameter
0	No Action	None
1	Beach Nourishment	Beach Seg. Volume
2	Groin	Length of Groin
3	Revetment	Transport Coef. Reduction
4	Breakwater	Wave Hgt. Reduction
5	Bulkhead	Beach Position
6	Combination	Various

Table 11. Beach erosion control alternatives and model representation.

was run for a 5-year time period, with the resulting annual beach position and volume given in Table B-1. The results show that the beach will be seriously eroded along most beach segments of Belle Fontaine. Segment 8 is predicted to build by 36 feet after five years. The cliff areas of Belle Fontaine, segments 16 through 18, will experience erosion of about 6 m (20 ft.). Sediment accumulates at the western end of the system, in segment 1, and the eastern end of the system, segments 21, 22 and 24. The net annual longshore transport rate varies greatly along Belle Fontaine, from a value of about 500 to 1000 cubic yards per year for beach segments 4 through 15, to 2000 to 4000 cubic yards per year for segments 16 through 19.

#### Alternative 1 - Beach Nourishment

The first erosion control option evaluated involved placing sediment along the beach segments forecasted to undergo the greatest amount of erosion. Table B-2 illustrates the effect of a one-time beach nourishment of 5000 cubic yards at segment 5, 10,000 cubic yards at segment 16, and 10,000 cubic yards at segment 19. This type of nourishment produced reduced erosion for the nourished segments and the segments immediately to the west; however, other segments still showed erosion. Table B-3 shows the effect of distributed nourishment. The beaches at segments 4, 5, 6, 11, 12, 13 and 14 were nourished artificially by 2000 cubic yards each. Beach erosion is reduced along all of these beach segments. Beach segments 16, 17 and 18 still show erosion. A biannual distributed beach nourishment scheme is evaluated in Table B-4. The erosion is eliminated along most of Belle Fontaine, except for the cliff area. This suggests that low-volume distributed nourishment is more effective in controlling beach erosion than high-volume concentrated nourishment.

#### Alternative 2 - Groins

Groins were placed at beach segments 11, 12, 13 and 14. The results are shown in Table B-5. The groins trap sand and prevent it from moving westward, hence the beach segments containing groins do not erode. The beach segments to the east experience the same amount of erosion as in the no action alternative, while the segments to the west, 10, 9, 8 and 7, had increased erosion.

#### Alternative 3 - Revetments

Revetments were placed at beach segments 11 through 14. The resulting shoreline changes are given in Table B-6. The revetments reduce the erosion of sediment and permit movement of sediment through the beach segments. The results in Table B-6 show a decrease in erosion at segments 11 through 14 and increased erosion in the segments to the west of those protected when compared to the no action alternative.

#### Alternative 4 - Breakwater

An offshore breakwater was placed along beach segments 17, 18 and 19. The breakwater was assumed to reduce the incoming wave height by 60%. The results of the forecast are given in Table B-7. The erosion of beach segments 17 through 19 was effectively eliminated; however, segments 11 through 16 experienced increased erosion when compared to the no action alternative for those segments. This is due to the reduction in the volume of sediments transported westward from the cliff area.

#### Alternative 5 - Bulkheads

The model was run with bulkhead-type protection at several beach segments experiencing the most natural erosion. The result of placing a bulkhead at segments 11 through 14 is given in Table B-8. This option prevents erosion of the beach segment but does not prevent longshore transport of sediment from taking place in either direction and therefore does not lead to erosion of the beach along segments to the west.

#### Alternative 6 - Combination of Alternatives

Because each of the erosion control alternatives only partially reduced the beach erosion, a combined approach was considered. Numerous combinations of the various alternatives were modeled to find the best combination approach that reduced erosion along most of the Belle Fontaine shoreline. The combined approach which best eliminated erosion involves beach nourishment and breakwaters. As an example of this approach, breakwaters were placed along segments 16, 17, 18, 19 and 20. Beach segments 4, 5, 11, 12, and 14 were each nourished with 2000 cubic yards of sediment. Beach segment 6 received 1000 cubic yards, while segment 13 received 3000 cubic yards. Segment 15 received 5000 cubic yards. The results of the forecast are shown in Table B-9. This combination of options seems to produce an overall effect of greatly reducing or eliminating erosion for much of the Belle Fontaine shoreline.

#### **CONCLUSIONS AND RECOMMENDATIONS**

The results of the study indicate that the Belle Fontaine area will experience erosion along most of the length of the beach in varying amounts if no action is taken to prevent it. The erosion rates vary along the shoreline depending upon the magnitude of the longshore sediment transport at that point. Structural controls such as bulkheads and revetments produce benefits only at the beach segment where they are placed and have adverse effects downdrift. Breakwaters and groins can prevent sediment movement alongshore and updrift from a site, but cause increased erosion downdrift. Beach nourishment has a net positive effect on the Belle Fontaine system.

It appears that a combination of beach nourishment and breakwaters may be required to control shoreline erosion along Belle Fontaine. The combination approach prevents shoreline erosion along the cliff areas with breakwaters and augments the lost sediment with beach nourishment. The combined approach of Alternative 6 was further refined by varying the parameters at individual segments in numerous runs of the model to produce a final solution which would economically eliminate erosion for all of the occupied shoreline at Belle Fontaine. The breakwaters are placed along segments 16, 17, 18, 19, and 20 to reduce erosion of the cliffs. Sand nourishment would be placed on the beach at segments 4, 5, and 6, and at segments 11, 12, 13, 14, and 15 to replace the sand which would be lost due to reduced erosion of the cliffs. Annual placement of about 13,000 cubic yards of sediment should provide enough sediment to offset the erosion along the southern shoreline of Belle Fontaine. The model results of this plan are shown in Table B-10.

The cost for implementing the recommended erosion control plan is difficult to determine because of two main factors. First, the cost of each structure will directly depend upon the design criteria specified for the structure. Breakwaters need to perform under routinely occurring weather conditions and survive under extreme conditions. The cost of the structure is a function of the survivability under extreme conditions. Second, the impact of in-kind services on project costs can be considerable. If state, county, or local donated equipment could be used to accomplish the construction of the structures and in moving beach sediment, the cost could be reduced.

Assuming no in-kind support and a 20-year design life for the structures, a general cost estimate can be made for the recommended plan. Beach nourishment costs are about \$4.00 per cubic yard, giving an annual cost of \$52,000. The breakwater costs are about \$100 per foot of beach, or about \$550,000 for the length needed. Amortizing the breakwater costs over a functional life of twenty years produces an annual cost of about \$27,500. Adding the annual beach nourishment costs of \$52,000 to the breakwater annual cost gives a total annual cost of about \$79,500. This would protect about 75,000 feet of shoreline at an average cost per year of about \$1.06/foot. This would average about \$212 annually for each property owner having 200 feet of shoreline.

#### **REFERENCES CITED**

- U. S. Army Corps of Engineers, 1984, Shore Protection Manual, Vols. I & II: Coastal Engineering Research Center, Dept. of the Army, U. S. Government Printing Office.
- U. S. Naval Weather Service, 1970, Summary of Synoptic Meteorological Observations: Vol. 6, Area 17.

## Appendix A.

Listing of the program SEM.BAS. Program is written in Q-Basic.

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10
        REM SEM.BAS PROGRAM FINAL VERSION 4/93
20 OPEN "INP.SEM" FOR INPUT AS #1
30 OPEN "OUT.SEM" FOR OUTPUT AS #2
40 INPUT#1, TITLES
50 PRINT#2, TITLES
60 \text{ REM} - \text{ALT} = 0, NO ACTION
70 REM - ALT = 1, NOURISHMENT (PAR=CUBIC YARDS PLACED)
80 REM - ALT = 2, GROIN (PAR=GROIN LENGTH, FT)
90 REM - ALT = 3, REVETMENT (PAR=FRACTION OF BEACH COVERED)
100 REM - ALT = 4, BREAKWATER (PAR=WAVE HEIGHT REDUCTION FRACTION)
110 REM - ALT = 5, BULKHEAD (PAR=MIN BEACH WIDTH, FT)
120
         REM INPUT FOR PROGRAM
130 INPUT#1,TITLEX$
140 INPUT#1,NI,NW,NY
150 DIM ALT(NI),HB(NI+1),HBANG(NI+1),PLS(NI+1),T(NT+1),Q(NI+1)
160 DIM BETA(NI+1),BHGT0(NI),SPOSN(NI+1),BWTHN(NI),BVOLN(NI),PAR(NI)
170 DIM WS(NW),WD(NW),DUR(NW),BWTHO(NI),BWTH0(NI),SCHG(NI),DBWTH(NI)
180 DIM SPOS0(NI+1),SPOSO(NI+1),BVOLO(NI),BVOL0(NI),PRN(NI),PRT(NW)
190 DIM YRA(25), SEGN(25), PARN(25), ABVOL(NI)
200 DEF FNTH(QQ)=1-EXP(-2.507*SQR(QQ)*(1.15+4*QQ))
210 DEF FNN(QQ)=.5+(P2*QQ)/(.5*(EXP(P4*QQ)-EXP(-P4*QQ))
220 G=32.2 : PI=3.142 : P2=2*PI : P4=4*PI : AP=.6
230
         REM BEACH INITIAL CONDITIONS AND ALTERNATIVES
240 SLEN=1640 : VOLT0=0
250 PRINT#2,"
                 INITIAL BEACH CONDITIONS"
260 PRINT#2,"
               SEGMENT SHORE BEACH BEACH BEACH BEACH ALT PAR PRN"
261 PRINT#2,"
                NUM POS
                             ANGLE WIDTH HEIGHT VOLUME"
270 PRINT#2."
                     (FT) (DEG) (FT) (FT) (CYD)"
280 SPOSO(0)=13600
290 INPUT#1, TITLEXS
300
      FOR I=1 TO NI
310 INPUT#1,SEG,SPOS0(I),BWTH0(I),BHGT0(I),ALT(I),PAR(I),PRN(I)
320 BWTHO(I)=BWTHO(I)
330 SPOSO(I)=SPOSO(I)
340 IF ALT(I)=1 THEN DBWTH(I)=27*PAR(I)/(SLEN*BHGT0(I))
350 IF ALT(I)=1 THEN SPOSO(I)=SPOS0(I)-DBWTH(I)
360 IF ALT(I)=1 THEN BWTHO(I)=BWTHO(I)+DBWTH(I)
370 BVOL0(I)=BWTHO(I)*BHGT0(I)*SLEN
380 BVOLO(I)=BVOL0(I)
390 VOLT0=VOLT0+BVOL0(I)
400 BETA(I)=-57.3*ATN((SPOSO(I)-SPOSO(I-1))/(SLEN))
410 PRINT#2,USING"
                     ## ###### ###.# ###
                                             ## ######## # ######.#
#";I;SPOS0(I);BETA(I);BWTH0(I);BHGT0(I);BVOL0(I)/27;ALT(I);PAR(I);PRN(I)
420
     NEXT I
430 INPUT#1,TITLEX$
440 KXX=0
450
       FOR K=1 TO 25
460 INPUT#1,YRA(K),SEGN(K),PARN(K)
```

```
470 IF YRA(K)=0 THEN GOTO 500
480 KXX=KXX+1
490
       NEXT K
500 PRINT#2."
                 TOTAL BEACH SEDIMENT VOLUME (CYD) =";VOLT0/27
510
         REM FRONTAL DATA
520
      FOR J=1 TO NW
530 READ WS(J),WD(J),DUR(J),PRT(J)
540
     NEXT J
550 DATA 10.-40.2.0
560 DATA 10,-35,2,0
570 DATA 20,-35,.5,0
580 DATA 10,-30,2,0
590 DATA 20,-30,1,0
600 DATA 30.-25..25.0
610 DATA 30,-25,.25,0
620 DATA 10.-15..5.0
630 DATA 20,-15,.5,0
640 DATA 10,0,1,0
650 DATA 20.0..5.0
660 DATA 10.15..5.0
670 DATA 20.15..5.0
680 DATA 10,30,.5,0
690 DATA 20.30..5.0
700 DATA 10,40,.5,0
710
         REM MULTIYEAR LOOP
720 XX=0: FOR III=1 TO NI:XX=PRN(III)+XX:NEXT III
730
      FOR Y=1 TO NY
740 FOR II=1 TO NI: ABVOL(II)=BVOLO(II) : NEXT II
750
      FOR M=1 TO 12
760 IF M=12 THEN PRINT#2,"
                                YEAR =";Y;"
                                                   MONTH =":M
770 IF XX=0 THEN GOTO 800
                                          KS KR HB CGB BRAG PLS
780 PRINT#2."
                  BS WS WD DUR H T
                                                                            O"
790 PRINT#2,"
                  (MPH)(DG)(HR)(FT) (S)
                                              (FT) (FPS) (DEG) (LB/S)(CYH)"
800
         REM BEACH SEGMENT LOOP
810
      FOR IT=1 TO NW
820 IF WD(IT)>-100 THEN H=.114*(WS(IT)^.75) : T=.84*WS(IT)^.35
830 IF WD(IT)>-67.5 THEN H=.129*(WS(IT)^.75) : T=.91*WS(IT)^.35
840 IF WD(IT)>-22.5 THEN H=.107*(WS(IT)^.75) : T=.81*WS(IT)^.35
850 IF WD(IT)>22.5 THEN H=.122*(WS(IT)^.75) : T=.87*WS(IT)^.35
860 KB=1!: DT=3600*24*DUR(IT)
870 GLEN=0
      FOR I0=2 TO NI
880
885 IF(I0)>21 AND WD(IT)<-15 THEN H=((21/I0)^2)*H
890 IF KXX=0 THEN GOTO 1040
910
        FOR K1=1 TO KXX
920 IF Y=YRA(K1) AND M=1 THEN GOTO 940
930 GOTO 1030
940 IF IT=1 AND I0=SEGN(K1) THEN GOTO 960
```

```
950 GOTO 1030
960 PAR(I0)=PARN(K1)
970 ALT(I0)=1
980 DBWTH(I0)=27*PAR(I0)/(SLEN*BHGT0(I0))
990 SPOSO(I0)=SPOSO(I0)-DBWTH(I0)
1000 BWTHO(I0)=BWTHO(I0)+DBWTH(I0)
1010 BVOLO(10)=BWTHO(10)*BHGT0(10)*SLEN
1020 PRINT"Y,M,IT,I0,DBWTH =";Y;M;IT;I0;DBWTH(I0)
1030
         NEXT K1
1040 BETA(I0)=-57.3*ATN((SPOSO(I0)-SPOSO(I0-1))/(SLEN))
1050 RANG=WD(IT)-BETA(I0)
1060 C0=5.12*T : L0=C0*T : HBX=H
1070
       FOR IX=1 TO 5
1080 DB=1.28*HBX
1090 CGB=SQR(32.2*DB)
1100 C=C0*FNTH(DB/L0) : L=C*T
1110 ZR=(C/C0)*SIN(RANG/57.3)
1120 HBANG(I0)=ATN(ZR/SQR(1-ZR*ZR))*57.3
1130 KRX=(COS(RANG/57.3)/COS(HBANG(10)/57.3))
1140 KR=SQR(KRX)
1150 KS=SQR(C0/(2*CGB))
1160 IF ALT(I0)=4 THEN KB=PAR(I0)
1170 HBX=H*KS*KR*KB
1180
      NEXT IX
1190 HB(I0)=HBX
          REM LONGSHORE TRANSPORT CALCULATION
1200
1210 PLS(I0)=4*HB(I0)*HB(I0)*CGB*SIN(2*HBANG(I0)/57.3)
1220 COEFK=.2
1230 IF ALT(I0)=3 THEN COEFK=PAR(I0)*COEFK
1240 IL=COEFK*PLS(I0)
1250 Q(I0)=IL/(3.4*G*AP)
1260 IF Q(10)<0 AND BWTHO(10)<30 THEN Q(10)=(BWTHO(10)/30)*Q(10)
1270 IF Q(I0)>0 AND BWTHO(I0-1)<30 THEN Q(I0)=(BWTHO(I0-1)/30)*O(I0)
1275 IF ALT(I0)=5 THEN BWTHMIN=PAR(I0) : IF BWTH0(I0)<BWTHMIN AND Q(I0)<0 THEN
Q(I0)=0
1280 IF ALT(I0)=2 THEN GLEN=PAR(I0):IF BWTHO(I0)-BWTH0(I0)<GLEN AND Q(I0)<0
THEN Q(I0)=0
1281 IF ALT(I0)=2 THEN GLEN=PAR(I0):IF BWTHO(I0)-BWTH0(I0)<GLEN AND Q(I0-1)>0
THEN Q(10-1)=0
1290 IF PRN(I0)=0 THEN GOTO 1310
1300 PRINT#2,USING"
                         ## ## ### ##.# ##.# #.# #.## #.## ##.# ##.# ###.# ###.#
###.#";I0;WS(IT);WD(IT);24*DUR(IT);H;T;KS;KR;HB(I0);CGB;HBANG(I0);PLS(I0);3600*Q(I0)/27
1310
       NEXT IO
1320 Q(1)=0 : Q(NI+1)=0 : PLS(1)=0 : HBANG(1)=0
1330
          REM BEACH VOLUME CALCULATION
1340 VOLT=0
        FOR I1=1 TO NI
1350
1360 DBVOL=DT^{(Q(I1+1)-Q(I1))}
```

```
1370 IF I1=7 AND Q(I1+1)<0 THEN DBVOL=DT*(.7*Q(I1+1)-Q(I1))
1380 BVOLN(I1)=BVOLO(I1)-DBVOL
1390 IF BVOLN(I1)<0 THEN BVOLN(I1)=0
1400 VOLT=VOLT+BVOLN(I1)
1410 BWTHN(I1)=BVOLN(I1)/(BHGT0(I1)*SLEN)
1420 SPOSN(I1)=SPOSO(I1)-(BWTHN(I1)-BWTHO(I1))
1430 SCHG(I1)=BWTHN(I1)-BWTH0(I1)
1440
       NEXT I1
1450 REM SPOSN(NI+1)=SPOSN(NI)
1460 IF PRT(IT)<1 THEN GOTO 1500
                 WIND SPEED (MPH) = ";WS(IT);"
1470 PRINT#2,"
                                                 WIND DIRECTION (DEG) =";WD(IT)
1480 PRINT#2."
                 SEG OBVOL Q*DT NBVOL
                                               DVOL
                                                      BWTH SCHG ALT PAR"
1490 PRINT#2."
                     (CYD) (CYD) (CYD) (CYD) (FT) (FT)"
1500
       FOR I4=1 TO NI
1510 IF PRT(IT)<1 THEN GOTO 1530
1520 PRINT#2,USING "
                       ## ####### ###### ######## ####### ####.# ####.# #
######.#"';I4;BVOLO(I4)/27;DT*Q(I4)/27;BVOLN(I4)/27;(BVOLN(I4)-BVOLO(I4))/27;BWTHN(I4);SC
HG(I4);ALT(I4),PAR(I4)
1530 BWTHO(I4)=BWTHN(I4)
1540 SPOSO(I4)=SPOSN(I4)
1550 BVOLO(I4)=BVOLN(I4)
1560 NEXT 14
1570
       NEXT IT
1580 IF M<12 THEN GOTO 1660
1590 PRINT#2," SEGMENT SHORE BEACH VOLUME ANNUAL BEACH SHORE ALT
PAR"
1591 PRINT#2,"
               NUM POS
                           VOLUME CHANGE CHANGE WIDTH CHANGE"
1600 PRINT#2."
                                                  (FT)"
                   (FT) (CYD) (CYD) (CYD) (FT)
1610
       FOR I3=1 TO NI
1620 PRINT#2.USING "
                      ######.#"';I3;SPOSN(I3);BVOLN(I3)/27;(BVOLN(I3)-BVOL0(I3))/27;(BVOLN(I3)-ABVOL(I3))/27;BWT
HN(I3);SCHG(I3);ALT(I3),PAR(I3)
1630 IF ALT(I3)=1 THEN ALT(I3)=0 : PAR(I3)=0
1640
       NEXT I3
1650 PRINT#2,"
                 TOTAL SEDIMENT VOLUME (CYD) =";VOLT/27
1660 PRINT"Y,M=";Y;M
1670
       NEXT M
1680 IF IT=NW-1 GOTO 1700
1690
       NEXT Y
1700 PRINT#2,"
                 END OF PROGRAM"
1710 END
```

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### Appendix B.

Belle Fontaine model results; SEM.BAS program printouts for all alternatives discussed in the text.

Table B-1. No action results - Alternative 0

EF		er.drg -		ONTRING	1100001			
IN	NITIAL B	EACH CON	DITIONS	ana	GRC			-
SEC	SEG	SEG	SEG NTONY	SEG UNICUM	SEG	ALT	PAR	PRN
NUM	1 POS	ANGL			VOLUME			
	(FT)	) (DEG	) (FT)	(FT)	(CYD)	•	• •	•
1	1346	5 4.7	30	5	9111	U	0.0	0
2	1277	1 22.9	30	5	9111	0	0.0	0
3	1180	4 30.5	30	6	10933	0	0.0	0
4	1051	4 38.2	50	5	15185	0	0.0	0
5	908	3 41.1	40	4	9719	0	0.0	0
6	748	5 44.3	40	4	9719	0	0.0	0
7	605	7 41.1	40	4	9719	0	0.0	0
8	476	4 38.3	40	4	9719	2	50.0	0
<u>9</u>	403	0 24.1	30	4	7289	0	0.0	0
10	343	5 19.9	40	4	9719	0	0.0	0
11	297	6 15 6	50	4	12148	Ō	0.0	Ō
12	269	2 9 8	60	6	21867	ō	0.0	Ō
12	209	2 9.0 5 5 1	70	7	29763	ň	0 0	ŏ
13	254	0 0.1	80	7	34015	ň	0.0	ŏ
16	255	0.2	60	ć	21867	ň	0.0	ň
12	239	/ -2.1	50	11	22407	ň	0.0	õ
16	266	4 ~2.3	50	15	35407	Ň	0.0	õ
17	293	9 -9.5	40	13	20444	Ň	0.0	ŏ
18	368	0 -24.3	70	17	72201	Ň	0.0	ŏ
19	464	3 -30.4	70	11	72201	0	0.0	ŏ
20	586	6 -36.7	50	± Ţ	33407	0	0.0	Ň
21	707	8 -36.5	40		1007	0	0.0	Ň
22	805	5 -30.8	30	6	10933	0	0.0	0
23	873	3 -22.5	30	6	10933	0	0.0	. 0
24	927	6 -18.3	30	6	10933	1 0	0.0	U
TC	OTAL BEA	CH SEDIM	ENT VOLU	JME (CYD)	= 51/51	1.2		
						_ 51	7510	
YEAR	= 1	MONTH =	12 SI	EDIMENT V	OL (CID)	= 21	7510	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)	•	<u> </u>
1	13434	18636	9525	9525	61.4	31.4	0	0.0
2	12773	8575	-536	-536	28.2	-1.8	0	0.0
3	11806	10189	-745	-745	28.0	-2.0	0	0.0
4	10516	14605	-580	-580	48.1	-1.9	0	0.0
5	9086	9012	-706	-706	37.1	-2.9	0	0.0
6	7488	8964	-755	-755	36.9	-3.1	0	0.0
7	6083	3508	-6211	-6211	14.4 -	25.6	0	0.0
8	4723	19586	9868	9868	80.6	40.6	2	50.0
9	4030	7305	16	16	30.1	0.1	0	0.0
10	3436	9507	-211	-211	39.1	-0.9	0	0.0
11	2979	11498	-650	-650	47.3	-2.7	0	0.0
12	2694	21039	-828	-828	57.7	-2.3	0	0.0
13	2548	28658	-1105	-1105	67.4	-2.6	0	0.0
14	2539	33410	-605	-605	78.6	-1.4	0	0.0
15	2597	21770	-97	-97	59.7	-0.3	0	0.0
16	2667	31233	-2174	-2174	46.7	-3.3	0	0.0
17	2945	31265	-5179	-5179	34.3	-5.7	0	0.0
18	3682	70103	-2179	-2179	67.9	-2.1	0	0.0
10	4645	70219	-2063	-2063	68.0	-2.0	0	0.0
20	5855	33402	84	84	50.1	0.1	0	0.0
20	7074	18820	1821	1821	44.3	4.3	0	0.0
21	10/4 00E1	19610	1577	1577	34 3	4.3	Ō	0.0
22	0021	10040	-02	-02	29 7	-0.3	ō	0.0
23	0/33	10767	1024	1921	35 0	5 0	ō	0.0
24	92/I	12/3/	1044	1024	JJ.U	5.0	•	

# PROGRAM SEM BAS - BELLE FONTAINE PROJECT

YEAR	= 2	MONTH =	12	SEDIMENT	VOL (CYE	)) = 51	5861	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13404	27599	18488	8964	90.9	60.9	0	0.0
2	12774	8171	-940	-404	26.9	-3.1	0	0.0
2	11007	0976	-1057	-313	27 1	-2 9	õ	0 0
3	10510	14020	1157	-515	AG 2	_3 9	ň	0.0
4	10218	14020	-1137	-370	40.4	-3.8	Ň	0.0
5	9090	7958	-1/60	-1054	32.0	-7.2	0	0.0
6	7500	6018	-3700	-2945	24.8	-15.2	U	0.0
7	6080	4145	-5573	638	17.1	-22.9	0	0.0
8	4708	23315	13597	3729	96.0	56.0	2	50.0
9	4030	7297	8	-8	30.0	0.0	0	0.0
10	3437	9292	-426	-215	38.2	-1.8	0	0.0
11	2981	10854	-1294	-644	44.7	-5.3	0	0.0
12	2697	20207	-1660	-832	55.4	-4.6	0	0.0
12	2550	27566	-2197	-1092	64.8	-5.2	0	0.0
14	2541	32805	-1210	-605	77 2	-2.8	ō	0.0
1 5	2241	21625	-232	_135	50 /	-0.6	õ	0.0
12	2390	21033	-232	-133	42 5	-0.0	õ	0.0
10	2671	29032	-43/5	-2201	43.5	-0.5	0	0.0
17	2950	26199 .	-10245	-5066	28.8	-11.2	0	0.0
18	3684	67866	-4415	-2237	65.7	-4.3	0	0.0
19	4647	68170	-4112	-2049	66.0	-4.0	0	0.0
20	5866	33590	183	99	50.3	0.3	0	0.0
21	7069	20621	3613	1792	48.5	8.5	0	0.0
22	8046	14052	3118	1542	38.6	8.6	0	0.0
23	8733	10822	-111	-20	29.7	-0.3	0	0.0
24	9266	14543	3610	1786	39.9	9.9	0	0.0
VEAR	= 3	монтн =	12	SEDIMENT	VOL (CYI	() = 51	3490	
YEAR	= 3	MONTH =	12 NCHG	SEDIMENT	VOL (CYI WIDTH	PCHG	3490 ALT	PAR
YEAR NUM	= 3 POS	MONTH = VOL	12 NCHG	SEDIMENT ACHG (CYD)	VOL (CYI WIDTH (FT)	D) = 51 PCHG (FT)	3490 ALT	PAR
YEAR NUM 1	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36196	12 NCHG (CYD) 27085	SEDIMENT ACHG (CYD) 8507	VOL (CYI WIDTH (FT) 119 2	D) = 51 PCHG (FT) 89 2	3490 ALT 0	PAR
YEAR NUM 1	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36196 7055	12 NCHG (CYD) 27085	SEDIMENT ACHG (CYD) 8597	VOL (CYI WIDTH (FT) 119.2	D) = 51 PCHG (FT) 89.2	3490 ALT 0	PAR 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775	MONTH = VOL (CYD) 36196 7955	12 NCHG (CYD) 27085 -1156	SEDIMENT ACHG (CYD) 8597 -216 127	VOL (CYI WIDTH (FT) 119.2 26.2	D) = 51 PCHG (FT) 89.2 -3.8	3490 ALT 0 0	PAR 0.0 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807	MONTH = VOL (CYD) 36196 7955 9749	12 NCHG (CYD) 27085 -1156 -1185	SEDIMENT ACHG (CYD) 8597 -216 -127	VOL (CYI WIDTH (FT) 119.2 26.2 26.7	$\begin{array}{l} \textbf{D} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ 89.2 \\ -3.8 \\ -3.3 \end{array}$	3490 ALT 0 0	<b>PAR</b> 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 3 POS (FT) 13376 12775 11807 10521	MONTH = VOL (CYD) 36196 7955 9749 13002	12 NCHG (CYD) 27085 -1156 -1185 -2183	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8	$\begin{array}{l} \textbf{D} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ 89.2 \\ -3.8 \\ -3.3 \\ -7.2 \\ 0.7 \\$	3490 ALT 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 3 POS (FT) 13376 12775 11807 10521 9098	MONTH = VOL (CYD) 36196 7955 9749 13002 6136	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3	$\begin{array}{l} \textbf{D} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ 89.2 \\ -3.8 \\ -3.3 \\ -7.2 \\ -14.7 \end{array}$	3490 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10521 9098 7503	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4	$\begin{array}{l} \textbf{D} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ 89.2 \\ -3.8 \\ -3.3 \\ -7.2 \\ -14.7 \\ -17.6 \end{array}$	3490 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0	$\begin{array}{l} \textbf{D} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{89.2} \\ \textbf{-3.8} \\ \textbf{-3.3} \\ \textbf{-7.2} \\ \textbf{-14.7} \\ \textbf{-17.6} \\ \textbf{-20.0} \end{array}$	3490 ALT 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2	pcHG = 51  PCHG (FT)  89.2  -3.8  -7.2  -14.7  -17.6  -20.0  64.2	3490 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0	pcHG = 51  PCHG (FT)  89.2  -3.8  -7.2  -14.7  -17.6  -20.0  64.2  -0.0	3490 ALT 0 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -4863	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3	pcHG (FT)  89.2  -3.8  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7	3490 ALT 0 0 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0	pcHG (FT)  89.2  -3.8  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7  -8.0	3490 ALT 0 0 0 0 0 0 0 0 2 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2	pcHG (FT)  89.2  -3.8  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7  -8.0  -6.8 $pcHG (FT)  89.2  -3.8  -3.3  -7.2  -14.7  -17.6  -20.0  -2.7  -8.0  -6.8  pcHG (FT) (FT) (FT)  -8.0  -6.8  pcHG (FT) (FT) (FT) (FT)  -8.0  -6.8  pcHG (FT) (FT) (FT) (FT) (FT) (FT) (FT) (FT)$	3490 ALT 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62 3	pcHG (FT)  89.2  -3.8  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7  -8.0  -6.8  -7.7  -7.2  -7.2  -14.7  -17.6  -20.0  -2.7  -8.0  -7.7  -7.7  -7.2  -7.7  -7.	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -2495 -3277 -1815	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7	pcHG (FT)  89.2  -3.8  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7  -8.0  -6.8  -7.7  -4.3  -7.3  -7.2  -14.7  -17.6  -20.0  -2.7  -8.0  -6.8  -7.7  -4.3  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -14.7  -7.2  -14.7  -20.0  -2.7  -8.0  -7.7  -7.7  -7.7  -7.7  -7.2  -7.2  -7.2  -14.7  -20.0  -2.7  -7.2  -7.3  -7.2  -7.3  -7.3  -7.2  -7.3  -7.3  -7.7  -7.3  -7.7  -7.3  -7.7	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1815	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7	pcHG (FT)  89.2  -3.8  -3.3  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7  -8.0  -6.8  -7.7  -4.3  -1  -1  -1  -1  -1  -1  -1  -1	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -4863 15587 -4 -645 -1932 -2495 -3277 -1815 -409	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9	pcHG = 51 $pcHG = -3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4873 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4863 15587 -4873 -4863 15587 -4873 -4873 -4863 15587 -4873 -4955 -4099 -72985 -4095 -4055 -40	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1	pcHG = 51 $pcHG = -3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4863 15727 -4873 -4873 -4873 -497	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5	pcHG (FT)  89.2  -3.8  -3.3  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7  -8.0  -6.8  -7.7  -4.3  -1.1  -10.9  -15.5  (FT)  PCHG (FT)  89.2  -3.8  -3.3  -7.2  -14.7  -17.6  -20.0  -2.7  -8.0  -5.8  -7.5  -5.5  (FT)  (FT	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -4863 15587 -4932 -2495 -3277 -1815 -409 -7298 -14143 -7062	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2	pcHG = 51 $pcHG = -3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$ $-15.5$ $-6.8$	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -4863 15587 -4932 -2495 -3277 -1815 -409 -7298 -14143 -7062 -6149	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 63.2 64.0	pcHG = 51 $pcHG = -3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$ $-15.5$ $-6.8$ $-6.0$	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649 5866	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132 33703	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -4863 15587 -4932 -2495 -3277 -1815 -409 -7298 -14143 -7062 -6149 295	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037 112	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 63.2 64.0 50.4	pcHG (FT)  89.2  -3.8  -3.3  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7  -8.0  -6.8  -7.7  -4.3  -1.1  -10.9  -15.5  -6.8  -6.0  0.4  0.4  0.4  0.4  0.4  0.5  0.4  0.5  0.4  0.5	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649 5866 7065	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132 33703 22384	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -4863 15587 -4932 -2495 -3277 -1815 -409 -7298 -14143 -7062 -6149 295 5377	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037 112 1764	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 64.0 50.4 52.6	pcHG (FT)  89.2  -3.8  -3.3  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7  -8.0  -6.8  -7.7  -4.3  -1.1  -10.9  -15.5  -6.8  -6.0  0.4  12.6 $pcHG (FT)  89.2  -3.8  -3.3  -7.2  -14.7  -17.6  -20.0  -2.7  -8.0  -6.8  -6.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.5  -7.$	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649 5866 7065 8042	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132 33703 22384 15568	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -495 -3277 -1815 -409 -7298 -14143 -7062 -6149 295 5377 4635	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037 112 1764 1516	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 64.0 50.4 52.6 42.7	pcHG (FT)  89.2  -3.8  -3.3  -7.2  -14.7  -17.6  -20.0  64.2  -0.0  -2.7  -8.0  -6.8  -7.7  -1.1  -10.9  -15.5  -6.8  -6.0  0.4  12.6  12.7  -7.2  -7.2  -6.2  -7.2  -6.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -7.2  -6.2  -7.2  -6.2  -7.2  -6.2  -7.2  -7.2  -6.2  -7.2  -7.2  -7.2  -7.2  -6.2  -7.2	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22 23	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649 5866 7065 8042 8733	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132 33703 22384 15568 10848	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -495 -3277 -1815 -409 -7298 -14143 -7062 -6149 295 5377 4635 -85	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037 112 1764 1516 26	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 64.0 50.4 52.6 42.7 29.8	$\begin{array}{l} = 51 \\ PCHG \\ (FT) \\ 89.2 \\ -3.8 \\ -3.3 \\ -7.2 \\ -14.7 \\ -17.6 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.7 \\ -8.0 \\ -6.8 \\ -7.7 \\ -4.3 \\ -1.1 \\ -10.9 \\ -15.5 \\ -6.8 \\ -6.0 \\ 0.4 \\ 12.6 \\ 12.7 \\ -0.2 \end{array}$	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 7 18 9 20 21 22 23 24	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649 5866 7065 8042 8733 9261	MONTE = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132 33703 22384 15568 10848 16310	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -495 -3277 -1815 -409 -7298 -14143 -7062 -6149 295 5377 4635 -85 5376	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037 112 1764 1516 26 1766	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 64.0 50.4 52.6 42.7 29.8 44.8	$\begin{array}{l} = 51 \\ PCHG \\ (FT) \\ 89.2 \\ -3.8 \\ -3.3 \\ -7.2 \\ -14.7 \\ -17.6 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.7 \\ -8.0 \\ -6.8 \\ -7.7 \\ -4.3 \\ -1.1 \\ -10.9 \\ -15.5 \\ -6.8 \\ -6.0 \\ 0.4 \\ 12.6 \\ 12.7 \\ -0.2 \\ 14.8 \end{array}$	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0

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YEAR	<b> 4</b>	MONTH =	12	SEDIMENT	VOL (CY	(D) = 51	.1127	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13348	44598	35487	8402	146.8	116.8	0	0.0
2	12775	7867	-1244	-88	25.9	-4.1	0	0.0
3	11807	9710	-1224	-39	26.6	-3.4	0	0.0
4	10529	10707	-4479	-2296	35.3	-14.7	Ō	0.0
5	9101	5377	-4342	-759	22.1	-17.9	Ō	0 0
6	7502	5482	-4236	51	22 6	-17 4	ň	0.0
7	6076	5094	-4625	239	21 0	-10 0	ň	0.0
Ŕ	4692	27321	17603	2016	112 /	70 A	2	50.0
ă	4030	7979	_17	_12	20 0	-0 1	2	50.0
10	3430	0051	-17	-12	29.9	-0.1	0	0.0
11	2423	0031	-000	-223	30.4	-3.6	U	0.0
10	2987	9384	-2564	-632	39.4	-10.6	0	0.0
12	2701	18533	-3334	-839	50.9	-9.1	0	0.0
13	2555	25417	-4346	-1069	59.8	-10.2	0	0.0
14	2544	31594	-2421	-606	74.3	-5.7	0	0.0
15	2599	21229	-638	-229	58.2	-1.8	0	0.0
16	2680	22 <b>4</b> 37 ·	-10971	-3672	33.6	-16.4	0	0.0
17	2957	19595 ·	-16850	-2707	21.5	-18.5	0	0.0
18	3690	62181 ·	-10101	-3039	60.2	-9.8	0	0.0
19	4651	64103	-8178	-2029	62.1	-7.9	0	0.0
20	5865	33828	421	126	50.6	0.6	Ō	0.0
21	7061	24120	7112	1736	56.7	16.7	ō	0 0
22	8038	17065	6131	1497	46.8	16.8	ŏ	0.0
23	8733	10903	-30	55	29.9	-0 1	õ	0.0
24	9256	18066	7133	1757	49 6	19 6	ň	0.0
		20000		2.0.	10.0	10.0	•	0.0
YEAR	= 5	MONTH =	12	SEDIMENT	VOL (CY	D) = 50	8774	
YEAR NUM	= 5 POS	MONTH = VOL	12 NCHG	SEDIMENT ACHG	VOL (CY WIDTH	D) = 50 PCHG	8774 ALT	PAR
YEAR NUM	= 5 POS (FT)	MONTH = Vol (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CY WIDTH (FT)	D) = 50 PCHG (FT)	8774 Alt	PAR
YEAR NUM 1	= 5 POS (FT) 13321	MONTH = VOL (CYD) 52911	12 NCHG (CYD) 43800	SEDIMENT ACHG (CYD) 8313	VOL (CY WIDTH (FT) 174.2	D) = 50 PCHG (FT) 144 2	8774 ALT 0	PAR
YEAR NUM 1 2	= 5 POS (FT) 13321 12775	MONTH = VOL (CYD) 52911 7834	12 NCHG (CYD) 43800 -1277	SEDIMENT ACHG (CYD) 8313 -32	VOL (CY WIDTH (FT) 174.2 25.8	D) = 50 PCHG (FT) 144.2 -4 2	8774 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2 3	= 5 POS (FT) 13321 12775 11808	MONTH = VOL (CYD) 52911 7834 9530	12 NCHG (CYD) 43800 -1277 -1404	SEDIMENT ACHG (CYD) 8313 -32 -180	VOL (CY WIDTH (FT) 174.2 25.8 26 1	D) = 50 PCHG (FT) 144.2 -4.2 -3.9	8774 ALT 0 0	PAR 0.0 0.0
YEAR NUM 1 2 3 4	= 5 POS (FT) 13321 12775 11808 10537	MONTH = VOL (CYD) 52911 7834 9530 8108	12 NCHG (CYD) 43800 -1277 -1404 -7078	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7	D) = 50 PCHG (FT) 144.2 -4.2 -3.9 -23.3 -24.5 -24.5 (FT) (FT) -24.5 (FT) (FT	8774 ALT 0 0 0	PAR 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 5 POS (FT) 13321 12775 11808 10537 9102	MONTH = VOL (CYD) 52911 7834 9530 8108 5184	12 NCHG (CYD) 43800 -1277 -1404 -7078	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-19$ $7$	8774 ALT 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 5 POS (FT) 13321 12775 11808 10537 9102 7502	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5502	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 22.0	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$	8774 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 5 POS (FT) 13321 12775 11808 10537 9102 7502	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5162	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.2	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $10.7$	8774 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4022	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$	8774 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4683	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$	8774 ALT 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$	8774 ALT 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$	8774 ALT 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$	8774 ALT 0 0 0 0 0 0 2 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$	8774 ALT 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -14948	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459 17642	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -14948 -18802	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459 - 17642 - 58884 -	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -14948 -18802 -13397	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459 17642 58884 62079	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -14948 -18802 -13397 -10202	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653 5865	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459 17642 58884 62079 33967	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -14948 -18802 -13397 -10202 559	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653 5865 7057	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459 17642 58884 62079 33967 25828	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -14948 -18802 -13397 -10202 559 8821	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138 1708	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8 60.7	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653 5865 7057 8034	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459 17642 58884 62079 33967 25828 18545	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -14948 -18802 -13397 -10202 559 8821 7612	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138 1708 1480	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8 60.7 50.9	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2600 2686 2960 3693 4653 5865 7057 8034 8733	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459 17642 58884 62079 33967 25828 18545 10982	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -14948 -18802 -13397 -10202 559 8821 7612 48	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138 1708 1480 79	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8 60.7 50.9 30 1	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$ $0.1$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2600 2686 2960 3693 4653 5865 7057 8034 8733 9252	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459 17642 58884 62079 33967 25828 18545 10982 19816	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -18802 -13397 -10202 559 8821 7612 48 8882	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138 1708 1480 79 1749	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8 60.7 50.9 30.1 54.4	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$ $0.1$ $-4$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2600 2686 2960 3693 4653 5865 7057 8034 8733 9252 PD 2057	MONTH = VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24358 30984 20812 18459 17642 58884 62079 33967 25828 18545 10982 19816 BOGRAM	12 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 -18802 -13397 -10202 559 8821 7612 48 8882	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138 1708 1480 79 1749	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8 60.7 50.9 30.1 54.4	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$ $0.1$ $24.4$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.

Table B-2. Beach Nourishment - Alternative 1, One Time

SEG         SEG         SEG         SEG         SEG         SEG         SEG         NUM         PAR         PRN           NUM         POS         ANGLE         WIDTH         HEIGHT         VOLUME           1         13465         4.7         30         5         9111         0         0.0         0           2         12771         22.9         30         5         9111         0         0.0         0           4         10514         38.2         50         5         15185         0         0.0         0           5         9083         41.1         40         4         9719         0         0.0         0           6         7485         44.6         40         4         9719         0         0.0         0           11         2976         15.6         50         4         12148         0         0.0         0           12         2692         9.8         60         6         21867         0         0.0         0           14         2538         0.2         80         7         34015         0         0.0         0           15	IN	ITIAL BE	EACH CON	DITION	S					
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	SEG	SEG	SEG	SE	g seg	SEG	ALT	PAR	PRN	
	NUM	i pos	ANGL	E WID	<b>FH HEIGH</b>	T VOLUME	1			
1       13465       4.7       30       5       9111       0       0.0       0         2       12771       22.9       30       5       9111       0       0.0       0         3       11804       30.5       30       6       10933       0       0.0       0         4       10514       38.2       50       5       15185       0       0.0       0         5       9083       41.1       40       4       9719       0       0.0       0         6       7485       44.6       40       4       9719       0       0.0       0         8       4764       38.3       40       4       9719       0       0.0       0         10       3435       19.9       40       4       9719       0       0.0       0         11       2976       15.6       50       4       12148       0       0.0       0         13       2545       5.1       70       7       29763       0       0.0       0         15       2597       -21.6       60       6       21867       0       0       0		(FT)	(DEG	) (FT)	) (FT)	(CYD)				
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1	1346	5 4.7	30	5	9111	. 0	0.0	0	
3         11804         30.5         30         6         10933         0         0.0         0           4         10514         38.2         50         5         15185         0         0.0         0           5         9083         41.1         40         4         9719         0         0.0         0           6         7485         44.6         40         4         14719         1         5000.0         0           7         6057         40.6         40         9719         0         0.0         0           10         3435         19.9         40.4         9719         0         0.0         0           11         2976         15.6         50         4         12148         0         0.0         0           12         2597         -21.1         60         21867         0.0         0         0           15         2597         -21.1         60         11         33407         0         0.0         0           16         2664         -1.8         50         11         33407         0         0.0         0           17078         -36.5	2	12771	L 22.9	30	5	9111	. 0	0.0	0	
4         10514         38.2         50         5         15185         0         0.0         0           5         9083         41.1         40         4         9719         0         0.0         0           6         7485         44.6         40         4         9719         0         0.0         0           7         6057         40.6         40         4         9719         2         50.0         0           9         4030         24.1         30         4         9719         2         50.0         0           9         4030         24.1         30         4         9719         0         0.0         0           11         2976         15.6         50         4         12148         0         0.0         0           12         2692         9.8         60         6         21867         0         0.0         0           13         2545         5.1         70         7         29763         0         0.0         0           14         3607         0         10         15         36441         10000.0         0           14	3	11804	30.5	30	6	10933	0	0.0	Õ	
5         9083         41.1         40         4         9715         0         0.0         0           6         7485         44.6         40         4         14719         1         500.0         0           7         6057         40.6         40         4         9719         2         50.0         0           9         4030         24.1         30         4         7289         0         0.0         0           10         3435         19.9         40         4         9719         0         0.0         0           11         2976         15.6         50         4         12148         0         0.0         0           12         2662         9.8         60         6         21867         0         0.0         0           13         2545         5.1         70         7         29763         0         0.0         0           14         2537         -2.1         60         6         21867         0         0.0         0           15         3644         0         10         3407         0         0.00         0           16	Δ	10514	1 38 2	50	5	15185	Ō	0 0	ō	
5         5000         11.2         10         1712         1         5000.0         0           7         6057         40.6         40         4         9719         0         0.0         0           8         4764         38.3         40         4         9719         0         0.0         0           9         4030         24.1         30         4         7289         0         0.0         0           11         2976         15.6         50         4         12148         0         0.0         0           12         2692         9.8         60         6         21867         0         0.0         0           13         2545         5.1         70         7         29763         0.0         0           15         2597         -2.1         60         6         21867         0         0.0         0           16         2664         -1.8         50         11         3407         0         0.0         0           20         5866         -36.9         50         11         3407         0         0.0         0           21         7078 <td>5</td> <td>0023</td> <td>a an 1</td> <td>40</td> <td>۵ ۵</td> <td>0710</td> <td>ň</td> <td>0.0</td> <td>ŏ</td>	5	0023	a an 1	40	۵ ۵	0710	ň	0.0	ŏ	
6         743.5         44.6         40         4         971.9         1         1.0.0.0         0           8         4764         38.3         40         4         971.9         2         50.0         0           9         4030         24.1         30         4         728.9         0         0.0         0           10         3435         19.9         40         4         971.9         0         0.0         0           11         2976         15.6         50         4         12148         0         0.0         0           12         2692         9.8         60         6         21867         0         0.0         0           13         2545         5.1         70         7         2976.3         0         0.0         0           15         2597         -2.1         60         6         21867         0.0         0         0           16         2664         -1.8         50         11         33407         0         0.0         0           21         7078         -36.5         40         7         17007         0         0.0         0 <t< td=""><td>2</td><td>7/0</td><td>5 41.1</td><td>40</td><td>-</td><td>14710</td><td>1</td><td>5000 0</td><td>ŏ</td></t<>	2	7/0	5 41.1	40	-	14710	1	5000 0	ŏ	
7       0037       40.5       40       4       9719       0       0.0       0         9       4030       24.1       30       4       7289       0       0.0       0         10       3435       19.9       40       4       9719       0       0.0       0         11       2976       15.6       50       4       12148       0       0.0       0         12       2692       9.8       60       6       21867       0       0.0       0         13       2545       5.1       70       7       29763       0       0.0       0         14       2538       0.2       80       7       34015       0       0.0       0         15       2597       -2.1       60       6       21867       0       0.0       0         17       2939       -10.0       40       15       36444       0       0.0       0         19       4643       -30.2       70       17       72281       0       0.0       0         20       5866       -36.5       40       7       17007       0       0.0       0	7	605°	7 40 6	40		14/13		5000.0	Ň	
8         4764         36.3         40         4         9719         2         50.0         0           10         3435         19.9         40         4         9719         0         0.0         0           11         2976         15.6         50         4         12148         0         0.0         0           12         2692         9.8         60         6         21867         0         0.0         0           13         2545         5.1         70         7         29763         0         0.0         0           14         2538         0.2         80         7         34015         0         0.0         0           15         2597         -2.1         60         6         21867         0         0.0         0           16         2664         -1.8         50         11         43407         10000.0         0           20         5866         -36.9         50         11         33407         0         0.0         0           21         7078         -36.5         40         7         17007         0         0.0         0         0		003	/ 40.0	40	4	9719		50.0	0	
9         4030         24.1         30         4         7289         0         0.0         0           10         3435         19.9         40         4         9719         0         0.0         0           11         2976         15.6         50         4         12148         0         0.0         0           12         2692         9.8         60         6         21867         0         0.0         0           13         2545         5.1         70         7         34015         0         0.0         0           14         2538         0.2         80         7         34015         0         0.0         0           15         2597         -2.1         60         6         21867         0         0.0         0           16         2664         -1.8         50         11         34307         0         0.0         0           19         4643         -30.2         70         17         72281         0         0.0         0           21         7078         -36.5         40         7         1007         0         0         0	8	4/64	1 38.3 0 0 1	40	4	9/19	2	50.0	0	
10       3435       19.9       40       4       9/19       0       0.0       0         11       2976       15.6       50       4       12148       0       0.0       0         12       2692       9.8       60       6       21867       0       0.0       0         13       2545       5.1       70       7       29763       0       0.0       0         14       2538       0.2       80       7       34015       0       0.0       0         15       2597       -2.1       60       6       21867       0       0.0       0         17       2939       -10.0       40       15       36444       0       0.0       0         18       3680       -24.3       70       17       72281       0       0.0       0         20       5866       -36.5       40       7       17007       0       0.0       0         21       7078       -36.5       40       7       17007       0       0.0       0         22       8055       -30.8       30       6       10933       0       0.0       0<	9	4030	24.1	30	4	/289	0	0.0	0	
11297615.65041214800.001226929.86062186700.001325455.17072976300.001425380.28073401500.00152597-2.16062186700.00162664-1.8501143407110000.00172939-10.040153644400.00194643-30.270177228100.00205866-36.950113340700.00217078-36.54071700700.00228055-30.83061093300.00238733-22.53061093300.00249276-18.33061093300.002127738575-536-53628.2-1.800.031180610189-745-74528.0-2.000.041051614606-579-57948.1-1.900.0590868968986880.640.6250.00590869507-211-21139.1 <td>10</td> <td>343</td> <td>5 19.9</td> <td>40</td> <td>4</td> <td>9/19</td> <td>0</td> <td>0.0</td> <td>0</td>	10	343	5 19.9	40	4	9/19	0	0.0	0	
12       2692       9.8       60       6       21867       0       0.0       0         13       2545       5.1       70       7       29763       0       0.0       0         14       2538       0.2       80       7       34015       0       0.0       0         15       2597       -2.1       60       6       21867       0       0.0       0         16       2664       -1.8       50       11       43407       1       10000.0       0         19       4643       -30.2       70       17       72281       0       0.0       0         21       7078       -36.5       40       7       17007       0.0       0       0         22       8055       -30.8       30       6       10933       0       0.0       0         23       8733       -22.5       30       6       10933       0       0.0       0         24       9276       -18.3       30       6       10933       0       0.0       0         2       12773       8575       -536       28.2       -1.8       0       0.0	11	2970	5 15.6	50	4	12148	0	0.0	0	
13       2545       5.1       70       7       29763       0       0.0       0         14       2538       0.2       80       7       34015       0       0.0       0         15       2597       -2.1       60       6       21867       0       0.0       0         16       2664       -1.8       50       11       43407       110000.0       0         17       2939       -10.0       40       15       36444       0       0.0       0         18       3680       -24.3       70       17       82281       1       10000.0       0         20       5866       -36.9       50       11       33407       0       0.0       0         21       7078       -36.5       40       7       17007       0       0.0       0         24       9276       -18.3       30       6       10933       0       0.0       0       0         13434       18636       9525       9525       61.4       31.4       0       0.0       0       0       0       0       0       0       0       0       0       0	12	2692	29.8	60	6	21867	0	0.0	0	
14       2538       0.2       80       7       34015       0       0.0       0         15       2597       -2.1       60       6       21867       0       0.0       0         16       2664       -1.8       50       11       43407       1       10000.0       0         17       2939       -10.0       40       15       36444       0       0.0       0         18       3680       -24.3       70       17       72281       0       0.0       0         20       5866       -36.5       40       7       17007       0.0       0       0         21       7078       -36.5       40       7       17007       0.0       0         22       8055       -30.8       30       6       10933       0       0.0       0         24       9276       -18.3       30       6       10933       0       0.0       0         13434       18636       9525       9525       61.4       31.4       0       0.0         2       12773       8575       -536       28.0       -2.0       0       0.0       0       <	13	2545	5 5.1	70	7	29763	0	0.0	0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	14	2538	30.2	80	7	34015	0	0.0	0	
	15	259	7 -2.1	60	6	21867	0	0.0	0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	16	2664	4 -1.8	50	11	43407	1	10000.0	0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17	2939	9 -10.0	40	15	36444	0	0.0	0	
19       4643       -30.2       70       17       82281       1       10000.0       0         20       5866       -36.9       50       11       33407       0       0.0       0         21       7078       -36.5       40       7       17007       0       0.0       0         22       8055       -30.8       30       6       10933       0       0.0       0         23       8733       -22.5       30       6       10933       0       0.0       0         24       9276       -18.3       30       6       10933       0       0.0       0         TOTAL BEACH SEDIMENT VOLUME (CYD)       542511.1       542510       NUM       POS       VOL       NCHG       ACHG       WIDTH       PCHG       ALT       PAR         (FT)       (CYD)       (CYD)       (CYD)       (FT)       (FT)       1       13434       18636       9525       9525       61.4       31.4       0       0.0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0       0	18	3680	) -24.3	70	17	72281	Ó	0.0	Ō	
20         5866         -36.9         50         11         33407         0         0.0         0           21         7078         -36.5         40         7         17007         0         0.0         0           22         8055         -30.8         30         6         10933         0         0.0         0           23         8733         -22.5         30         6         10933         0         0.0         0           24         9276         -18.3         30         6         10933         0         0.0         0           TOTAL BEACH SEDIMENT VOLUME (CYD)         = 542511.1         542510         NUM         PCS         VOL         NCHG         ACHG         WIDTH         PCHG         ALT         PAR           (FT)         (CYD)         (CYD)         (CYD)         (FT)         (FT)         1         13434         18636         9525         9525         61.4         31.4         0         0.0         0           1         13436         18636         9525         9525         61.4         31.4         0         0.0           2         12773         8575         -536         28.2	19	4643	3 -30.2	70	17	82281	1	10000.0	Õ	
21         7078         -36.5         40         7         17007         0         0.0         0           22         8055         -30.8         30         6         10933         0         0.0         0           23         8733         -22.5         30         6         10933         0         0.0         0           24         9276         -18.3         30         6         10933         0         0.0         0           TOTAL BEACH SEDIMENT VOLUME (CYD)         = 542510         NUM         POS         VOL         NCHG         ACHG         WIDTH         PCHG ALT         PAR           (FT)         (CYD)         (CYD)         (CYD)         (FT)         (FT)           1         13434         18636         9525         9525         61.4         31.4         0         0.0           2         12773         8575         -536         28.0         -2.0         0         0.0           3         11806         10189         -745         28.0         -2.0         0         0.0           5         9086         8925         -794         -794         36.7         -3.3         0         0.0 </td <td>20</td> <td>586</td> <td>5 -36.9</td> <td>50</td> <td>11</td> <td>33407</td> <td>ō</td> <td>0.0</td> <td>ō</td>	20	586	5 -36.9	50	11	33407	ō	0.0	ō	
22         8055         -30.8         30         6         10933         0         0.0         0           23         8733         -22.5         30         6         10933         0         0.0         0           24         9276         -18.3         30         6         10933         0         0.0         0           TOTAL BEACH SEDIMENT VOLUME (CYD)         = 542511.1         542511.1         1         1         13434         18636         9525         9525         61.4         31.4         0         0.0           2         1         13434         18636         9525         9525         61.4         31.4         0         0.0           3         11806         10189         -745         -745         28.0         -2.0         0         0.0           4         10516         14606         -579         -579         48.1         -1.9         0         0.0           5         9086         8925         -794         -626         58.0         18.0         1         5000.0           6         7467         14093         -626         -6253         14.3         -25.7         0         0.0	21	7078	-36.5	40	7	17007	Ö	0.0	õ	
23       8733       -22.5       30       6       10933       0       0.0       0         24       9276       -18.3       30       6       10933       0       0.0       0         TOTAL BEACH SEDIMENT VOLUME (CYD) = 542511.1         YEAR = 1       MONTH = 12       SEDIMENT VOL (CYD) = 542510         NUM       POS       VOL       NCHG       ACHG       WIDTH       PCHG       ALT       PAR         (FT)       (CYD)       (CYD)       (CYD)       (FT)       (FT)       1       13434       18636       9525       9525       61.4       31.4       0       0.0         2       12773       8575       -536       -536       28.2       -1.8       0       0.0         3       11806       10189       -745       -745       28.0       -2.0       0       0.0         5       9086       8925       -794       -794       36.7       -3.3       0       0.0       0         7       6083       3465       -6253       16.30.1       0.1       0       0.0         9       4030       7305       16       16       30.1       0.1       0	22	805	5 -30 8	30	6	10933	i Õ	0 0	ō	
23       9753       12.1.5       30       6       10933       0       0.0       0         TOTAL BEACH SEDIMENT VOLUME (CYD)       = 542511.1       0.0       0 <td< td=""><td>23</td><td>873</td><td>3 -22 5</td><td>30</td><td>Ğ</td><td>10933</td><td>Ő</td><td>0.0</td><td>ň</td></td<>	23	873	3 -22 5	30	Ğ	10933	Ő	0.0	ň	
TOTAL BEACH SEDIMENT VOLUME (CYD) = 542511.1         YEAR = 1       MONTH = 12       SEDIMENT VOL (CYD) = 542510         NUM       POS       VOL       NCHG       ACHG       WIDTH       PCHG       ALT       PAR         (FT)       (CYD)       (CYD)       (CYD)       (FT)       (FT)       0.00         2       13434       18636       9525       9525       61.4       31.4       0       0.00         3       11806       10189       -745       -745       28.0       -2.0       0       0.0         4       10516       14606       -579       -579       48.1       -1.9       0       0.0         5       9086       8925       -794       -794       36.7       -3.3       0       0.0         6       7467       14093       -626       -626       58.0       18.0       1       5000.0         7       6083       3465       -6253       -6253       14.3       -25.7       0       0.0         84723       19586       9868       9868       80.6       40.6       2       50.0         9       4030       7305       16       16       30.1       0.1	21	9270	5 <u>1</u> 8 3	30	Š	10033	Ő	0.0	ň	
YEAR = 1NUM1111111111111 <th <="" column<="" td=""><td>63 TC</td><td>9270 1071 1071</td><td></td><td>ENT VO</td><td>ט זיזארבי (ריער</td><td>10955</td><td>1 1</td><td>0.0</td><td>v</td></th>	<td>63 TC</td> <td>9270 1071 1071</td> <td></td> <td>ENT VO</td> <td>ט זיזארבי (ריער</td> <td>10955</td> <td>1 1</td> <td>0.0</td> <td>v</td>	63 TC	9270 1071 1071		ENT VO	ט זיזארבי (ריער	10955	1 1	0.0	v
YEAR= 1MONTH= 12SEDIMENTVOL(CYD)= 542510NUMPOSVOLNCHGACHGWIDTHPCHGALTPAR(FT)(CYD)(CYD)(CYD)(FT)(FT)113434186369525952561.431.400.02127738575-536-53628.2-1.800.031180610189-745-74528.0-2.000.041051614606-579-57948.1-1.900.0590868925-794-79436.7-3.300.06746714093-626-62658.018.01<5000.0	10					// - 54251	* • *			
NUM         POS         VOL         NCHG         ACHG         WIDTH         PCHG         ALT         PAR           (FT)         (CYD)         (CYD)         (CYD)         (CYD)         (FT)         (FT)           1         13434         18636         9525         9525         61.4         31.4         0         0.0           2         12773         8575         -536         -536         28.2         -1.8         0         0.0           3         11806         10189         -745         -745         28.0         -2.0         0         0.0           4         10516         14606         -579         -579         48.1         -1.9         0         0.0           5         9086         8925         -794         -794         36.7         -3.3         0         0.0           6         7467         14093         -626         -626         58.0         18.0         1         5000.0           7         6083         3465         -6253         -6253         14.3         -25.7         0         0.0           10         3436         9507         -211         -211         39.1         -0.9         <	VEAR	= 1	MONTH =	12	SEDIMENT	VOL. (CYD)	= 54	2510		
NonFOSFOSFOSFOSFOSFOSFOSFOSFAR(FT)(CTD)(CTD)(CTD)(CTD)(FT)(FT)(FT)113434186369525952561.431.400.02127738575 $-536$ $-536$ 28.2 $-1.8$ 00.031180610189 $-745$ $-745$ 28.0 $-2.0$ 00.041051614606 $-579$ $-579$ 48.1 $-1.9$ 00.0590868925 $-794$ $-794$ 36.7 $-3.3$ 00.06746714093 $-626$ $-626$ 58.018.015000.0760833465 $-6253$ $-6253$ 14.3 $-25.7$ 00.084723195869868986880.640.6250.0940307305161630.10.100.01034369507 $-211$ $-211$ 39.1 $-0.9$ 00.011297911498 $-650$ $-650$ 47.3 $-2.7$ 00.012269421039 $-828$ $-828$ 57.7 $-2.3$ 00.014253933412 $-603$ $-603$ 78.6 $-1.4$ 00.015259721907414160.10.100.017294531428 $-5017$	NITM			NCNC	ACHC			2J10 3T.T	DND	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	NOM	203 (ET)			(CVD)			AUI	FAN	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1	12424	19636	0525	0525		21 /	0	0 0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2	10770	10030	5325	-525	20 2	1 0	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	2	11006	10100	-330	-330	20.2	-1.0	0	0.0	
41051614606 $-579$ $-579$ $48.1$ $-1.9$ $0$ $0.0$ 590868925 $-794$ $-794$ $36.7$ $-3.3$ $0$ $0.0$ 6746714093 $-626$ $-626$ $58.0$ $18.0$ $1$ $5000.0$ 76083 $3465$ $-6253$ $-6253$ $14.3$ $-25.7$ $0$ $0.0$ 847231958698689868 $80.6$ $40.6$ $2$ $50.0$ 940307305 $16$ $16$ $30.1$ $0.1$ $0$ $0.0$ 10 $3436$ $9507$ $-211$ $-211$ $39.1$ $-0.9$ $0$ $0.0$ 11 $2979$ $11498$ $-650$ $-650$ $47.3$ $-2.7$ $0$ $0.0$ 12 $2694$ $21039$ $-828$ $-828$ $57.7$ $-2.3$ $0$ $0.0$ 13 $2548$ $28658$ $-1105$ $-1105$ $67.4$ $-2.6$ $0$ $0.0$ 14 $2539$ $33412$ $-603$ $-603$ $78.6$ $-1.4$ $0$ $0.0$ 15 $2597$ $21907$ $41$ $41$ $60.1$ $0.1$ $0$ $0.0$ 16 $2653$ $40931$ $-2477$ $-2477$ $61.3$ $11.3$ $1$ $10000.0$ 17 $2945$ $31428$ $-5017$ $-5017$ $34.5$ $-5.5$ $0$ $0.0$ 18 $3682$ $70189$ $-2092$ $-2092$ $68.0$ $-2.0$ $0.0$ $0.0$ <t< td=""><td>3</td><td>11000</td><td>10189</td><td>-/43</td><td>- /45</td><td>28.0</td><td>-2.0</td><td>0</td><td>0.0</td></t<>	3	11000	10189	-/43	- /45	28.0	-2.0	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	4	10210	14606	-5/9	-5/9	48.1	-1.9	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5	9086	8925	-794	- / 94	36.7	-3.3	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	6	/46/	14093	-626	-626	58.0	18.0	1 50	00.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	7	6083	3465	-6253	-6253	14.3 -	25.7	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	8	4723	19586	9868	9868	80.6	40.6	2	50.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	9	4030	7305	16	16	30.1	0.1	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10	3436	9507	-211	-211	39.1	-0.9	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	11	2979	11498	-650	-650	47.3	-2.7	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	12	2694	21039	-828	-828	57.7	-2.3	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	13	2548	28658	-1105	-1105	67.4	-2.6	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	14	2539	33412	-603	-603	78.6	-1.4	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	15	2597	21907	41	41	60.1	0.1	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	16	2653	40931	-2477	-2477	61.3	11.3	1 100	00.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	17	2945	31428	-5017	-5017	34.5	-5.5	0	0.0	
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	18	3682	70189	-2092	-2092	68.0	-2.0	0	0.0	
2058663355815015050.20.200.0217074188291822182244.34.300.0228051125101577157734.34.300.023873310842-92-9229.7-0.300.0249271127571824182435.05.000.0	19	4635	80066	-2215	-2215	77.5	7.5	1 100	00.0	
217074188291822182244.34.300.0228051125101577157734.34.300.023873310842-92-9229.7-0.300.0249271127571824182435.05.000.0	20	5866	33558	150	150	50.2	0.2	0	0.0	
22         8051         12510         1577         1577         34.3         4.3         0         0.0           23         8733         10842         -92         -92         29.7         -0.3         0         0.0           24         9271         12757         1824         1824         35.0         5.0         0         0.0	21	7074	18829	1822	1822	44.3	4.3	Ō	0.0	
23       8733       10842       -92       -92       29.7       -0.3       0       0.0         24       9271       12757       1824       1824       35.0       5.0       0       0.0	22	8051	12510	1577	1577	34.3	4.3	Ō	0.0	
24 9271 12757 1824 1824 35.0 5.0 0 0.0	23	8733	10842	-92	-92	29.7	-0.3	õ	0.0	
	24	9271	12757	1824	1824	35.0	5.0	Ō	0.0	

### PROGRAM SEM.BAS - BELLE FONTAINE PROJECT

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YEAR	= 2	MONTH =	12	SEDIMENT	VOL (CY)	D) = 540	0861	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13404	27599	18488	8964	90.9	60.9	0	0.0
2	12774	8171	-940	-404	26.9	-3.1	0	0.0
3	11807	9876	-1057	-313	27.1	-2.9	Õ	0.0
4	10518	14030	-1155	-576	46.2	-3.8	õ	0.0
5	9089	8152	-1567	-773	33.6	-6.4	ŏ	0.0
6	7480	10862	-3856	-3230	44 7	47	õ	0.0
7	6080	4106	-5613	640	16 9	-23 1	ň	0.0
Ŕ	4708	23316	13507	3720	96 0	56 0	2	50.0
å	4030	7207	13331	_9	30.0		2	30.0
10	2427	0202	-126	-215	30.0	-1 0	Ň	0.0
11	2427	9292 10054	1204	-213	30.2	-1.0	0	0.0
10	2981	10854	-1294	-044	44./	-5.3	0	0.0
12	2697	20207	-1000	-832	55.4	-4.6	0	0.0
13	2550	27566	-2197	-1092	64.8	-5.2	0	0.0
14	2541	32812	-1203	-600	77.2	-2.8	0	0.0
15	2597	21898	32	-9	60.1	0.1	0	0.0
16	2656	38456	-4952	-2475	57.6	7.6	0	0.0
17	2950	26495	-9950	-4933	29.1	-10.9	0	0.0
18	3684	68047	-4235	-2142	65.9	-4.1	0	0.0
19	4638	77868	-4413	-2198	75.4	5.4	0	0.0
20	5866	33720	313	162	50.5	0.5	0	0.0
21	7069	20622	3615	1793	48.5	8.5	0	0.0
22	8046	14052	3118	1542	38.6	8.6	0	0.0
23	8733	10822	-111	-20	29.7	-0.3	0	0.0
24	9266	14543	3610	1786	39.9	9.9	Ō	0.0
-							-	
YEAR	= 3	MONTH =	12	SEDIMENT	VOL (CY	D) = 531	8490	
YEAR NUM	= 3 POS	MONTH = VOL	12 NCHG	SEDIMENT ACHG	VOL (CYI WIDTH	D) = 530 $PCHG$	8490 ALT	PAR
YEAR NUM	= 3 POS (FT)	MONTH = VOL (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CYI WIDTH (FT)	D) = 53 PCHG (FT)	8490 ALT	PAR
YEAR NUM 1	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36196	12 NCHG (CYD) 27085	SEDIMENT ACHG (CYD) 8597	VOL (CYI WIDTH (FT) 119.2	D) = 53 PCHG (FT) 89.2	8490 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775	MONTH = VOL (CYD) 36196 7955	12 NCHG (CYD) 27085 -1156	SEDIMENT ACHG (CYD) 8597 -216	VOL (CYI WIDTH (FT) 119.2 26.2	D) = 53 PCHG (FT) 89.2 -3.8	8490 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807	MONTH = VOL (CYD) 36196 7955 9748	12 NCHG (CYD) 27085 -1156 -1186	SEDIMENT ACHG (CYD) 8597 -216 -128	VOL (CYI WIDTH (FT) 119.2 26.2 26.7	D) = 531PCHG(FT)89.2-3.8-3.3	8490 ALT 0 0	PAR 0.0 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807 10520	MONTH = VOL (CYD) 36196 7955 9748 13453	12 NCHG (CYD) 27085 -1156 -1186	SEDIMENT ACHG (CYD) 8597 -216 -128 -577	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3	D) = 533PCHG(FT)89.2-3.8-3.3-5.7	8490 ALT 0 0 0	PAR 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 3 POS (FT) 13376 12775 11807 10520	MONTH = VOL (CYD) 36196 7955 9748 13453 7406	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30 5	D) = 53 PCHG (FT) 89.2 -3.8 -3.3 -5.7	8490 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10520 9093 7480	MONTH = VOL (CYD) 36196 7955 9748 13453 7406	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 260	D) = 533PCHG(FT)89.2-3.8-3.3-5.7-9.5	8490 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10520 9093 7489	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0	D) = 533PCHG(FT)89.2-3.8-3.3-5.7-9.5-4.0202	8490 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8	D) = 533PCHG(FT)89.2-3.8-3.3-5.7-9.5-4.0-20.2	8490 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4700	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2	D) = 533PCHG(FT)89.2-3.8-3.3-5.7-9.5-4.0-20.264.2	8490 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 010	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0	D) = 533 PCHG (FT) 89.2 -3.8 -3.3 -5.7 -9.5 -4.0 -20.2 64.2 -0.0	8490 ALT 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3	D) = 533 PCHG (FT) 89.2 -3.8 -3.3 -5.7 -9.5 -4.0 -20.2 64.2 -0.0 -2.7 20.2 -2.7 -2.5 -2.7	8490 ALT 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0	D) = 533 PCHG (FT) 89.2 -3.8 -3.3 -5.7 -9.5 -4.0 -20.2 64.2 -0.0 -2.7 -8.0	8490 ALT 0 0 0 0 0 0 0 2 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932 -2495	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$	8490 ALT 0 0 0 0 0 0 0 2 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932 -2495 -3277	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$	8490 ALT 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932 -2495 -3277 -1800	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932 -2495 -3277 -1800 -28	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597 2661	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839 35343	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932 -2495 -3277 -1800 -28 -8064	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60 -3112	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9 52.9	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.22$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$ $2.9$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597 2661 2954	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839 35343 22622	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932 -2495 -3277 -1800 -28 -8064 -13823	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60 -3112 -3873	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9 52.9 24.8	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$ $2.9$ $-15.2$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597 2661 2954 3687	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839 35343 22622 65521	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932 -2495 -3277 -1800 -28 -8064 -13823 -6761	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60 -3112 -3873 -2526	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9 52.9 24.8 63.5	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$ $2.9$ $-15.2$ $-6.5$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597 2661 2954 3687 4640	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839 35343 22622 65521 75686	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932 -2495 -3277 -1800 -28 -8064 -13823 -6761 -6596	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60 -3112 -3873 -2526 -2182	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9 52.9 24.8 63.5 73.3	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$ $2.9$ $-15.2$ $-6.5$ $3.3$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597 2661 2954 3687 4640 5865	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839 35343 22622 65521 75686 33894	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -4 -645 -1932 -2495 -3277 -1800 -28 -8064 -13823 -6761 -6596 486	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60 -3112 -3873 -2526 -2182 174	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9 52.9 24.8 63.5 73.3 50.7	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$ $2.9$ $-15.2$ $-6.5$ $3.3$ $0.7$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597 2661 2954 3687 4640 5865 7065	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839 35343 22622 65521 75686 33894 22388	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -645 -1932 -2495 -3277 -1800 -28 -8064 -13823 -6761 -6596 486 5380	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60 -3112 -3873 -2526 -2182 174 1765	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9 52.9 24.8 63.5 73.3 50.7 52.7	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$ $2.9$ $-15.2$ $-6.5$ $3.3$ $0.7$ $12.7$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597 2661 2954 3687 4640 5865 7065 8042	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839 35343 22622 65521 75686 33894 22388 15568	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -645 -1932 -2495 -3277 -1800 -28 -8064 -13823 -6761 -6596 486 5380 4635	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60 -3112 -3873 -2526 -2182 174 1765 1516	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9 52.9 24.8 63.5 73.3 50.7 52.7 42.7	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$ $2.9$ $-15.2$ $-6.5$ $3.3$ $0.7$ $12.7$ $12.7$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22 23	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597 2661 2954 3687 4640 5865 7065 8042 8733	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839 35343 22622 65521 75686 33894 22388 15568 10848	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -645 -1932 -2495 -3277 -1800 -28 -8064 -13823 -6761 -6596 486 5380 4635 -85	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60 -3112 -3873 -2526 -2182 174 1765 1516 26	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9 52.9 24.8 63.5 73.3 50.7 52.7 42.7 29.8	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$ $2.9$ $-15.2$ $-6.5$ $3.3$ $0.7$ $12.7$ $-0.2$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22 23 24	= 3 POS (FT) 13376 12775 11807 10520 9093 7489 6077 4700 4030 3438 2984 2699 2553 2542 2597 2661 2954 3687 4640 5865 7065 8042 8733 9261	MONTH = VOL (CYD) 36196 7955 9748 13453 7406 8751 4815 25306 7285 9074 10216 19371 26486 32215 21839 35343 22622 65521 75686 33894 22388 15568 10848 16310	12 NCHG (CYD) 27085 -1156 -1186 -1732 -2313 -5967 -4904 15588 -645 -1932 -2495 -3277 -1800 -28 -8064 -13823 -6761 -6596 486 5380 4635 -85 5376	SEDIMENT ACHG (CYD) 8597 -216 -128 -577 -746 -2111 709 1991 -13 -219 -638 -836 -1080 -597 -60 -3112 -3873 -2526 -2182 174 1765 1516 26 1766	VOL (CYI WIDTH (FT) 119.2 26.2 26.7 44.3 30.5 36.0 19.8 104.2 30.0 37.3 42.0 53.2 62.3 75.8 59.9 52.9 24.8 63.5 73.3 50.7 52.7 42.7 29.8 44.8	D) = 533 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-5.7$ $-9.5$ $-4.0$ $-20.2$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.2$ $-0.1$ $2.9$ $-15.2$ $-6.5$ $3.3$ $0.7$ $12.7$ $-0.2$ $14.8$	8490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.

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					1107 /017	D) - E2	c1 20	
YEAR	$\mathbf{x} = 4$	MONTH =	12	SEDIMENT	VOL (CI	D) = 53	270	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)	•	
1	13348	44597	35486	8401	146.8	116.8	0	0.0
2	12775	7863	-1248	-92	25.9	-4.1	0	0.0
3	11807	9699	-1235	-49	26.6	-3.4	0	0.0
4	10522	12650	-2536	-803	41.7	-8.3	0	0.0
5	9095	6888	-2831	-518	28.3	-11.7	0	0.0
6	7496	7074	-7645	-1677	29.1	-10.9	0	0.0
7	6076	5063	-4656	248	20.8	-19.2	0	0.0
Ŕ	4692	27323	17604	2017	112.5	72.5	2	50.0
ă	4030	7979	_17	_12	29 9	-0 1	ō	0 0
10	2420	0051	-060	-223	25.J 36 A	-3 6	ň	0.0
10	3439	0031	-000	-223	20.4	-10 6	ŏ	0.0
11	2987	9584	-2564	-632	39.4	-10.0	0	0.0
12	2701	18533	-3334	-839	50.9	-9.1	0	0.0
13	2555	25418	-4345	-1069	59.8	-10.2	0	0.0
14	2544	31618	-2396	-596	74.4	-5.6	0	0.0
15	2597	21720	-147	-119	59.6	-0.4	0	0.0
16	2667	31508 -	-11900	-3835	47.2	-2.8	0	0.0
17	2957	19918 -	-16526	-2704	21.9	-18.1	0	0.0
18	3689	62601	-9681	-2920	60.6	-9.4	0	0.0
19	4642	73515	-8767	-2171	71.2	1.2	0	0.0
20	5865	34079	671	185	51.0	1.0	Ŏ	0.0
21	7061	24126	7119	1738	56 7	16 7	ō	0.0
22	0030	17065	6121	1407	46.8	16.8	õ	0.0
22	0030	10003	-30	55	20.0	-0 1	ŏ	0.0
23	0733	10903	-30	1757	29.9 10 C	10 6	ŏ	0.0
24	9230	10000	1122	1/5/	49.0	19.0	U	0.0
VEA	P - 5	MONTH -	12	SEDIMENT	VOL (CY	D) = 53	3774	
YEA	R = 5	MONTH =	12 NCHG	SEDIMENT	VOL (CY	D) = 53	3774 גד.ש	PAR
YEA) NUM	R = 5 POS (EPR)	MONTH = VOL	12 NCEG	SEDIMENT ACHG	VOL (CY WIDTH	D) = 53 PCHG	3774 Alt	PAR
YEAI NUM	R = 5 POS (FT)	MONTH = VOL (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CY WIDTH (FT)	D) = 53 PCHG (FT)	3774 ALT	PAR
YEAN NUM	R = 5 POS (FT) 13321	MONTH = VOL (CYD) 52903	12 NCHG (CYD) 43792	SEDIMENT ACHG (CYD) 8306	VOL (CY WIDTH (FT) 174.2	D) = 53 PCHG (FT) 144.2	3774 ALT 0	PAR 0.0
YEAU NUM 1 2	R = 5 POS (FT) 13321 12775	MONTH = VOL (CYD) 52903 7842	12 NCHG (CYD) 43792 -1269	SEDIMENT ACHG (CYD) 8306 -21	VOL (CY WIDTH (FT) 174.2 25.8	D) = 53 PCHG (FT) 144.2 -4.2	3774 ALT 0 0	PAR 0.0 0.0
YEAD NUM 1 2 3	R = 5 POS (FT) 13321 12775 11807	MONTH = VOL (CYD) 52903 7842 9687	12 NCHG (CYD) 43792 -1269 -1246	SEDIMENT ACHG (CYD) 8306 -21 -11	VOL (CY WIDTH (FT) 174.2 25.8 26.6	D) = 53 PCHG (FT) 144.2 -4.2 -3.4	3774 ALT 0 0	PAR 0.0 0.0 0.0
YEAD NUM 1 2 3 4	R = 5 POS (FT) 13321 12775 11807 10527	MONTH = VOL (CYD) 52903 7842 9687 11289	12 NCHG (CYD) 43792 -1269 -1246 -3896	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2	D) = 53 PCHG (FT) 144.2 -4.2 -3.4 -12.8	3774 ALT 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAJ NUM 1 2 3 4 5	R = 5 POS (FT) 13321 12775 11807 10527 9097	MONTH = VOL (CYD) 52903 7842 9687 11289 6263	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8	D) = 53 PCHG (FT) 144.2 -4.2 -3.4 -12.8 -14.2	3774 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEA NUM 1 2 3 4 5 6	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.8 25.5	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$	3774 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEA NUM 1 2 3 4 5 6 7	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$	3774 ALT 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEA NUM 1 2 3 4 5 6 7 8	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$	3774 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEA) NUM 1 2 3 4 5 6 7 8 9	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$	3774 ALT 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAU NUM 1 2 3 4 5 6 7 8 9	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$	3774 ALT 0 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAU NUM 1 2 3 4 5 6 7 8 9 10	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$	3774 ALT 0 0 0 0 0 0 0 2 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
YEAU NUM 1 2 3 4 5 6 7 8 9 10 11 12	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48 5	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAU NUM 1 2 3 4 5 6 7 8 9 10 11 12	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAU NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 21022	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAU NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAU NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAN NUM 1 2 3 4 5 6 7 8 9 10 112 13 14 15 6 7	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598 2673	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537 27204	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330 -16203	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183 -4304	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1 40.7	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$ $-9.3$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAN NUM 1 2 3 4 5 6 7 8 9 10 112 13 14 15 16 7	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598 2673 2959	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537 27204 18006	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330 -16203 -18438	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183 -4304 -1912	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1 40.7 19.8	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$ $-9.3$ $-20.2$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAN NUM 1 2 3 4 5 6 7 8 9 10 112 13 14 15 16 7 18	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598 2673 2959 3692	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537 27204 18006 59420	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330 -16203 -18438 -12861	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183 -4304 -1912 -3180	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1 40.7 19.8 57.5	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$ $-9.3$ $-20.2$ $-12.5$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0
YEAN NUM 1 2 3 4 5 6 7 8 9 10 112 13 14 15 16 7 18 19	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598 2673 2959 3692 4644	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537 27204 18006 59420 71353	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330 -16203 -18438 -12861 -10928	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183 -4304 -1912 -3180 -2162	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1 40.7 19.8 57.5 69.1	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$ $-9.3$ $-20.2$ $-12.5$ $-0.9$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAN NUM 1 2 3 4 5 6 7 8 9 10 112 13 14 15 16 7 18 9 20	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598 2673 2959 3692 4644 5865	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537 27204 18006 59420 71353 34274	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330 -16203 -18438 -12861 -10928 866	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183 -4304 -1912 -3180 -2162 195	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1 40.7 19.8 57.5 69.1 51.3	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$ $-9.3$ $-20.2$ $-12.5$ $-0.9$ $1.3$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
YEAN NUM 1 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 3 4 5 1 2 3 4 5 1 8 9 0 11 2 3 4 5 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 2 3 1 1 1 2 3 1 1 2 3 1 1 2 3 1 1 1 2 3 1 1 1 1	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598 2673 2959 3692 4644 5865 7057	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537 27204 18006 59420 71353 34274 25837	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330 -16203 -18438 -12861 -10928 866 8830	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183 -4304 -1912 -3180 -2162 195 1711	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1 40.7 19.8 57.5 69.1 51.3 60.8	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-14.5$ $-18.8$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$ $-9.3$ $-20.2$ $-12.5$ $-0.9$ $1.3$ $20.8$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
YEAN NUM 1 2 3 4 5 6 7 8 9 0 11 2 3 4 5 6 7 8 9 0 11 2 13 4 15 6 7 18 9 0 21 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598 2673 2959 3692 4644 5865 7057 8034	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537 27204 18006 59420 71353 34274 25837 18545	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330 -16203 -18438 -12861 -10928 866 8830 7612	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183 -4304 -1912 -3180 -2162 195 1711 1480	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1 40.7 19.8 57.5 69.1 51.3 60.8 50.9	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-14.5$ $-14.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$ $-9.3$ $-20.2$ $-12.5$ $-0.9$ $1.3$ $20.8$ $20.9$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
YEAN NUM 1 2 3 4 5 6 7 8 9 0 112 134 15 16 7 8 9 0 112 134 15 16 7 18 9 0 212 23	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598 2673 2959 3692 4644 5865 7057 8034 8733	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537 27204 18006 59420 71353 34274 25837 18545 10982	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330 -16203 -18438 -12861 -10928 866 8830 7612 48	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183 -4304 -1912 -3180 -2162 195 1711 1480 79	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1 40.7 19.8 57.5 69.1 51.3 60.8 50.9 30.1	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-14.5$ $-14.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$ $-9.3$ $-20.2$ $-12.5$ $-0.9$ $1.3$ $20.9$ $0.1$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
YEAN NUM 1234567890112314567890112314567890212232	R = 5 POS (FT) 13321 12775 11807 10527 9097 7500 6076 4683 4030 3440 2989 2703 2558 2545 2598 2673 2959 3692 4644 5865 7057 8034 8733 9252	MONTH = VOL (CYD) 52903 7842 9687 11289 6263 6190 5145 29365 7267 8623 8958 17691 24360 31022 21537 27204 18006 59420 71353 34274 25837 18545 10982 19816	12 NCHG (CYD) 43792 -1269 -1246 -3896 -3456 -8528 -4573 19646 -22 -1096 -3191 -4176 -5403 -2993 -330 -16203 -18438 -12861 -10928 8866 8830 7612 48 8882	SEDIMENT ACHG (CYD) 8306 -21 -11 -1361 -625 -884 82 2042 -5 -228 -626 -842 -1058 -596 -183 -4304 -1912 -3180 -2162 195 1711 1480 79 1749	VOL (CY WIDTH (FT) 174.2 25.8 26.6 37.2 25.8 25.5 21.2 120.9 29.9 35.5 36.9 48.5 57.3 73.0 59.1 40.7 19.8 57.5 69.1 51.3 60.8 50.9 30.1 54.4	D) = 53 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.4$ $-12.8$ $-14.2$ $-14.5$ $-14.5$ $-14.5$ $-13.1$ $-11.5$ $-12.7$ $-7.0$ $-0.9$ $-9.3$ $-20.2$ $-12.5$ $-0.9$ $1.3$ $20.8$ $20.9$ $0.1$ $24.4$	3774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0

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Tab:	<b>le B-3.</b> 1	Beach No	urishme	ent - Alt	ernative	1, 1	Distribu
PROC INIT	GRAM SEM	.BAS - B CH CONDI	ELLE FO	NTAINE P	ROJECT		
SEG	SEG	SEG	SEG	SEG	SEG	ALT	PAR
NUM	POS	ANGLE	WIDTH	HEIGHT	VOLUME		
	(FT)	(DEG)	(FT)	(FT)	(CYD)		
1	13465	4.7	30	5	9111	0	0.0
2	12771	22.9	30	5	9111	0	0.0
3	11804	30.5	30	6	10933	0	0.0

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23	87	733 -22.	5 30	) 6	1093	3 0	C	).0 0
24	92	276 -18.	3 30	) 6	1093	3 0	C	).0 0
т	OTAL BE	EACH SEDI	MENT VO	DLUME (CYI	D) = 5315	11.1		
YEAR	= 1	MONTH =	: 12	SEDIMENT	VOL (CYD	) = 53	1510	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13434	18633	9522	9522	61.4	31.4	0	0.0
2	12773	8569	-543	-543	28.2	-1.8	0	0.0
3	11806	10171	-762	-762	27.9	-2.1	0	0.0
4	10509	16625	-560	-560	54.7	4.7	1	2000.0
5	9078	11019	-700	-700	45.4	5.4	1	2000.0
6	7480	10981	-738	-738	45.2	5.2	1	2000.0
7	6083	3491	-6228	-6228	14.4	-25.6	0	0.0
8	4723	19586	9868	9868	80.6	40.6	2	50.0
9	4030	7305	16	16	30.1	0.1	0	0.0
10	3436	9527	-191	-191	39.2	-0.8	0	0.0
11	2971	13465	-684	-684	55.4	5.4	1	2000.0
12	2689	23047	-820	-820	63.2	3.2	1	2000.0
13	2543	30663	-1099	-1099	72.1	2.1	1	2000.0
14	2535	35366	-648	-648	83.2	3.2	1	2000.0
15	2597	21813	-53	-53	59.9	-0.1	0	0.0
16	2667	31234	-2174	-2174	46.7	-3.3	0	0.0
17	2945	31265	-5179	-5179	34.3	-5.7	0	0.0
18	3682	70103	-2179	-2179	67.9	-2.1	0	0.0
19	4645	70219	-2063	-2063	68.0	-2.0	0	0.0
20	5866	33492	84	84	50.1	0.1	0	0.0
21	7074	18829	1821	1821	44.3	4.3	0	0.0
22	8051	12510	1577	1577	34.3	4.3	0	0.0
23	8733	10842	-92	-92	29.7	-0.3	0	0.0
24	9271	12757	1824	1824	35.0	5.0	0	0.0

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38.3

41.1

44.3

40.9

38.3

24.1

19.9

15.9

9.7

5.1

0.2

-2.2

-2.3

-9.5

-24.3

-30.4

-36.7

-36.5

-30.8

PRN

YEAR	= 2	MONTH =	12	SEDIMENT	VOL (CYD	) = 52	9861	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13404	27585	18474	8952	90.8	60.8	0	0.0
2	12774	8157	-955	-412	26.9	-3.1	0	0.0
3	11807	9851	-1083	-320	27.0	-3.0	0	0.0
4	10511	16068	-1117	-558	52.9	2.9	0	0.0
5	9080	10345	-1374	-674	42.6	2.6	0	0.0
6	7493	7662	-4057	-3319	31.5	-8.5	0	0.0
7	6080	4130	-5589	639	17.0	-23.0	0	0.0
8	4708	23315	13597	3729	96.0	56.0	2	50.0
Ğ	4030	7297	9	-8	30.0	0.0	Ō	0.0
10	3437	9331	-387	-196	38.4	-1.6	Ō	0.0
11	2973	12789	-1360	-676	52.6	2.6	Õ	0.0
12	2691	22222	-1645	-825	61.0	1.0	Ō	0.0
12	2545	29576	-2187	-1088	69 6	-0 4	õ	0.0
14	2536	34721	_1204	-645	81 7	1 7	õ	0.0
15	2550	21710	_1/0	_015	59 6	-0.4	ň	0.0
16	2597	20035	-1373	-2100	43 5	-6 5	õ	0.0
17	2071	29035	-43/3	-5066	20.0	_11 2	0	0.0
10	2930	20199 -	-10245	-3000	20.0	-1.3	ő	0.0
10	3084	0/000	-4413	-2237	65.7	-4.5	0	0.0
19	404/	001/0	-4112	-2049	50.U	-4.0	0	0.0
20	5866	33590	103	1700	50.5	0.3	0	0.0
21	7069	20621	3013	1/92	48.5	8.5	0	0.0
22	8046	14052	3118	1542	38.0	8.0	0	0.0
23	8733	10822	-111	-20	29.7	-0.3	0	0.0
24	9266	14543	3610	1,86	39.9	9.9	U	0.0
YEAR	= 3	MONTH =	12	SEDIMENT	VOL (CYD	) = 52	7490	
YEAR NUM	= 3 POS	MONTH = VOL	12 NCHG	SEDIMENT ACHG	VOL (CYD WIDTH	) = 52 PCHG	7490 ALT	PAR
YEAR NUM	= 3 POS (FT)	MONTH = VOL (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CYD WIDTH (FT)	) = 52 PCHG (FT)	7490 ALT	PAR
YEAR NUM 1	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36162	12 NCHG (CYD) 27051	SEDIMENT ACHG (CYD) 8577	VOL (CYD WIDTH (FT) 119.1	) = 52 PCHG (FT) 89.1	7490 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775	MONTH = VOL (CYD) 36162 7936	12 NCHG (CYD) 27051 -1175	SEDIMENT ACHG (CYD) 8577 -221	VOL (CYD WIDTH (FT) 119.1 26.1	)) = 52 PCHG (FT) 89.1 -3.9	7490 ALT 0 0	PAR 0.0 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807	MONTH = VOL (CYD) 36162 7936 9719	12 NCHG (CYD) 27051 -1175 -1214	SEDIMENT ACHG (CYD) 8577 -221 -132	VOL (CYD WIDTH (FT) 119.1 26.1 26.7	<pre>&gt;) = 52 PCHG (FT) 89.1 -3.9 -3.3</pre>	7490 ALT 0 0	PAR 0.0 0.0
YEAR NUM 1 2 3 4	= 3 POS (FT) 13376 12775 11807 10513	MONTH = VOL (CYD) 36162 7936 9719 15511	12 NCHG (CYD) 27051 -1175 -1214 -1674	SEDIMENT ACHG (CYD) 8577 -221 -132 -557	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1	$\begin{array}{l} \mathbf{p} = 52 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \end{array}$	7490 ALT 0 0 0	PAR 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 3 POS (FT) 13376 12775 11807 10513 9086	MONTH = VOL (CYD) 36162 7936 9719 15511 9103	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5	) = 52 PCHG (FT) 89.1 -3.9 -3.3 1.1 -2 5	7490 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10513 9086 7500	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24 9	<pre>&gt;) = 52 PCHG (FT) 89.1 -3.9 -3.3 1.1 -2.5 -15 1</pre>	7490 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9	$p) = 52 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -2.5 \\ -15.1 \\ -20 \\ 1 \end{bmatrix}$	7490 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2	$p) = 52 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -2.5 \\ -15.1 \\ -20.1 \\ 64 \\ 2$	7490 ALT 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0$	7490 ALT 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-24$	7490 ALT 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$	7490 ALT 0 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2603	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21303	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2028	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58 7	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.2$	7490 ALT 0 0 0 0 0 0 0 2 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28400	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -23264	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 1077	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-2.5$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2548	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 24078	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -3264	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 642	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-3.0$ $1$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2538	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -3264 -1937	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 50.1	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-3.0$ $0.1$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2538 2538 2598	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078 21578	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -1937 -288	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643 -140	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 59.2	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-3.0$ $0.1$ $-0.8$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2538 2598 2675	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078 21578 26114	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -1937 -288 -7293	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643 -140 -2921	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 59.2 39.1	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-3.0$ $0.1$ $-0.8$ $-10.9$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2538 2598 2675 2955 2657	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078 21578 26114 22302	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -1937 -288 -7293 -14143	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643 -140 -2921 -3897	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 59.2 39.1 24.5	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-3.0$ $0.1$ $-0.8$ $-10.9$ $-15.5$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2598 2675 2955 3687 464	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078 21578 26114 22302 65219	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -1937 -288 -7293 -14143 -7062	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643 -140 -2921 -3897 -2647	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 59.2 39.1 24.5 63.2	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-3.0$ $0.1$ $-0.8$ $-10.9$ $-15.5$ $-6.8$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2598 2675 2955 3687 4649 5000	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078 21578 26114 22302 65219 66132	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -1937 -288 -7293 -14143 -7062 -6149	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643 -140 -2921 -3897 -2647 -2037	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 59.2 39.1 24.5 63.2 64.0	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-3.0$ $0.1$ $-0.8$ $-10.9$ $-15.5$ $-6.8$ $-6.0$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2598 2675 2955 3687 4649 5866	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078 21578 26114 22302 65219 66132 33703	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -1937 -288 -7293 -14143 -7062 -6149 295	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643 -140 -2921 -3897 -2647 -2037 112	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 59.2 39.1 24.5 63.2 64.0 50.4	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $-20.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-3.0$ $0.1$ $-0.8$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 13 14 15 16 17 18 9 20 21 2	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2538 2598 2675 2955 3687 4649 5866 7065	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078 26114 22302 65219 66132 33703 22384	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -1937 -288 -7293 -14143 -7062 -6149 295 5377	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643 -140 -2921 -3897 -2647 -2037 112 1764	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 59.2 39.1 24.5 63.2 64.0 50.4 52.6	$\begin{array}{l} = 52\\ PCHG\\ (FT)\\ 89.1\\ -3.9\\ -3.3\\ 1.1\\ -2.5\\ -15.1\\ -20.1\\ -64.2\\ -0.0\\ -2.4\\ -0.1\\ -1.3\\ -3.0\\ 0.1\\ -0.8\\ -10.9\\ -15.5\\ -6.8\\ -6.0\\ 0.4\\ 12.6\end{array}$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2538 2598 2675 2955 3687 4649 5866 7065 8042	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078 26114 22302 65219 66132 33703 22384 15568	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -1937 -288 -7293 -14143 -7062 -6149 295 5377 4635	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643 -140 -2921 -3897 -2647 -2037 112 1764 1516	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 59.2 39.1 24.5 63.2 64.0 50.4 52.6 42.7	p) = 52 $PCHG$ $(FT)$ $89.1$ $-3.9$ $-3.3$ $1.1$ $-2.5$ $-15.1$ $64.2$ $-0.0$ $-2.4$ $-0.1$ $-1.3$ $-3.0$ $0.1$ $-0.8$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$ $12.6$ $12.7$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 13 14 15 16 17 18 9 20 21 22 3	= 3 POS (FT) 13376 12775 11807 10513 9086 7500 6077 4700 4030 3437 2976 2693 2548 2538 2598 2675 2955 3687 4649 5866 7065 8042 8733	MONTH = VOL (CYD) 36162 7936 9719 15511 9103 6051 4843 25306 7285 9131 12120 21393 28499 34078 21578 26114 22302 65219 66132 33703 22384 15568 10848	12 NCHG (CYD) 27051 -1175 -1214 -1674 -2616 -5668 -4875 15587 -4 -587 -2028 -2474 -3264 -1937 -288 -7293 -14143 -7062 -6149 295 5377 4635 -85	SEDIMENT ACHG (CYD) 8577 -221 -132 -557 -1242 -1611 713 1990 -13 -200 -669 -829 -1077 -643 -140 -2921 -3897 -2647 -2037 112 1764 1516 26	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 37.5 24.9 19.9 104.2 30.0 37.6 49.9 58.7 67.0 80.1 59.2 39.1 24.5 63.2 64.0 50.4 52.6 42.7 29.8	$\begin{array}{l} = 52\\ PCHG\\ (FT)\\ 89.1\\ -3.9\\ -3.3\\ 1.1\\ -2.5\\ -15.1\\ -20.1\\ -4.2\\ -0.0\\ -2.4\\ -0.1\\ -1.3\\ -3.0\\ 0.1\\ -0.8\\ -10.9\\ -15.5\\ -6.8\\ -6.0\\ 0.4\\ 12.6\\ 12.7\\ -0.2 \end{array}$	7490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0

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YEAR	= 4	MONTH = 1	L2	SEDIMENT	VOL (CYD)	) = 52	5127	
NUM	POS	VOL 1	ICHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13348	44539 3	35428	8377	146.7	116.7	0	0.0
2	12775	7841 -	-1270	-95	25.8	-4.2	0	0.0
3	11807	9668 -	-1266	-51	26.5	-3.5	ō	0 0
4	10515	14953 -	-2233	-559	49 2	-0.8	õ	0.0
5	00010	7047	-1671	-2056	20 0	_11 0	ŏ	0.0
ç	7502	5600	- <b>40</b> 71	-2050	23.0	-16 6	õ	0.0
7	6076	5099 -	4621	-331	23.5	10.5	0	0.0
	6076	5087 -	-4031	244	20.9	-19.1	0	0.0
8	4692	2/322	L/603	2016	112.5	12.5	2	50.0
9	4030	1213	-10	-12	29.9	-0.1	0	0.0
10	3438	8927	-792	-205	36.7	-3.3	0	0.0
11	2979	11458 -	-2690	-662	47.2	-2.8	0	0.0
12	2696	20559 -	-3307	-833	56.4	-3.6	0	0.0
13	2550	27432 -	-4331	-1066	64.5	-5.5	0	0.0
14	2539	33436 -	-2579	-642	78.6	-1.4	0	0.0
15	2598	21384	-482	-194	58.7	-1.3	0	0.0
16	2680	22445 -1	10962	-3669	33.6	-16.4	0	0.0
17	2957	19595 -1	6849	-2707	21.5	-18.5	0	0.0
18	3690	62181 -1	0101	-3039	60.2	-9.8	ŏ	0.0
19	4651	64103 -	-8178	-2029	62.1	-7.9	Õ	0.0
20	5865	33828	421	126	50.6	0.6	õ	0.0
21	7061	24120	7112	1736	56 7	16 7	ŏ	0.0
22	0030	17065	6121	1/07	16 9	16 9	õ	0.0
22	0030	10003	- 30	1497	20.0	_0 1	ŏ	0.0
23	0122	10903	7122	1757	29.9	10.1	0	0.0
24	9230	TANDD	1733	1/3/	49.0	19.0	U	0.0
YEAR	= 5	MONTH = 1	2	SEDIMENT	VOL (CYD)	) = 52	2774	. 4
YEAR	= 5 POS	MONTH = 1	L2 JCHG	SEDIMENT	VOL (CYD) WIDTH	) = 52 PCHG	2774 AT.T	PAR
YEAR NUM	= 5 POS	MONTH = 1 $VOL P$ $(CVD)$	L2 NCHG	SEDIMENT ACHG (CYD)	VOL (CYD) WIDTH (FT)	) = 52 PCHG (FT)	2774 ALT	PAR
YEAR NUM 1	= 5 POS (FT) 13321	MONTH = 1 $VOL P$ $(CYD)$ $52819$	L2 ICHG (CYD) 13708	SEDIMENT ACHG (CYD) 8280	VOL (CYD) WIDTH (FT) 173 9	) = 52 PCHG (FT) 143 9	2774 ALT	PAR
YEAR NUM 1 2	= 5 POS (FT) 13321	MONTH = 1 VOL N (CYD) 52819	L2 NCHG (CYD) 13708	SEDIMENT ACHG (CYD) 8280	VOL (CYD) WIDTH (FT) 173.9	) = 52 PCHG (FT) 143.9	2774 ALT 0	PAR 0.0
YEAR NUM 1 2	= 5 POS (FT) 13321 12775	MONTH = 1 VOL N (CYD) 52819 4 7818 -	L2 NCHG (CYD) 13708 -1294	SEDIMENT ACHG (CYD) 8280 -24 -13	VOL (CYD) WIDTH (FT) 173.9 25.7	) = 52 PCHG (FT) 143.9 -4.3	2774 ALT 0 0	PAR 0.0 0.0
YEAR NUM 1 2 3	= 5 POS (FT) 13321 12775 11807	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 -	L2 ICHG (CYD) 13708 -1294 -1279	SEDIMENT ACHG (CYD) 8280 -24 -13	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5	) = 52 PCHG (FT) 143.9 -4.3 -3.5	2774 ALT 0 0	PAR 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 5 POS (FT) 13321 12775 11807 10520	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 -	L2 ICHG (CYD) 13708 -1294 -1279 -3799	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1	) = 52 PCHG (FT) 143.9 -4.3 -3.5 -5.9	2774 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 5 POS (FT) 13321 12775 11807 10520 9099	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 -	L2 NCHG (CYD) 43708 -1294 -1279 -3799 -5900	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9	) = 52 PCHG (FT) 143.9 -4.3 -3.5 -5.9 -16.1	2774 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 5 POS (FT) 13321 12775 11807 10520 9099 7502	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 -	L2 ICHG (CYD) 13708 -1294 -1279 -3799 -5900 -6053	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3	$\begin{array}{l} = 52 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -5.9 \\ -16.1 \\ -16.7 \end{array}$	2774 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2	$\begin{array}{l} = 52 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -5.9 \\ -16.1 \\ -16.7 \\ -18.8 \end{array}$	2774 ALT 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 1	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9	$\begin{array}{l} = 52 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -5.9 \\ -16.1 \\ -16.7 \\ -18.8 \\ 80.9 \end{array}$	2774 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 1 7267	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9	$\begin{array}{l} = 52 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -5.9 \\ -16.1 \\ -16.7 \\ -18.8 \\ 80.9 \\ -0.1 \end{array}$	2774 ALT 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 1 7267 8718 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9	$\begin{array}{l} = 52 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -5.9 \\ -16.1 \\ -16.7 \\ -18.8 \\ 80.9 \\ -0.1 \\ -4.1 \end{array}$	2774 ALT 0 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 1 7267 8718 - 10803 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5	$\begin{array}{l} = 52 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -5.9 \\ -16.1 \\ -16.7 \\ -18.8 \\ 80.9 \\ -0.1 \\ -4.1 \\ -5.5 \end{array}$	2774 ALT 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 1 7267 8718 - 8718 - 10803 - 19723 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -4144	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1	= 52  PCHG  (FT)  143.9  -4.3  -3.5  -5.9  -16.1  -16.7  -18.8  80.9  -0.1  -4.1  -5.5  -5.9	2774 ALT 0 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698 2553	MONTH = 1 VOL P (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 1 7267 8718 - 8718 - 10803 - 19723 - 26376 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -3144 -5387	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837 -1056	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1 62.0	$\begin{array}{l} = 52 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -5.9 \\ -16.1 \\ -16.7 \\ -18.8 \\ 80.9 \\ -0.1 \\ -4.1 \\ -5.5 \\ -5.9 \\ -8.0 \end{array}$	2774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698 2553 2541	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 - 7267 8718 - 8718 - 10803 - 19723 - 26376 - 32794 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -4144 -5387 -3221	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837 -1056 -643	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1 62.0 77.1	= 52  PCHG  (FT)  143.9  -4.3  -3.5  -5.9  -16.1  -16.7  -18.8  80.9  -0.1  -4.1  -5.5  -5.9  -8.0  -2.9	2774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
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YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698 2553 2541 2599 2686 2060	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 - 7267 8718 - 10803 - 19723 - 26376 - 32794 - 21002 - 18470 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -4144 -5387 -3221 -865 L9937	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837 -1056 -643 -382 -3975 -1952	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1 62.0 77.1 57.6 27.6 19 4	= 52  PCHG  (FT)  143.9  -4.3  -5.9  -16.1  -16.7  -18.8  80.9  -0.1  -4.1  -5.5  -5.9  -8.0  -2.9  -2.4  -20.6	2774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
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YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698 2553 2541 2599 2686 2960 3693	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 - 7267 8718 - 10803 - 19723 - 26376 - 32794 - 21002 - 18470 - 17643 - 58884 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -4144 -5387 -3221 -865 L9802 14937 L8802	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837 -1056 -643 -382 -3975 -1952 -3296	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1 62.0 77.1 57.6 27.6 19.4 57.0 60.1	= 52      PCHG      (FT)      143.9      -4.3      -3.5      -5.9      -16.1      -16.7      -18.8      80.9      -0.1      -4.1      -5.5      -5.9      -8.0      -2.9      -2.4      -20.6      -13.0      -13.0      -2.4      -20.6      -13.0      -13.0      -2.4      -20.6      -13.0      -2.0      -2.4      -20.6      -13.0      -2.0      -13.0      -2.0      -2.4      -20.6      -13.0      -2.0      -2.4      -2.0      -2.4      -2.0      -2.4      -2.0      -2.0      -2.4      -2.0      -2.4      -2.0      -2	2774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 22	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698 2553 2541 2599 2686 2960 3693 4653	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 - 7267 8718 - 10803 - 19723 - 26376 - 32794 - 21002 - 18470 - 17643 - 58884 - 52079 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -4144 -5387 -3221 -865 L9802 14937 L8802	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837 -1056 -643 -382 -3975 -1952 -3296 -2024	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1 62.0 77.1 57.6 27.6 19.4 57.0 60.1	= 52      PCHG      (FT)      14.3      -3.5      -5.9      -16.1      -16.7      -18.8      80.9      -0.1      -4.1      -5.5      -5.9      -2.9      -2.4      -20.6      -13.0      -9.9      -9.2      -2.4      -2.4      -2.9      -2.9      -2.4      -2.9      -2.4      -2.9      -2.9      -2.4      -2.9      -2.4      -2.9      -2.4      -2.9      -2.4      -2.9      -2.4      -2.9      -2.9      -2.9      -2.4      -2.9      -2.	2774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698 2553 2541 2599 2686 2960 3693 4653 5865	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 - 7267 8718 - 10803 - 19723 - 26376 - 32794 - 21002 - 18470 - 17643 - 58884 - 62079 - 33967 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -4144 -5387 -3221 -865 14937 18802 13397 -202 -355 -255	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837 -1056 -643 -382 -3975 -1952 -3296 -2024 138	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1 62.0 77.1 57.6 27.6 19.4 57.0 60.1 50.8	= 52      PCHG      (FT)      14.3.9      -4.3      -5.9      -16.1      -16.7      -18.8      80.9      -0.1      -4.1      -5.5      -8.0      -2.4      -20.6      -9.9      0.2      -9.8      -9.	2774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698 2553 2541 2599 2686 2960 3693 4653 5865 7057	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 - 7267 8718 - 10803 - 19723 - 26376 - 32794 - 21002 - 18470 - 17643 - 58884 - 62079 - 33967 25828 -	L2 ICHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -4144 -5387 -3221 -865 14937 18802 13397 18802 559 821 -559	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837 -1056 -643 -382 -3975 -1952 -3296 -2024 138 1708	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1 62.0 77.1 57.6 27.6 19.4 57.0 60.1 50.8 60.7	= 52      PCHG      (FT)      143.9      -4.3      -3.5      -5.9      -16.1      -16.7      -18.8      80.9      -0.1      -4.1      -5.5      -8.0      -2.4      -20.6      -9.9      0.8      20.7      20.7      -9.8      -9.9      -9.8      -9.9	2774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 20	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698 2553 2541 2599 2686 2960 3693 4653 5865 7057 8034	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 - 5665 - 5160 - 29363 - 7267 8718 - 10803 - 19723 - 26376 - 32794 - 21002 - 18470 - 17643 - 58884 - 62079 - 33967 - 25828 18545 -	L2 NCHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -4144 -5387 -3221 -865 14937 18802 13397 18802 559 8821 7612	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837 -1056 -643 -382 -3975 -1952 -3296 -2024 138 1708 1480	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1 62.0 77.1 57.6 27.6 19.4 57.0 60.1 50.8 60.7 50.9	= 52      PCHG      (FT)      143.9      -4.3      -3.5      -5.9      -16.1      -16.7      -18.8      80.9      -0.1      -4.1      -5.5      -8.0      -2.4      -20.6      -9.9      0.8      20.7      20.9      -2.4      -20.6      -9.8      20.7      20.9      -2.4      -20.6      -9.8      20.7      20.9      -2.4      -20.6      -9.8      20.7      20.9      -2.4      -20.6      -9.8      20.7      20.9      -2.4      -2.4      -2.0      -9.8      20.7      20.9      -2.4      -2.5      -9.8      -2.4      -2.6      -9.8      20.7      20.9      -2.4      -2.0      -3.8      -2.9      -2.4      -2.0      -3.8      -2.9      -2.4      -2.0      -3.8      -2.9      -2.0      -2.4      -2.4      -2.0      -2.0      -2.0      -2.4      -2.0      -2.4      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0      -2.0	2774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22 23	= 5 POS (FT) 13321 12775 11807 10520 9099 7502 6076 4683 4030 3439 2982 2698 2553 2541 2599 2686 2960 3693 4653 5865 7057 8034 8733	MONTH = 1 VOL N (CYD) 52819 4 7818 - 9654 - 13386 - 5819 5665 - 5160 29363 - 7267 8718 - 10803 - 19723 - 26376 - 32794 - 21002 18470 - 17643 - 58884 - 62079 - 33967 25828 18545 10982	L2 NCHG (CYD) 43708 -1294 -1279 -3799 -5900 -6053 -4558 L9645 -22 -1001 -3346 -4144 -5387 -3221 -865 L937 L8802 13397 L8802 13397 L8802 559 8821 7612 -48	SEDIMENT ACHG (CYD) 8280 -24 -13 -1566 -1229 -34 73 2042 -5 -209 -655 -837 -1056 -643 -382 -3975 -1952 -3296 -2024 138 1708 1480 79	VOL (CYD) WIDTH (FT) 173.9 25.7 26.5 44.1 23.9 23.3 21.2 120.9 29.9 35.9 44.5 54.1 62.0 77.1 57.6 27.6 19.4 57.0 60.1 50.8 60.7 50.9 30.1	= 52      PCHG      (FT)      143.9      -4.3      -3.5      -5.9      -16.1      -16.7      -18.8      80.9      -0.1      -4.1      -5.5      -8.0      -2.4      -20.6      -9.9      0.8      20.7      0.1      -2.4      -20.6      -9.9      0.8      20.7      0.1      -2.4      -20.6      -9.9      0.8      20.7      0.1      -2.4      -20.6      -9.9      0.8      20.7      0.1      -2.4      -20.6      -9.9      0.8      20.7      0.1      -2.4      -20.6      -9.9      0.8      20.7      0.1      -2.4      -2.4      -2.4      -2.4      -2.4      -9.9      0.8      20.7      0.1      -9.9      0.8      -2.9      -2.4      -2.0      -0.1      -9.9      -2.4      -9.9      -2.4      -9.9      -2.0      -9.9      -2.0      -9.9      -2.0      -2.4      -9.9      -2.0      -9.9      -2.0      -9.9      -2.0      -9.9      -2.0      -0.1      -9.9      -0.1      -9.9      -0.1      -9.9      -0.1      -9.9      -0.1      -9.9      -0.1      -0.1      -0.1      -0.1      -0.1      -0.8      -0.1      -0	2774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0

END OF PROGRAM

Table	B-4.	Beach	Nourishment	-	Alternative	1,	Biannual	Distributed

II	NITIAL B	BEACH CON	DITIONS					
SEC	G SEG	SEC	i seg	SEG	SEG	ALT	PAR	PRN
NUN	M POS	angi angi	E WIDT	H HEIGHT	VOLUME			
	(FT	') (DEG	) (FT)	(FT)	(CYD)			
1	1346	5 4.7	30	5	9111	0	0.	0 0
2	1277	1 22.9	30	5	9111	Ó	Ō.	ÕÕ
3	1180	4 30.5	30	6	10933	Ō	Ō.	Õ Õ
Ă	1051	4 38 3	50	5	17185	1	2000	0 0
5	000	2 11 1	40	Д	11710	1	2000	ññ
5	749		40	-	11710	1	2000.	
7	/40 COE	· · · · · · · · · · · · · · · · · · ·	40		0710	2	2000.	
/	603	40.9	40	4	9/19	0		
8	4/6	4 38.3	40	4	9/19	2	50.	0 0
9	403	0 24.1	. 30	4	7289	0	0.	0 0
10	343	19.9	40	4	9719	0	0.	00
11	297	6 15.9	50	4	14148	1	2000.	00
12	269	9.7	60	6	23867	1	2000.	00
13	254	5.1	. 70	7	31763	1	2000.	0 0
14	253	8 0.2	80	7	36015	1	2000.	0 0
15	259	7 -2.2	60	6	21867	0	0.	0 0
16	266	4 -2.3	50	11	33407	0	0.	0 0
17	293	9 _9 5	40	15	36444	ō	Ô.	0 0
19	369		70	17	72281	ō	ů.	n n
10	300		70	17	72201	ň	ů.	ñ ñ
13	404			11	22407	Ň	Ŭ.	
20	280		50	1	33407	0	0.	
21	707	8 -36.5	40	1	1/00/	0	0.	0 0
22	805	5 -30.8	30	6	10933	0	0.	0 0
23	873	3 -22.5	30	6	10933	0	0.	0 0
24	927	6 -18.3	30	6	10933	0	0.	0 0
T	otal bea	ACH SEDIN	ENT VOL	UME (CYD)	= 53151	1.1		
YEAR	= 1	MONTH =	12 S	EDIMENT V	VOL (CYD)	= 53	1510	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13434	18633	9522	9522	61.4	31.4	0	0.0
2	12773	8569	-543	-543	28.2	-1.8	0	0.0
3	11806	10171	-762	-762	27.9	-2.1	0	0.0
4	10509	16625	-560	-560	54.7	4.7	1 2	000.0
5	9078	11019	-700	-700	45.4	5.4	1 2	000.0
6	7480	10981	-738	-738	45.2	5.2	1 2	000 0
7	6083	3491	-6228	-6228	144 -	25 6	<u> </u>	
ģ	4723	10586	0868	9868	80 6	40 6	2	50 0
0	4020	7205	16	16	20.1	40.0	2	
10	4030	7303	101	101	30.1		0	0.0
10	3430	9527	-191	-191	39.2	-0.0	1 0	0.0
11	2971	13465	-684	-684	55.4	5.4		000.0
12	2689	23047	-820	-820	63.2	3.2	1 2	000.0
13	2543	30663	-1099	-1099	72.1	2.1	1 2	000.0
14	2535	35366	-648	-648	83.2	3.2	1 2	000.0
15	2597	21813	-53	-53	59.9	-0.1	0	0.0
16	2667	31234	-2174	-2174	46.7	-3.3	0	0.0
17	2945	31265	-5179	-5179	34.3	-5.7	0	0.0
18	3682	70103	-2179	-2179	67.9	-2.1	0	0.0
19	4645	70219	-2063	-2063	68.0	-2.0	0	0.0
20	5866	33492	84	84	50.1	0.1	0	0.0
21	7074	18829	1821	1821	44.3	4 3	ō	0.0
22	8051	12510	1577	1577	34 3	4 2	ñ	0.0 0 0
23	8723	10842	_02	_02	20 7	-0 3	õ	0.0
23	0733	10757	-74 1004	- 74 1004	25.1	с. О	ŏ	
24	0271							

#### PROGRAM SEM.BAS - BELLE FONTAINE PROJECT INITIAL BEACH CONDITIONS

YEAR	= 2	MONTH =	12	SEDIMENT	VOL (CYD	) = 52	9861	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13404	27585	18474	8952	90.8	60.8	0	0.0
2	12774	8157	-955	-412	26.9	-3.1	Ō	0.0
3	11807	9851	-1083	-320	27.0	-3.0	ŏ	0.0
4	10511	16068	-1117	-558	52 9	2 9	ň	0.0
5	0090	10345	-1374	-674	42 6	2 6	ŏ	0.0
S C	7402	7662	-1057	-2210	42.0 21 E	_0 E	ŏ	0.0
0	7493	/002	-4037	-2213	31.3	-0.5	0	0.0
/	6080	4130	-5589	639	17.0	-23.0	0	0.0
8	4708	23315	13597	3729	96.0	56.0	2	50.0
9	4030	7297	9	-8	30.0	0.0	0	0.0
10	3437	9331	-387	-196	38.4	-1.6	0	0.0
11	2973	12789	-1360	-676	52.6	2.6	0	0.0
12	2691	22222	-1645	-825	61.0	1.0	0	0.0
13	2545	29576	-2187	-1088	69.6	-0.4	0	0.0
14	2536	34721	-1294	-645	81.7	1.7	0	0.0
15	2597	21718	-149	- 95	59 6	-0 4	Ō	0 0
16	2671	20035	-4373	-2100	43 5	-6 5	ň	0.0
17	2071	25033	10245	-5066	20 0	_11 2	ŏ	0.0
10	2930	20199 -	4415	-3000	20.0	-11.2	0	0.0
18	3684	6/866	-4415	-2237	65.7	-4.3	0	0.0
19	4647	68170	-4112	-2049	66.0	-4.0	0	0.0
20	5866	33590	183	99	50.3	0.3	0	0.0
21	7069	20621	3613	1792	48.5	8.5	0	0.0
22	8046	14052	3118	1542	38.6	8.6	0	0.0
23	8733	10822	-111	-20	29.7	-0.3	0	0.0
24	9266	14543	3610	1786	39.9	9.9	0	0.0
YEAR	= 3	MONTH =	12	SEDIMENT	VOL (CYD	) = 54	1490	
YEAR NUM	= 3 POS	MONTH =	12 NCHG	SEDIMENT ACHG	VOL (CYD WIDTH	PCHG	1490 ALT	PAR
YEAR NUM	= 3 POS (FT)	MONTH = VOL (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CYD WIDTH (FT)	) = 54 PCHG (FT)	1490 ALT	PAR
YEAR NUM	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36159	12 NCHG (CYD) 27048	SEDIMENT ACHG (CYD) 8574	VOL (CYD WIDTH (FT) 119.1	) = 54 PCHG (FT) 89.1	1490 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775	MONTH = VOL (CYD) 36159 7929	12 NCHG (CYD) 27048 -1182	SEDIMENT ACHG (CYD) 8574 -227	VOL (CYD WIDTH (FT) 119.1 26.1	) = 54 PCHG (FT) 89.1 -3 9	1490 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775 11807	MONTH = VOL (CYD) 36159 7929	12 NCHG (CYD) 27048 -1182	SEDIMENT ACHG (CYD) 8574 -227 -149	VOL (CYD WIDTH (FT) 119.1 26.1 26.6	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \end{array}$	1490 ALT 0 0	<b>PAR</b> 0.0 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807	MONTH = VOL (CYD) 36159 7929 9701	12 NCHG (CYD) 27048 -1182 -1232	SEDIMENT ACHG (CYD) 8574 -227 -149 1461	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7 \\ 7 \end{array}$	1490 ALT 0 0 0	PAR 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 3 POS (FT) 13376 12775 11807 10506	MONTH = VOL (CYD) 36159 7929 9701 17529	12 NCHG (CYD) 27048 -1182 -1232 343	SEDIMENT ACHG (CYD) 8574 -227 -149 1461	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7	$\begin{array}{l} = 54 \\ \text{PCHG} \\ (\text{FT}) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 82 \end{array}$	1490 ALT 0 0 0 1	PAR 0.0 0.0 2000.0
YEAR NUM 1 2 3 4 5	= 3 POS (FT) 13376 12775 11807 10506 9075	MONTH = VOL (CYD) 36159 7929 9701 17529 11709	12 NCHG (CYD) 27048 -1182 -1232 343 -9	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \end{array}$	1490 ALT 0 0 0 1 1	PAR 0.0 0.0 2000.0 2000.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10506 9075 7494	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \end{array}$	1490 ALT 0 0 1 1 1	PAR 0.0 0.0 2000.0 2000.0 2000.0
YEAR NUM 1 2 3 4 5 6 7	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9	) = 54         PCHG         (FT)         89.1         -3.9         -3.4         7.7         8.2         -9.3         -20.1	1490 ALT 0 0 1 1 1 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2	<pre>b) = 54 PCHG (FT) 89.1 -3.9 -3.4 7.7 8.2 -9.3 -20.1 64.2</pre>	1490 ALT 0 0 1 1 1 0 2	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \end{array}$	1490 ALT 0 0 1 1 1 0 2 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7	<pre>b) = 54 PCHG (FT) 89.1 -3.9 -3.4 7.7 8.2 -9.3 -20.1 64.2 -0.0 -2.3</pre>	1490 ALT 0 0 1 1 1 0 2 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0	<pre>b) = 54 PCHG (FT) 89.1 -3.9 -3.4 7.7 8.2 -9.3 -20.1 64.2 -0.0 -2.3 8.0</pre>	1490 ALT 0 0 1 1 1 0 2 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2	= 54         PCHG         (FT)         89.1         -3.9         -3.4         7.7         8.2         -9.3         -20.1         64.2         -0.0         -2.3         8.0         4.2	1490 ALT 0 0 1 1 1 0 2 0 0 1 1	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2688	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7	<pre>b) = 54 PCHG (FT) 89.1 -3.9 -3.4 7.7 8.2 -9.3 -20.1 64.2 -0.0 -2.3 8.0 4.2 1 7</pre>	1490 ALT 0 0 1 1 1 0 2 0 0 1 1	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2688 2543	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8	<pre>b) = 54 PCHG (FT) 89.1 -3.9 -3.4 7.7 8.2 -9.3 -20.1 64.2 -0.0 -2.3 8.0 4.2 1.7 4</pre>	1490 ALT 0 0 1 1 1 0 2 0 0 1 1 1	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2543 2533	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 50.2	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ 7.7 \\ 4.8 \\ 7.7 \\ 4.8 \\ 7.7 \\ 4.8 \\ 7.7 \\ 4.8 \\ 7.7 \\$	1490 ALT 0 0 1 1 1 0 2 0 0 1 1 1	PAR 0.0 0.0 2000.0 2000.0 2000.0 50.0 0.0 50.0 0.0 2000.0 2000.0 2000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2543 2533 2533	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ -0.7 \\ 4.8 \\ -0.7 \end{array}$	1490 ALT 0 0 1 1 1 0 2 0 0 1 1 1 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2543 2533 2598 2675	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622 26115	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245 -7293	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97 -2920	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3 39.1	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ -0.7 \\ -10.9 $	1490 ALT 0 0 1 1 1 0 2 0 0 1 1 1 1 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2543 2533 2598 2675 2955	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622 26115 22302	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245 -7293 -14143	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97 -2920 -3897	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3 39.1 24.5	$\begin{array}{l} = 54\\ PCHG\\ (FT)\\ 89.1\\ -3.9\\ -3.4\\ 7.7\\ 8.2\\ -9.3\\ -20.1\\ 64.2\\ -0.0\\ -2.3\\ 8.0\\ 4.2\\ 1.7\\ 4.8\\ -0.7\\ -10.9\\ -15.5\end{array}$	1490 ALT 0 0 1 1 1 0 2 0 0 1 1 1 1 0 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2543 2533 2598 2675 2955 3687	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622 26115 22302 65219	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245 -7293 -14143 -7062	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97 -2920 -3897 -2647	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3 39.1 24.5 63.2	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ -0.7 \\ -10.9 \\ -15.5 \\ -6.8 \end{array}$	1490 ALT 0 0 1 1 1 0 2 0 0 1 1 1 1 0 0 0 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2543 2533 2598 2675 2955 3687 4649	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622 26115 22302 65219 66132	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245 -7293 -14143 -7062 -6149	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97 -2920 -3897 -2647 -2037	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3 39.1 24.5 63.2 64.0	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ -0.7 \\ -10.9 \\ -15.5 \\ -6.8 \\ -6.0 \end{array}$	1490 ALT 0 0 1 1 0 2 0 0 1 1 1 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2543 2533 2598 2675 2955 3687 4649 5866	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622 26115 22302 65219 66132 33703	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245 -7293 -14143 -7062 -6149 295	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97 -2920 -3897 -2647 -2037 112	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3 39.1 24.5 63.2 64.0 50.4	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ -0.7 \\ -10.9 \\ -15.5 \\ -6.8 \\ -6.0 \\ 0.4 \end{array}$	1490 ALT 0 0 0 1 1 0 2 0 0 1 1 1 0 0 0 0 0 0 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2533 2598 2675 2955 3687 4649 5866 7065	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622 26115 22302 65219 66132 33703 22384	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245 -7293 -14143 -7062 -6149 295 5377	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97 -2920 -3897 -2647 -2037 112 1764	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3 39.1 24.5 63.2 64.0 50.4 52.6	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ -0.7 \\ -10.9 \\ -15.5 \\ -6.8 \\ -6.0 \\ 0.4 \\ 12.6 \end{array}$	1490 ALT 0 0 1 1 0 2 0 0 1 1 1 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2533 2598 2675 2955 3687 4649 5866 7065 8042	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622 26115 22302 65219 66132 33703 22384 15568	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245 -7293 -14143 -7062 -6149 295 5377 4635	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97 -2920 -3897 -2647 -2037 112 1764 1516	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3 39.1 24.5 63.2 64.0 50.4 52.6 42.7	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ -0.7 \\ -10.9 \\ -15.5 \\ -6.8 \\ -6.0 \\ 0.4 \\ 12.6 \\ 12.7 \end{array}$	1490 ALT 0 0 1 1 0 2 0 0 1 1 1 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 22 23	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2543 2533 2598 2675 2675 2675 3687 4649 5866 7065 8042 8733	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622 26115 22302 65219 66132 33703 22384 15568 10848	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245 -7293 -14143 -7062 -6149 295 5377 4635 -85	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97 -2920 -3897 -2647 -2037 112 1764 1516 26	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3 39.1 24.5 63.2 64.0 50.4 52.6 42.7 29.8	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ -0.7 \\ -10.9 \\ -15.5 \\ -6.8 \\ -6.0 \\ 0.4 \\ 12.6 \\ 12.7 \\ -0.2 \end{array}$	1490 ALT 0 0 1 1 0 2 0 0 1 1 1 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 112 13 14 15 16 17 8 9 0 21 223 24	= 3 POS (FT) 13376 12775 11807 10506 9075 7494 6077 4700 4030 3437 2968 2688 2543 2533 2598 2675 2675 2675 3687 4649 5866 7065 8042 8042 8042	MONTH = VOL (CYD) 36159 7929 9701 17529 11709 7465 4832 25306 7285 9150 14087 23401 30504 36035 21622 26115 22302 65219 66132 33703 22384 15568 10848 16310	12 NCHG (CYD) 27048 -1182 -1232 343 -9 -4254 -4887 15587 -4 -568 -61 -466 -1259 20 -245 -7293 -14143 -7062 -6149 295 5377 4635 -85	SEDIMENT ACHG (CYD) 8574 -227 -149 1461 1365 -197 702 1990 -13 -181 1298 1179 928 1314 -97 -2920 -3897 -2647 -2037 112 1764 1516 26 1766	VOL (CYD WIDTH (FT) 119.1 26.1 26.6 57.7 48.2 30.7 19.9 104.2 30.0 37.7 58.0 64.2 71.7 84.8 59.3 39.1 24.5 63.2 64.0 50.4 52.6 42.7 29.8 44.8	$\begin{array}{l} = 54 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.4 \\ 7.7 \\ 8.2 \\ -9.3 \\ -20.1 \\ 64.2 \\ -0.0 \\ -2.3 \\ 8.0 \\ 4.2 \\ 1.7 \\ 4.8 \\ -0.7 \\ -10.9 \\ -15.5 \\ -6.8 \\ -6.0 \\ 0.4 \\ 12.6 \\ 12.7 \\ -0.2 \\ 14.8 \end{array}$	1490 ALT 00011102001111000000000000000000000000	PAR 0.0 0.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 0.0

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YEAR	= 4	MONTH = 12	SEDIMENT	VOL (CY	D) = 53	9128	
NUM	POS	VOL NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD) (CYD)	(CYD)	(FT)	(FT)		
1	13348	44524 35413	8365	146.6	116.6	0	0.0
2	12775	7827 -1284	-102	25.8	-4.2	0	0.0
3	11807	9642 -1291	-59	26.5	-3.5	0	0.0
4	10508	16989 -196	-539	55.9	5.9	0	0.0
5	9080	10555 -1163	-1154	43.4	3.4	0	0.0
6	7499	6219 -5500	-1246	25.6	-14.4	0	0.0
7	6076	5077 -4642	245	20.9	-19.1	0	0.0
8	4692	27322 17604	2016	112.5	72.5	2	50.0
9	4030	7273 -16	-12	29.9	-0.1	0	0.0
10	3438	8965 -754	-186	36.9	-3.1	0	0.0
11	2971	13393 -755	-694	55.1	5.1	0	0.0
12	2690	225/4 -1292	-826	61.9	1.9	Ű	0.0
13	2546		-1062	69.Z	-0.8	0	0.0
14	2535	35353 -002	-082	83.1	3.1	0	0.0
15	2598		-154	58.9		0	0.0
17	2080		-300/	33.0	-10.4	0	0.0
10	2957	L9393 -L0849	-2707	21.5	-18.5	0	0.0
10	3090	62101 - 10101	-2029	60.2	-9.8	0	0.0
20	4031	22020 421	-2029	62.1 50 6	-7.9	0	0.0
20	7061	20120 421 20120 7112	1736	56.7	16 7	Ň	0.0
22	8038	17065 6131	1/07	46 8	16 8	ň	0.0
22	8733	10003 -30	55	20.0	-0 1	õ	0.0
23	9256	18066 7133	1757	49 6	19 6	õ	0.0
	2200	10000 /100	2.07	49.0	19.0	•	0.0
YEAR	= 5	MONTH = 12	SEDIMENT	VOL (CY	D) = 53	6774	
YEAR NUM	= 5 Pos	MONTH = 12 VOL NCHG	SEDIMENT ACHG	VOL (CY WIDTH	D) = 53 PCHG	6774 Alt	PAR
YEAR NUM	= 5 POS (FT)	MONTH = 12 VOL NCHG (CYD) (CYD)	SEDIMENT ACHG (CYD)	VOL (CY WIDTH (FT)	D) = 53 PCHG (FT)	6774 ALT	PAR
YEAR NUM	= 5 POS (FT) 13321	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674	SEDIMENT ACHG (CYD) 8260	VOL (CY WIDTH (FT) 173.8	D) = 53 PCHG (FT) 143.8	6774 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 5 POS (FT) 13321 12775	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313	SEDIMENT ACHG (CYD) 8260 -29	VOL (CY WIDTH (FT) 173.8 25.7	D) = 53 PCHG (FT) 143.8 -4.3	6774 ALT 0 0	<b>PAR</b> 0.0 0.0
YEAR NUM 1 2 3	= 5 POS (FT) 13321 12775 11808	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311	SEDIMENT ACHG (CYD) 8260 -29 -20	VOL (CY WIDTH (FT) 173.8 25.7 26.4	$\begin{array}{l} \textbf{D} &= 53 \\ \textbf{PCHG} \\ (\textbf{FT}) \\ 143.8 \\ -4.3 \\ -3.6 \end{array}$	6774 ALT 0 0 0	PAR 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 5 POS (FT) 13321 12775 11808 10510	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723	SEDIMENT ACHG (CYD) 8260 -29 -20 -527	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2	D) = 53 PCHG (FT) 143.8 -4.3 -3.6 4.2	6774 ALT 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 5 POS (FT) 13321 12775 11808 10510 9087	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7	D) = 53 PCHG (FT) 143.8 -4.3 -3.6 4.2 -4.3 -4.3	6774 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 5 POS (FT) 13321 12775 11808 10510 9087 7501	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$	6774 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$	6774 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4683	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$	6774 ALT 0 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 101	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 26.1	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$	6774 ALT 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2074	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 686	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2$	6774 ALT 0 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2602	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $0.2$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-0.3$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 690	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $-3.2$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21122 744	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 245	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $0$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536 2599 2696	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21123 -743	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 -345	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5 58.0	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $-2.0$ $22.4$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536 2599 2686 2060	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21123 -743 18474 -14933 17643 -18901	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 -345 -3973	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5 58.0 27.6	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $-2.0$ $-22.4$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536 2599 2686 2599	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21123 -743 18474 -14933 17643 -18801 5884 -13207	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 -345 -3973 -1952 -3206	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5 58.0 27.6 19.4 57	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $-2.0$ $-22.4$ $-20.6$ $-13.2$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536 2599 2686 2599 2686 2593 4653	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21123 -743 18474 -14933 17643 -18801 58884 -13397 62079 -10202	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 -345 -3973 -1952 -3296 -2024	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5 58.0 27.6 19.4 57.0 60.1	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $-2.0$ $-22.4$ $-20.6$ $-13.0$ $-9$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536 2599 2686 2599 2686 2960 3693 4653 5865	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21123 -743 18474 -14933 17643 -18801 58884 -13397 62079 -10202 33967 550	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 -345 -3973 -1952 -3296 -2024 138	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5 58.0 27.6 19.4 57.0 60.1 50.8	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $-2.0$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536 2599 2686 2599 2686 2599 2686 2599	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21123 -743 18474 -14933 17643 -18801 58884 -13397 62079 -10202 33967 559 25828 8821	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 -345 -3973 -1952 -3296 -2024 138 1708	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5 58.0 27.6 19.4 57.0 60.1 50.8 60.7	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $-2.0$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 23 14 15 16 17 18 9 20 21 22	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536 2599 2686 2599 2686 2599 2686 2960 3693 4653 5865 7057 8034	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21123 -743 18474 -14933 17643 -18801 58884 -13397 62079 -10202 33967 559 25828 8821 18545 7612	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 -345 -3973 -1952 -3296 -2024 138 1708 1480	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5 58.0 27.6 19.4 57.0 60.1 50.8 60.7 50.9	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $-2.0$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22 23	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536 2599 2686 2599 2686 2960 3693 4653 5865 7057 8034 8733	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21123 -743 18474 -14933 17643 -18801 58884 -13397 62079 -10202 33967 559 25828 8821 18545 7612 10982 48	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 -345 -3973 -1952 -3296 -2024 138 1708 1480 79	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5 58.0 27.6 19.4 57.0 60.1 50.8 60.7 50.9 30.1	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $-2.0$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$ $0.1$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 12 3 4 5 6 7 8 9 10 12 3 4 5 6 7 8 9 10 12 3 4 5 6 7 8 9 10 12 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 12 3 14 5 16 7 8 9 10 11 12 12 10 11 12 12 11 12 11 12 11 12 11 12 11 12 11 12 11 12 11 12 11 12 11 12 11 12 11 12 12	= 5 POS (FT) 13321 12775 11808 10510 9087 7501 6076 4683 4030 3439 2974 2692 2548 2536 2599 2686 2960 3693 4653 5865 7057 8034 8733 9252	MONTH = 12 VOL NCHG (CYD) (CYD) 52785 43674 7798 -1313 9622 -1311 16462 -723 8665 -3053 5835 -5884 5154 -4564 29364 19646 7268 -21 8774 -945 12708 -1441 21744 -2123 28389 -3374 34673 -1342 21123 -743 18474 -14933 17643 -18801 58884 -13397 62079 -10202 33967 559 25828 8821 18545 7612 10982 48 19816 8882	SEDIMENT ACHG (CYD) 8260 -29 -20 -527 -1890 -384 77 2042 -5 -191 -686 -831 -1053 -680 -345 -3973 -1952 -3296 -2024 138 1708 1480 79 1749	VOL (CY WIDTH (FT) 173.8 25.7 26.4 54.2 35.7 24.0 21.2 120.9 29.9 36.1 52.3 59.7 66.8 81.5 58.0 27.6 19.4 57.0 60.1 50.8 60.7 50.9 30.1 54.4	D) = 53 $PCHG$ $(FT)$ $143.8$ $-4.3$ $-3.6$ $4.2$ $-4.3$ $-16.0$ $-18.8$ $80.9$ $-0.1$ $-3.9$ $2.3$ $-0.3$ $-3.2$ $1.5$ $-2.0$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$ $0.1$ $24.4$	6774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.

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PI II	ROGRAM	SEM.BAS BEACH CO	- BELLE : NDITIONS	FONTAINE	PROJECT			
SEC	G SE	G SE	G SEG	SEG	SEG	ALT	PAR	PRN
NUI	M PO	s ang	LE WIDT	H HEIGHT	VOLUME			
_	(F	T) (DE	G) (FT)	(FT)	(CYD)			
1	134	<b>65 4</b> .	7 30	5	9111	0	0.0	0
2	127	71 22.	9 30	5	9111	0	0.0	0
3	118	04 30.	5 30	6	10933	0	0.0	0
4	105	14 38.	2 50	5	15185	0	0.0	0
5	90	83 41.	1 40	4	9719	0	0.0	0
5	74	85 44.	3 40	4	9719	0	0.0	0
/	603		1 40 2 40	4	9719	0	0.0	0
ð 0	47	D4 38. 20 24	3 40	4	9/19	2	50.0	0
10	40.	30 24. 35 10	1 30	4	0710	0	0.0	0
11	201	76 15.	5 40 6 50		12148	2	0.0	0
12	26	92 9	8 60	6	21867	2	0.0	ň
13	25	45 5	1 70	7	29763	2	0.0	õ
14	25	38 0.	2 80	7	34015	2	0.0	õ
15	25	97 -2.	1 60	6	21867	Ō	0.0	Ō
16	26	64 -2.	3 50	11	33407	Ō	0.0	Ō
17	29	39 -9.	5 40	15	36444	Ō	0.0	Ō
18	36	80 -24.	3 70	17	72281	0	0.0	0
19	46	43 -30.	4 70	17	72281	0	0.0	0
20	58	66 -36.	7 50	11	33407	0	0.0	0
21	70.	78 -36.	5 40	7	17007	0	0.0	0
22	80	55 -30.	8 30	6	10933	0	0.0	0
23	87:	33 -22.	5 30	6	10933	0	0.0	0
24	92	76 -18.	3 30	6	10933	0	0.0	0
							0.0	•
TC	OTAL BE	ACH SEDI	MENT VOL	JME (CYD)	= 517511	L.2	0.0	Ū
T	OTAL BE	ACH SEDI	MENT VOL	JME (CYD)	= 517511	L.2 _ 51	7510	U
T( YEAR	OTAL BEA	ACH SEDI MONTH =	MENT VOLU	JME (CYD) EDIMENT V	= 517511 OL (CYD)	L.2 = 517	7510	סגם
TO YEAR NUM	OTAL BEA = 1 POS (ET)	ACH SEDI MONTH = VOL	MENT VOLU 12 SI NCHG	JME (CYD) EDIMENT V ACHG	= 517511 OL (CYD) WIDTH H	L.2 = 517 CHG	7510 ALT	PAR
TO YEAR NUM	OTAL BE = 1 POS (FT) 13434	ACH SEDI MONTH = VOL (CYD) 18636	MENT VOLU 12 SI NCHG (CYD) 9525	JME (CYD) EDIMENT V ACHG (CYD) 9525	= 517511 OL (CYD) WIDTH F (FT) ( 61 4 3	L.2 = 517 PCHG (FT) 81 4	7510 ALT 0	PAR
TO YEAR NUM 1 2	OTAL BE = 1 POS (FT) 13434 12773	ACH SEDI MONTH = VOL (CYD) 18636 8575	MENT VOLU 12 SI NCHG (CYD) 9525 -536	JME (CYD) EDIMENT V( ACHG (CYD) 9525 -536	= 517511 OL (CYD) WIDTH F (FT) 6 61.4 3 28.2	= 517 PCHG (FT) 31.4 -1.8	0 0 0	PAR 0.0 0.0
TO YEAR NUM 1 2 3	OTAL BE = 1 POS (FT) 13434 12773 11806	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189	MENT VOLU 12 SU NCHG (CYD) 9525 -536 -745	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745	= 517511 OL (CYD) WIDTH F (FT) 6 61.4 3 28.2 - 28.0 -	= 517 PCHG (FT) 31.4 -1.8 -2.0	7510 ALT 0 0 0	PAR 0.0 0.0 0.0
TO YEAR NUM 1 2 3 4	OTAL BE = 1 POS (FT) 13434 12773 11806 10516	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605	MENT VOLU 12 SU NCHG (CYD) 9525 -536 -745 -580	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580	= 517511 OL (CYD) WIDTH F (FT) ( 61.4 3 28.2 - 28.0 - 48.1 -	= 517 PCHG (FT) 31.4 -1.8 -2.0 -1.9	7510 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
TO YEAR NUM 1 2 3 4 5	OTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706	= 517511 OL (CYD) WIDTH E (FT) 6 61.4 3 28.2 - 28.0 - 48.1 - 37.1 -	= 517 PCHG (FT) 31.4 -1.8 -2.0 -1.9 -2.9	7510 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
TO YEAR NUM 1 2 3 4 5 6	OTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755	= 517511 OL (CYD) WIDTH F (FT) 6 28.2 - 28.0 - 48.1 - 37.1 - 36.9 -	= 517 PCHG (FT) 31.4 -1.8 -2.0 -1.9 -2.9 -3.1	7510 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
TO YEAR NUM 1 2 3 4 5 6 7	OTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508	MENT VOLU 12 SU NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211	= 517511 OL (CYD) WIDTH F (FT) 6 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2	= 517 PCHG (FT) 31.4 -1.8 -2.0 -1.9 -2.9 -3.1 25.6	7510 ALT 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
TO YEAR NUM 1 2 3 4 5 6 7 8	OTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586	MENT VOLU 12 SU NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867	= 517511 OL (CYD) WIDTH F (FT) 6 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4	2.2 = 517 CHG (FT) 31.4 -1.8 -2.0 -1.9 -2.9 -3.1 25.6 40.6	7510 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
TO YEAR NUM 1 2 3 4 5 6 7 8 9	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381	MENT VOLU 12 SU NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92	= 517511 OL (CYD) WIDTH F (FT) 6 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4	$= 51^{\circ}$	7510 ALT 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475	= 517511 OL (CYD) WIDTH F (FT) 6 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 - 80.6 4 30.4 - 25.7 -1	= 517 $= 517$ $= 51$	7510 ALT 0 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77	JME (CYD) EDIMENT V( ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77	= 517511 OL (CYD) WIDTH F (FT) 6 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 - 80.6 4 30.4 - 25.7 -1 49.7 -	= 517 $= 517$ $= 51$	7510 ALT 0 0 0 0 0 0 2 0 0 2 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83	= 517511 OL (CYD) WIDTH E (FT) 6 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4 - 25.7 -1 49.7 - 60.2	= 517 PCHG (FT) 31.4 -1.8 -2.0 -1.9 -2.9 -3.1 25.6 40.6 0.4 14.3 -0.3 0.2	7510 ALT 0 0 0 0 0 0 0 2 0 0 2 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7	= 517511 OL (CYD) WIDTH E (FT) 6 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4 - 25.7 - 49.7 - 60.2 - 70.0 -	= 51 PCHG (FT) 31.4 -1.8 -2.0 -1.9 -2.9 -3.1 25.6 0.4 14.3 -0.3 0.2 -0.0	7510 ALT 0 0 0 0 0 0 2 0 0 2 2 2 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545 2538	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756 34008	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -7 -7 -7 -7 -7 -7 -7 -7 -7	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -6	= 517511 OL (CYD) WIDTH F (FT) 6 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4 - 25.7 -1 49.7 - 60.2 - 70.0 - 80.0 -	= 51 PCHG (FT) 31.4 -1.8 -2.0 -1.9 -2.9 -3.1 25.6 40.6 0.4 14.3 -0.3 0.2 -0.0 -0.0	7510 ALT 0 0 0 0 0 0 0 2 2 2 2 2 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545 2538 2597	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756 34008 21778	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -6 -89 -89	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -6 -89 -15	= 517511 OL (CYD) WIDTH F (FT) ( 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4 2 25.7 -1 49.7 - 60.2 7 70.0 - 80.0 - 59.8 -	= 517 $= 517$ $= 51$	7510 ALT 0 0 0 0 0 0 0 2 2 2 2 2 2 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	OTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545 2538 2597 2667	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756 34008 21778 31233 21265	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -89 -2174 5170	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -6 -89 -2174 -5170	= 517511 OL (CYD) WIDTH F (FT) 6 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4 - 25.7 -1 49.7 - 60.2 - 70.0 - 80.0 - 59.8 - 46.7 - 24 2	$= 51^{\circ}$	7510 ALT 0 0 0 0 0 0 0 2 2 2 2 2 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	OTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545 2538 2597 2667 2945 2682	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756 34008 21778 31233 31265 70102	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 83 -7 -6 -89 -2174 -5179 -2170	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -6 -89 -2174 -5179 -2170	= 517511 OL (CYD) WIDTH F (FT) 6 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4 - 25.7 -1 49.7 - 60.2 - 70.0 - 80.0 - 59.8 - 46.7 - 34.3 -	$\begin{array}{l} & = 51 \\ = 51 \\ \text{CHG} \\ \text{(FT)} \\ 31.4 \\ -1.8 \\ -2.0 \\ -1.9 \\ -2.9 \\ -3.1 \\ 25.6 \\ 0.4 \\ 14.3 \\ -0.3 \\ -0.0 \\ -0.0 \\ -0.2 \\ -3.3 \\ -0.2 \\ -3.3 \\ -2.1 \end{array}$	7510 ALT 0 0 0 0 0 0 0 0 2 2 2 2 2 2 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545 2538 2597 2667 2945 3682 4645	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756 34008 21778 31233 31265 70103 70210	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -89 -2174 -5179 -2179 -2179	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -89 -2174 -5179 -2179 -2179 -2063	= 517511 OL (CYD) WIDTH F (FT) 6 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4 - 25.7 -1 49.7 - 60.2 - 70.0 - 80.0 - 59.8 - 46.7 - 34.3 - 67.9 -	$\begin{array}{l} & = 51 \\ = 51 \\ \text{CHG} \\ \text{(FT)} \\ 31.4 \\ -1.8 \\ -2.0 \\ -1.9 \\ -2.9 \\ -3.1 \\ 25.6 \\ 0.4 \\ 14.3 \\ -0.3 \\ -0.0 \\ -0.0 \\ -0.2 \\ -3.3 \\ -5.7 \\ -2.1 \\ 0 \end{array}$	7510 ALT 0 0 0 0 0 0 0 0 2 2 2 2 2 2 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545 2538 2597 2667 2945 3682 4645 5866	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756 34008 21778 31233 31265 70103 70219 33402	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -77 83 -77 -89 -2174 -5179 -2179 -2063	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -77 83 -7 -6 -89 -2174 -5179 -2179 -2063 84	= 517511 OL (CYD) WIDTH E (FT) 61.4 28.2 28.0 48.1 37.1 36.9 14.4 30.4 25.7 49.7 60.2 70.0 80.0 59.8 46.7 34.3 67.9 68.0 50.1	$= 51^{\circ}$ $= 51^{\circ}$ $= 51^{\circ}$ $= 51^{\circ}$ $= 51^{\circ}$ $= 51^{\circ}$ $= 1.8$ $= 2.0$ $= 1.9$ $= 2.9$ $= 3.1$ $= 2.9$ $= 3.1$ $= 2.9$ $= 3.1$ $= 2.9$ $= 3.1$ $= 2.9$ $= 3.1$ $= 0.4$ $= 3.3$ $= 0.0$ $= 0.2$ $= 0.0$ $= 0.2$ $= 0.0$ $= 0.2$ $= 0.0$ $= 0.2$ $= 0.0$ $= 0.2$ $= 0.0$ $= 0.2$ $= 0.0$ $= 0.2$ $= 0.0$ $= 0.2$ $= 0.0$ $= 0.2$ $= 0.0$ $= 0.2$ $= 0.0$ $= $	7510 ALT 0 0 0 0 0 0 0 0 2 2 2 2 2 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	OTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545 2538 2597 2667 2945 3682 4645 5866 7074	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756 34008 21778 31233 31265 70103 70219 33492 18829	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -77 83 -77 83 -77 -89 -2174 -5179 -2179 -2063 84 1821	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -89 -2174 -5179 -2179 -2063 84 1821	= 517511 OL (CYD) WIDTH E (FT) 6 1.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 - 280.6 4 30.4 - 25.7 - 49.7 - 60.2 - 70.0 - 80.0 - 59.8 - 46.7 - 34.3 - 67.9 - 68.0 - 50.1 -	= 51 = 51 (FT) = 2.0 = 2.9 = 2.9 = 3.1 = 2.9 = 3.1 = 2.9 = 3.1 = 0.4 = 0.2 = 0.0 = 0.0 = 0.0 = 0.2 = 0.	7510 ALT 0 0 0 0 0 0 0 2 2 2 2 2 0 0 0 2 2 2 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	OTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545 2538 2597 2667 2945 3682 4645 5866 7074 8051	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756 34008 21778 31233 31265 70103 70219 33492 18829 12510	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -6 -89 -2174 -5179 -2179 -2063 84 1821 1577	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -6 -89 -2174 -5179 -2179 -2179 -2063 84 1821 1577	= 517511 OL (CYD) WIDTH F (FT) 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4 - 25.7 - 49.7 - 60.2 - 70.0 - 80.0 - 59.8 - 46.7 - 34.3 - 67.9 - 68.0 - 50.1 - 44.3 - 34.3 -	$\begin{array}{r} & = 51\\ = 51\\ (FT)\\ 31.4\\ -1.8\\ -2.9\\ -3.6\\ 0.4\\ -3.6\\ 0.4\\ -3.3\\ -0.0\\ -0.2\\ -0.2\\$	7510 ALT 0 0 0 0 0 0 0 0 2 2 2 2 2 0 0 0 0 2 2 2 2 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
TO YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	DTAL BE = 1 POS (FT) 13434 12773 11806 10516 9086 7488 6083 4723 4030 3449 2976 2692 2545 2538 2597 2667 2945 3682 4645 5866 7074 8051 8733	ACH SEDI MONTH = VOL (CYD) 18636 8575 10189 14605 9012 8964 3508 19586 7381 6244 12071 21950 29756 34008 21778 31233 31265 70103 70219 33492 18829 12510 10842	MENT VOLU 12 SI NCHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -6 -89 -2174 -5179 -2179 -2063 84 1821 1577 -92	JME (CYD) EDIMENT V ACHG (CYD) 9525 -536 -745 -580 -706 -755 -6211 9867 92 -3475 -77 83 -7 -6 -89 -2174 -5179 -2179 -2179 -2063 84 1821 1577 -92	= 517511 OL (CYD) WIDTH F (FT) 61.4 3 28.2 - 28.0 - 48.1 - 37.1 - 36.9 - 14.4 -2 80.6 4 30.4 - 25.7 -1 49.7 - 60.2 - 70.0 - 80.0 - 59.8 - 46.7 - 34.3 - 67.9 - 68.0 - 50.1 - 44.3 - 34.3 - 29.7 -	$\begin{array}{l} & = 51 \\ = 51 \\ \text{CHG} \\ \text{(FT)} \\ 31.4 \\ -1.8 \\ -2.0 \\ -1.9 \\ -2.9 \\ -3.1 \\ -2.9 \\ -3.6 \\ -0.2 \\ -0.0 \\ -0.2 \\ -0.0 \\ -0.2 \\ -0.0 \\ -0.2 \\ -0.3 \\ -0.3 \\ -0.3 \\ -0.3 \end{array}$	7510 ALT 0 0 0 0 0 0 0 0 2 2 2 2 2 2 2 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.

#### Table B-5. Groin - Alternative 2

YEAR	= 2	MONTH =	12	SEDIMENT	VOL (CYL	) = 51!	5871	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)	•	~ ~
1	13404	27599	18488	8964	90.9	60.9	0	0.0
2	12774	8171	-940	-404	26.9	-3.1	0	0.0
3	11807	9876	-1057	-313	27.1	-2.9	0	0.0
4	10518	14028	-1157	-578	46.2	-3.8	0	0.0
5	9090	7954	-1764	-1058	32.7	-7.3	0	0.0
6	7500	6009	-3710	-2955	24.7	-15.3	0	0.0
7	6080	4136	-5583	628	17.0	-23.0	0	0.0
8	4712	22459	12740	2873	92.4	52.4	2	50.0
9	4035	5953	-1336	-1428	24.5	-5.5	0	0.0
10	3454	5151	-4567	-1092	21.2	-18.8	0	0.0
11	2976	12201	53	130	50.2	0.2	2	0.0
12	2692	21940	73	-10	60.2	0.2	2	0.0
13	2545	29635	-128	-121	69.7	-0.3	2	0.0
14	2538	34002	-12	-6	80.0	-0.0	2	0.0
15	2598	21663	-204	-115	59.4	-0.6	0	0.0
16	2671	29033	-4374	-2200	43.5	-6.5	0	0.0
17	2950	26199	-10245	-5066	28.8	-11.2	0	0.0
18	3684	67866	-4415	-2237	65.7	-4.3	0	0.0
19	4647	68170	-4112	-2049	66.0	-4.0	0	0.0
20	5866	33590	183	99	50.3	0.3	0	0.0
21	7069	20621	3613	1792	48.5	8.5	0	0.0
22	8046	14052	3118	1542	38.6	8.6	0	0.0
23	8733	10822	-111	-20	29.7	-0.3	0	0.0
24	9266	14543	3610	1786	39.9	9.9	0	0.0
VEAR	= 3	MONTH =	12	SEDIMENT	VOL (CY	D) = 51	.3491	
NIIM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13376	36196	27085	8597	119.2	89.2	0	0.0
2	12775	7955	-1156	-216	26.2	-3.8	0	0.0
3	11807	9749	-1185	-127	26.7	-3.3	0	0.0
4	10521	12998	-2188	-1030	42.8	-7.2	0	0.0
5	9098	6130	-3588	-1824	25.2	-14.8	0	0.0
ĥ	7503	5430	-4289	-579	22.3	-17.7	0	0.0
7	6077	4867	-4851	731	20.0	-20.0	0	0.0
Ŕ	4714	21983	12265	-475	90.5	50.5	2	50.0
ă	4038	5274	-2015	-680	21.7	-8.3	0	0.0
10	3455	4890	-4829	-262	20.1	-19.9	0	0.0
11	2976	12209	61		50.3	0.3	2	0.0
12	2692	21886	19	-54	60.1	0.1	2	0.0
13	2545	29635	-128	-0	69.7	-0.3	2	0.0
14	2538	33996	-18	-6	80.0	-0.0	2	0.0
15	2598	21518	-349	-145	59.0	-1.0	Ö	0.0
16	2590	26111	-7207	-2922	39.1	-10.9	ŏ	0.0
17	2013	20212	-14142	-3807	24 5	-15.5	ō	0.0
10	2500	65210	-7062	-2647	63 2	-6.8	ō	0.0
10	7001	66132	-6140	-2037	64.0	-6.0	ō	0.0
20	4049 50 <i>22</i>	33203	205	112	50 4	0 4	õ	0.0
20	3000 7025	22102	233 5377	1764	50.4 52 K	12 6	ň	0.0
22	2007	22304 15569	7211	1516	42 7	12.0	ŏ	0.0
22	0042	102/0	-95	25	20 8	-0.2	õ	0.0
23	0721	16210	5376	1766	44 R	14.8	õ	0.0
<i>*</i> • • •	7401	T C O T C					~	~ • • •

YEAR	= 4	MONTH =	12	SEDIMENT	VOL (CYI	<b>)) = 51</b> 3	1355	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13348	44598	35487	8402	146.8	116.8	0	0.0
2	12775	7867	-1244	-88	25.9	-4.1	0	0.0
2	11807	9710	-1224	-30	26 6	-3 4	õ	0 0
3	10520	10601	-1224	-2307	20.0	_1/ 9	ň	0.0
4	10529	10091	-44.74	~2307	33.2	-14.0	Ň	0.0
5	9101	5342	-4377	-/89	22.0	-18.0	0	0.0
6	7503	5336	-4382	-93	22.0	-18.0	0	0.0
7	6078	4686	-5033	-182	19.3	-20.7	0	0.0
8	4714	21800	12081	-183	89.7	49.7	2	50.0
9	4039	5047	-2242	-227	20.8	-9.2	0	0.0
10	3456	4642	-5077	-248	19.1	-20.9	0	0.0
11	2976	12137	-11	-72	50.0	-0.0	2	0.0
12	2692	21886	19	-0	60.1	0.1	2	0.0
12	2545	29758	-5	123	70.0	-0.0	2	0.0
14	2545	34056	41	60	80 1	0 1	2	0 0
14	2550	21224	E 3 3	_194	59 5	_1 5	ñ	0.0
12	2390	21334	-333	2670	22.5	_16 4	õ	0.0
16	2680	22440	-10967	-3670	33.0	-10.4	Ň	0.0
17	2957	19595 -	-16849	-2707	21.5	-10.5	0	0.0
18	3690	62181 ·	-10101	-3039	60.2	-9.8	0	0.0
19	4651	64103	-8178	-2029	62.1	-7.9	0	0.0
20	5865	33828	421	126	50.6	0.6	0	0.0
21	7061	24120	7112	1736	56.7	16.7	0	0.0
22	8038	17065	6131	1497	46.8	16.8	0	0.0
23	8733	10903	-30	55	29.9	-0.1	0	0.0
24	9256	18066	7133	1757	49.6	19.6	0	0.0
YEAR	= 5	MONTH =	12	SEDIMENT	VOL (CY	D) = 50	9384	
YEAR NUM	= 5 POS	MONTH = VOL	12 NCHG	SEDIMENT ACHG	VOL (CY WIDTH	D) = 50 PCHG	9384 Alt	PAR
YEAR NUM	= 5 POS (FT)	MONTH = VOL (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CY WIDTH (FT)	D) = 50 PCHG (FT)	9384 Alt	PAR
YEAR NUM 1	= 5 POS (FT) 13321	MONTH = VOL (CYD) 52911	12 NCHG (CYD) 43800	SEDIMENT ACHG (CYD) 8312	VOL (CY WIDTH (FT) 174.2	D) = 50 PCHG (FT) 144.2	9384 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 5 POS (FT) 13321 12775	MONTH = VOL (CYD) 52911 7831	12 NCHG (CYD) 43800 -1280	SEDIMENT ACHG (CYD) 8312 -36	VOL (CY WIDTH (FT) 174.2 25.8	D) = 50 PCHG (FT) 144.2 -4.2	9384 ALT 0 0	<b>PAR</b> 0.0 0.0
YEAR NUM 1 2 3	= 5 POS (FT) 13321 12775	MONTH = VOL (CYD) 52911 7831 9504	12 NCHG (CYD) 43800 -1280 -1429	SEDIMENT ACHG (CYD) 8312 -36 -206	VOL (CY WIDTH (FT) 174.2 25.8 26.1	$\begin{array}{l} D) = 50 \\ PCHG \\ (FT) \\ 144.2 \\ -4.2 \\ -3.9 \end{array}$	9384 ALT 0 0 0	<b>PAR</b> 0.0 0.0 0.0
YEAR NUM 1 2 3	= 5 POS (FT) 13321 12775 11808	MONTH = VOL (CYD) 52911 7831 9504	12 NCHG (CYD) 43800 -1280 -1429 -7178	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4	D) = 50 PCHG (FT) 144.2 -4.2 -3.9 -23.6	9384 ALT 0 0 0	<b>PAR</b> 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 5 POS (FT) 13321 12775 11808 10538	MONTH = VOL (CYD) 52911 7831 9504 8007	12 NCHG (CYD) 43800 -1280 -1429 -7178	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$	9384 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 5 POS (FT) 13321 12775 11808 10538 9103	MONTH = VOL (CYD) 52911 7831 9504 8007 4976	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$	9384 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 5 POS (FT) 13321 12775 11808 10538 9103 7504	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$	9384 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$	9384 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$	9384 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$	9384 ALT 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$	9384 ALT 0 0 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$	9384 ALT 0 0 0 0 0 0 0 2 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$	9384 ALT 0 0 0 0 0 0 0 2 0 0 2 2 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 25	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$	9384 ALT 0 0 0 0 0 0 0 0 2 0 0 2 2 2 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 25 4 17	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $0.0$	9384 ALT 0 0 0 0 0 0 0 0 2 2 2 2 2 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 4 17 -893	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $0.0$ $-2.5$	9384 ALT 0 0 0 0 0 0 0 0 2 2 2 2 2 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599 2686	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973 18465	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 25 4 17 -893 -14942	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360 -3975	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5 27.6	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $0.0$ $-2.5$ $-22.4$	9384 ALT 0 0 0 0 0 0 0 0 2 2 2 2 2 2 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599 2686 2050	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973 18465 17643	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 4 17 -893 -14942 -18802	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360 -3975 -1952	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5 27.6 19.4	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $-2.5$ $-22.4$ $-20.6$	9384 ALT 0 0 0 0 0 0 0 0 0 2 2 2 2 2 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599 2686 2960 2602	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973 18465 17643 58884	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 4 17 -893 -14942 -18802	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360 -3975 -1952 -3296	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5 27.6 19.4 57.0	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $-2.5$ $-22.4$ $-20.6$ $-13.0$	9384 ALT 0 0 0 0 0 0 0 0 0 2 2 2 2 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599 2686 2960 3693 4652	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973 18465 17643 58884 62070	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 4 17 -893 -14942 -18802 -13397	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360 -3975 -1952 -3296 -2024	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5 27.6 19.4 57.0 60 1	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $-2.5$ $-22.4$ $-20.6$ $-13.0$ $-9$	9384 ALT 0 0 0 0 0 0 0 0 0 2 2 2 2 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599 2686 2960 3693 4653	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973 18465 17643 58884 62079	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 4 17 -893 -14942 -18802 -13397 -10202	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360 -3975 -1952 -3296 -2024 -390	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5 27.6 19.4 57.0 60.1 50.8	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $-2.5$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$	9384 ALT 0 0 0 0 0 0 0 0 0 0 2 2 2 2 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599 2686 2960 3693 4653 5865	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973 18465 17643 58884 62079 33967	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 4 17 -893 -14942 -18802 -13397 -10202 559	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360 -3975 -1952 -3296 -2024 138	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5 27.6 19.4 57.0 60.1 50.8 60.7	D) = 50 $PCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $-2.5$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$	9384 ALT 0 0 0 0 0 0 0 0 0 0 0 2 2 2 2 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599 2686 2960 3693 4653 5865 7057	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973 18465 17643 58884 62079 33967 25828	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 4 17 -893 -14942 -18802 -13397 -10202 559 8821	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360 -3975 -1952 -3296 -2024 138 1708	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5 27.6 19.4 57.0 60.1 50.8 60.7	D) = 50 $PCHG (FT)$ $144.2 - 4.2 - 3.9 - 23.6 - 19.5 - 18.9 - 21.7 49.8 - 9.6 - 20.8 - 0.2 0.1 0.0 0 - 2.5 - 22.4 - 20.6 - 13.0 - 9.9 0.8 20.7 200$	9384 ALT 0 0 0 0 0 0 0 0 0 0 0 2 2 2 2 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599 2686 2960 3693 4653 5865 7057 8034	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973 18465 17643 58884 62079 33967 25828 18545	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 4 17 -893 -14942 -18802 -13397 -10202 559 8821 7612	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360 -3975 -1952 -3296 -2024 138 1708 1480	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5 27.6 19.4 57.0 60.1 50.8 60.7 50.9	D) = 50 $PCHG$ $(FT)$ $144.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $0.0$ $-2.5$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$	9384 ALT 0 0 0 0 0 0 0 0 0 0 0 2 2 2 2 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	= 5 POS (FT) 13321 12775 11808 10538 9103 7504 6079 4714 4040 3456 2976 2692 2545 2538 2599 2686 2960 3693 4653 5865 7057 8034 8733	MONTH = VOL (CYD) 52911 7831 9504 8007 4976 5136 4458 21820 4949 4654 12103 21892 29767 34032 20973 18465 17643 58884 62079 33967 25828 18545 10982	12 NCHG (CYD) 43800 -1280 -1429 -7178 -4743 -4583 -5260 12101 -2340 -5065 -45 25 4 17 -893 -14942 -18802 -13397 -10202 559 8821 7612 48	SEDIMENT ACHG (CYD) 8312 -36 -206 -2684 -366 -201 -227 20 -98 12 -35 6 9 -24 -360 -3975 -1952 -3296 -2024 138 1708 1480 79	VOL (CY WIDTH (FT) 174.2 25.8 26.1 26.4 20.5 21.1 18.3 89.8 20.4 19.2 49.8 60.1 70.0 80.0 57.5 27.6 19.4 57.0 60.1 50.8 60.7 50.9 30.1	D) = 50 $PCHG$ $(FT)$ $144.2$ $-3.9$ $-23.6$ $-19.5$ $-18.9$ $-21.7$ $49.8$ $-9.6$ $-20.8$ $-0.2$ $0.1$ $0.0$ $0.0$ $-2.5$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$ $0.1$	9384 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.

END OF PROGRAM

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PR	logram se	EM.BAS -	BELLE	FONTAINE	PROJECT			
IN	ITIAL BE	each con	DITION	IS				
SEG	s seg	SEG	; se	ig seg	SEG	ALT	PAR	PRN
NUM	i pos	Angi	E WID	TH HEIGHT	VOLUME			
	(FT)	(DEG	5) (FT	') (FT)	(CYD)			
1	13465	5 4.7	30	5	9111	0	0.0	0
2	12771	L 22.9	) 30	5	9111	0	0.0	0
3	11804	<b>1</b> 30.5	i 30	6	10933	0	0.0	0
4	10514	1 38.2	2 50	) 5	15185	0	0.0	0
5	9083	3 41.1	. 40	) 4	9719	0	0.0	0
6	7485	5 44.3	40	) 4	9719	0	0.0	0
7	6057	7 41.1	. 40	) 4	9719	0	0.0	0
8	4764	4 38.3	40	) 4	9719	2	50.0	Ō
9	4030	) 24.1	. 30	) 4	7289	0	0.0	Ō
10	343!	5 19.9	40	) 4	9719	Ō	0.0	Ō
11	297(	5 15.6	5 50	) 4	12148	3	0.5	Ō
12	2692	2 9.8	60	6	21867	3	0.5	ō
13	254	5 5.1	. 70	7	29763	3	0.5	ō
14	2538	3 0.2	80	7	34015	3	0.5	ō
15	259	7 -2.1	60	6	21867	ō	0.0	ō
16	2664	-2.3	50	11	33407	ŏ	0.0	ň
17	293	9 -9.5	40	15	36444	ŏ	0.0	ň
18	3680	) -24	70	17	72281	ŏ	0.0	ň
19	4643	3 -30.4	70	17	72281	ŏ	0.0	ň
20	586	5 -36 7	50	11	33407	ŏ	0.0	ň
21	7078	-36 5	40	7	17007	ŏ	0.0	ň
22	805	5 -30.8	30	6	10933	ŏ	0.0	ň
23	8733	-22 5	30	6	10933	ŏ	0.0	ň
24	9270	5 -18 3	1 30	6	10933	ŏ	0.0	ň
 TC	TAT. BEA	TH SEDIN	rent vc	TIME (CVD)	$= 51751^{\circ}$	1 2	0.0	v
					- J1/J1.			
YEAR	= 1 N	NONTH =	12	SEDTMENT N		= 51	7510	
NITM	POS	VOI.	NCHG	ACHG			λĩ.Ψ	DAD
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	ECUU (FT)	<b>NU</b> I	FAN
1	13434	18636	9525	9525	61 4	(# # / 21 /	0	0 0
2	12773	8575	-536	-536	28 2	-1 8	0	0.0
3	11806	10189	-745	-745	28 0	-2 0	ŏ	
4	10516	14605	-580	-580	19 1	_1 0	ŏ	
5	9086	9012	-706	-706	37 1	-2 0	0	
5	7/99	8064	-755	-766	36.0	-2.9	0	0.0
7	6003	2504	-735	- 6011		-J.I DE C	0	0.0
6	4724	10442	0724	-0211	14.4 -	23.0	0	
0	4/24	5700	500	9/24	80.0 ·	40.0	2	50.0
10	4032	5/00	-309	-389	27.0	-2.4	0	0.0
11	3432	34/2	-424/	-4247	22.5 -	11.5	U	0.0
10	29/8	11//3	-3/3	-3/3	48.5	-1.5	3	0.5
12	2093	21433	-413	-413	58.9	-1.1	3	0.5
13	2340	29221	-536	-536	68.7	-1.3	3	0.5
14	2531	36893	2878	2878	86.8	6.8	3	0.5
12	2597	21811	-56	-56	59.8	-0.2	0	0.0
1 J T Ø	200/	31233	-2174	-2174	46.7	-3.3	U	0.0
10	2945	31202	-5179	-5179	34.3	-5.7	0	0.0
TR	3682	70103	-2179	-2179	67.9	-2.1	0	0.0
19	4645	70219	-2063	-2063	68.0	-2.0	0	0.0
20	5866	33492	84	84	50.1	0.1	0	0.0
21	7074	18829	1821	1821	44.3	4.3	0	0.0
22	8051	12510	1577	1577	34.3	4.3	0	0.0
23	8733	10842	-92	-92	29.7	-0.3	0	0.0
24	9271	12757	1824	1824	35.0	5.0	0	0.0

#### Table B-6. Revetment - Alternative 3

YEAR	= 2	MONTH =	12	SEDIMENT	VOL (CY	D) = 51	6036	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13404	27599	18488	8964	90.9	60.9	0	0.0
2	12774	8171	-940	-404	26.9	-3.1	Õ	0.0
3	11807	9876	-1057	- 31 3	27 1	-2 9	ō	0 0
1	10519	14028	_1157	-577	46 2	-3.8	ň	0.0
-	10310	7000	-1011	-1104	30.2	_7 5	ŏ	0.0
5	9090	7908	-1011	-1104	32.5	15 0	0	0.0
0	7501	2883	-3835	-3080	24.2	-13.8	0	0.0
1	608T	3878	-5841	370	16.0	-24.0	0	0.0
8	4714	21793	12074	2350	89.7	49.7	2	50.0
9	4039	5109	-2180	-1591	21.0	-9.0	0	0.0
10	3458	4205	-5514	-1267	17.3	-22.7	0	0.0
11	2980	11284	-864	-491	46.4	-3.6	3	0.5
12	2694	21038	-829	-415	57.7	-2.3	3	0.5
13	2547	28725	-1038	-502	67.6	-2.4	3	0.5
14	2525	39672	5657	2779	93.3	13.3	3	0.5
15	2597	21790	-77	-21	59.8	-0.2	0	0.0
16	2671	29035	-4372	-2198	43.5	-6.5	0	0.0
17	2950	26199	-10245	-5066	28.8	-11.2	Ō	0.0
18	3684	67866	-4415	-2237	65.7	-4.3	Ō	0.0
10	4647	68170	-4112	-2049	66 0	-4 0	ō	0 0
20	5966	33500	197	00	50.3	03	ŏ	0.0
20	7060	20621	3613	1702	48 5	8 5	õ	0.0
21	7009	14052	2110	15/2	38 6	8 6	ŏ	0.0
22	0040	10032	.111	-20	20.7	-0.3	ŏ	0.0
23	8/33	10822	2010	1706	29.1	-0.3	Ň	0.0
24	9266	14543	3010	T/80	39.9	9.9	U	0.0
VEND	- 3	MONTH -	12	SEDTMENT	VOI. (CY	D) = 51	4159	
YEAR	= 3	MONTH =	12 NCHG	SEDIMENT	VOL (CY	D) = 51 PCHG	4159 ALT	PAR
YEAR NUM	= 3 POS	MONTH = VOL	12 NCHG	SEDIMENT ACHG	VOL (CY) WIDTH (FT)	D) = 51 PCHG (FT)	4159 ALT	PAR
YEAR NUM	= 3 POS (FT) 12276	MONTH = VOL (CYD)	12 NCHG (CYD) 27095	SEDIMENT ACHG (CYD) 8597	VOL (CY) WIDTH (FT) 119 2	D) = 51 PCHG (FT) 89 2	4159 ALT	PAR
YEAR NUM	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36196	12 NCHG (CYD) 27085	SEDIMENT ACHG (CYD) 8597 -216	VOL (CY) WIDTH (FT) 119.2	D) = 51 PCHG (FT) 89.2	4159 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775	MONTH = VOL (CYD) 36196 7955	12 NCHG (CYD) 27085 -1156	SEDIMENT ACHG (CYD) 8597 -216 127	VOL (CY) WIDTH (FT) 119.2 26.2	D) = 51 PCHG (FT) 89.2 -3.8 -3.2	4159 ALT 0 0	PAR 0.0 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807	MONTH = VOL (CYD) 36196 7955 9749	12 NCHG (CYD) 27085 -1156 -1184	SEDIMENT ACHG (CYD) 8597 -216 -127	VOL (CY WIDTH (FT) 119.2 26.2 26.8	D) = 51 PCHG (FT) 89.2 -3.8 -3.2	4159 ALT 0 0 0	<b>PAR</b> 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 3 POS (FT) 13376 12775 11807 10522	MONTH = VOL (CYD) 36196 7955 9749 12897	12 NCHG (CYD) 27085 -1156 -1184 -2288	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5	D) = 51 PCHG (FT) 89.2 -3.8 -3.2 -7.5	4159 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 3 POS (FT) 13376 12775 11807 10522 9099	MONTH = VOL (CYD) 36196 7955 9749 12897 5926	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4	D) = 51 PCHG (FT) 89.2 -3.8 -3.2 -7.5 -15.6	4159 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10522 9099 7505	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4	D) = 51 PCHG (FT) 89.2 -3.8 -3.2 -7.5 -15.6 -19.6	4159 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$	4159 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$	4159 ALT 0 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4 -782	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$	4159 ALT 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4 -782 -333	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$	4159 ALT 0 0 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982	MONTH = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4 -782 -333 -524	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$	4159 ALT 0 0 0 0 0 0 0 2 0 0 3	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4 -782 -333 -524 -418	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$	4159 ALT 0 0 0 0 0 0 0 2 0 0 3 3 3	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4 -782 -333 -524 -418 -469	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$	4159 ALT 0 0 0 0 0 0 0 2 0 0 3 3 3 3	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4 -782 -333 -524 -418 -469 2684	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$	4159 ALT 0 0 0 0 0 0 0 2 0 0 3 3 3 3 3	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341 -71	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -981 -925 91 -4 -782 -333 -524 -418 -469 2684 5	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$	4159 ALT 0 0 0 0 0 0 0 0 2 0 0 3 3 3 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597 2675	MONTE = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795 26118	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341 -71 -7289	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -981 -925 91 -4 -782 -333 -524 -418 -469 2684 5 -2917	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8 39.1	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$ $-10.9$	4159 ALT 0 0 0 0 0 0 0 0 0 0 0 3 3 3 3 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597 2675 2955	MONTH = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795 26118 22302	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341 -71 -7289 -14143	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -981 -925 91 -4 -782 -333 -524 -418 -469 2684 5 -2917 -3897	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8 39.1 24.5	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$ $-10.9$ $-15.5$	4159 ALT 0 0 0 0 0 0 0 0 0 0 0 3 3 3 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597 2675 2955 3687	MONTH = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795 26118 22302 65219	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341 -71 -7289 -14143 -7062	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -981 -925 91 -4 -782 -333 -524 -418 -469 2684 5 -2917 -3897 -2647	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8 39.1 24.5 63.2	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$ $-10.9$ $-15.5$ $-6.8$	4159 ALT 0 0 0 0 0 0 0 0 0 0 0 3 3 3 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597 2675 2955 3687 4640	MONTH = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795 26118 22302 65219 66132	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341 -71 -7289 -14143 -7062 -6140	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -981 -925 91 -4 -782 -333 -524 -418 -469 2684 5 -2917 -3897 -2647 -2037	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8 39.1 24.5 63.2 64.0	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-6.0$	4159 ALT 0 0 0 0 0 0 0 0 0 2 0 0 3 3 3 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597 2675 2955 3687 4649 5866	MONTH = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795 26118 22302 65219 66132 33703	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341 -71 -7289 -14143 -7062 -6149 295	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -981 -925 91 -4 -782 -333 -524 -418 -469 2684 5 -2917 -3897 -2647 -2037 112	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8 39.1 24.5 63.2 64.0 50.4	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-0.4$	4159 ALT 0 0 0 0 0 0 0 0 2 0 0 3 3 3 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597 2675 2955 3687 4649 5866 7065	MONTH = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795 26118 22302 65219 66132 33703 22384	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341 -71 -7289 -14143 -7062 -6149 295 5377	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -981 -925 91 -4 -782 -333 -524 -418 -469 2684 5 -2917 -3897 -2647 -2037 112	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8 39.1 24.5 63.2 64.0 50.4 52.6	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-0.4$ $12.6$	4159 ALT 0 0 0 0 0 0 0 0 0 2 0 0 3 3 3 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597 2675 2955 3687 4649 5866 7065	MONTH = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795 26118 22302 65219 66132 33703 22384	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1388 -1247 -1507 8341 -71 -7289 -14143 -7062 -6149 295 5377 4675	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4 -782 -333 -524 -418 -469 2684 5 -2917 -3897 -2647 -2037 112 1764	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8 39.1 24.5 63.2 64.0 50.4 52.6 42.7	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$ $12.7$	4159 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22 22	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597 2675 2955 3687 4649 5866 7065 8042	MONTH = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795 26118 22302 65219 66132 33703 22384 15568	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341 -71 -7289 -14143 -7062 -6149 295 5377 4635	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4 -782 -333 -524 -418 -469 2684 5 -2917 -3897 -2647 -2037 112 1764 1516 26	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8 39.1 24.5 63.2 64.0 50.4 52.6 42.7 29.8	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$ $12.6$ $12.6$ $-0.2$ $-0.2$ $-10.7$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$ $12.6$ $-0.2$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $-0.2$ $-10.9$ $-10.5$ $-6.2$ $-10.9$ $-10.5$ $-6.2$ $-10.9$ $-10.5$ $-6.2$ $-10.2$	4159 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22 23	= 3 POS (FT) 13376 12775 11807 10522 9099 7505 6081 4714 4042 3459 2982 2695 2549 2518 2597 2675 2955 3687 4649 5866 7065 8042 8733	MONTH = VOL (CYD) 36196 7955 9749 12897 5926 4959 3969 21789 4327 3872 10760 20620 28256 42356 21795 26118 22302 65219 66132 33703 22384 15568 10848	12 NCHG (CYD) 27085 -1156 -1184 -2288 -3792 -4760 -5750 12070 -2962 -5847 -1388 -1247 -1507 8341 -71 -7289 -14143 -7062 -6149 2955 5377 4635 -85	SEDIMENT ACHG (CYD) 8597 -216 -127 -1131 -1981 -925 91 -4 -782 -333 -524 -418 -469 2684 5 -2917 -3897 -2647 -2037 112 1764 1516 26	VOL (CY WIDTH (FT) 119.2 26.2 26.8 42.5 24.4 20.4 16.3 89.7 17.8 15.9 44.3 56.6 66.5 99.6 59.8 39.1 24.5 63.2 64.0 50.4 52.6 42.7 29.8	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.2$ $-7.5$ $-15.6$ $-19.6$ $-23.7$ $49.7$ $-12.2$ $-24.1$ $-5.7$ $-3.4$ $-3.5$ $19.6$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$ $12.6$ $12.7$ $-0.2$ $-0.2$ $-0.2$ $-0.2$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-0.2$ $-10.9$ $-15.5$ $-6.8$ $-0.2$ $-10.2$ $-0.2$	4159 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 0.0

YEA	R = 4	MONTH =	12	SEDIMENT	VOL (CY	D) = 51	2515	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13348	44599	35488	8403	146.8	116.8	0	0.0
2	12775	7867	-1244	-88	25.9	-4.1	0	0.0
3	11807	9712	-1221	-37	26.6	-3.4	0	0.0
4	10530	10226	-4960	-2671	33.7	-16.3	0	0.0
5	9103	4843	-4876	-1083	19.9	-20.1	0	0.0
6	7507	4492	-5227	-467	18.5	-21.5	0	0.0
7	6082	3699	-6020	-270	15.2	-24.8	0	0.0
8	4714	21808	12090	19	89.8	49.8	2	50.0
9	4043	4037	-3251	-289	16.6	-13.4	0	0.0
10	3459	3776	-5942	-95	15.5	-24.5	0	0.0
11	2984	10230	-1919	-530	42.1	-7.9	3	0.5
12	2697	20200	-1667	-420	55.4	-4.6	3	0.5
13	2550	27818	-1945	-438	65.4	-4.6	3	0.5
14	2512	44949	10934	2593	105.7	25.7	3	0.5
15	2597	21812	-55	16	59.8	-0.2	0	0.0
16	2680	22458	-10950	-3661	33.6	-16.4	0	0.0
17	2957	19595	-16849	-2707	21.5	-18.5	0	0.0
18	3690	62181	-10101	-3039	60.2	-9.8	0	0.0
19	4651	64103	-8178	-2029	62.1	-7.9	0	0.0
20	5865	33828	421	126	50.6	0.6	0	0.0
21	7061	24120	7112	1736	56.7	16.7	0	0.0
22	8038	17065	6131	1497	46.8	16.8	0	0.0
23	8733	10903	-30	55	29.9	-0.1	0	0.0
24	9256	18066	7133	1757	49.6	19.6	0	0.0
YEA	$\mathbf{R} = 5$	MONTH =	= 12	SEDIMENT	VOL (CY	(D) = 51	0960	
YEA Num	R = 5 ( POS	MONTH = VOL	= 12 NCHG	SEDIMENT ACHG	VOL (CY WIDTH	D) = 51 PCHG	0960 ALT	PAR
yea Num	LR = 5 I POS (FT)	MONTH = Vol (CYD)	= 12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CY WIDTH (FT)	(D) = 51 PCHG (FT)	0960 ALT	PAR
yea Num 1	LR = 5 I POS (FT) 13321	MONTH = Vol (CYD) 52899	= 12 NCHG (CYD) 43788	SEDIMENT ACHG (CYD) 8300	VOL (CY WIDTH (FT) 174.2	(D) = 51 PCHG (FT) 144.2	0960 ALT 0	<b>PAR</b> 0.0
YEA Num 1 2	LR = 5 ( POS (FT) 13321 12775	MONTH = Vol (CYD) 52899 7772	= 12 NCHG (CYD) 43788 -1339	SEDIMENT ACHG (CYD) 8300 -95	VOL (CY WIDTH (FT) 174.2 25.6	(D) = 51 PCHG (FT) 144.2 -4.4	0960 ALT 0 0	<b>PAR</b> 0.0 0.0
YEA NUM 1 2 3	LR = 5 ( POS (FT) 13321 12775 11809	MONTH = VOL (CYD) 52899 7772 9211	= 12 NCHG (CYD) 43788 -1339 -1722	SEDIMENT ACHG (CYD) 8300 -95 -501	VOL (CY WIDTH (FT) 174.2 25.6 25.3	(D) = 51 PCHG (FT) 144.2 -4.4 -4.7	0960 ALT 0 0 0	<b>PAR</b> 0.0 0.0 0.0
YEA NUM 1 2 3 4	R = 5 POS (FT) 13321 12775 11809 10540	MONTH = VOL (CYD) 52899 7772 9211 7258	= 12 NCHG (CYD) 43788 -1339 -1722 -7927	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9	(D) = 51 PCHG (FT) 144.2 -4.4 -4.7 -26.1	0960 ALT 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0
YEA NUM 2 3 4 5	R = 5 POS (FT) 13321 12775 11809 10540 9106	MONTH = VOL (CYD) 52899 7772 9211 7258 4247	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5	(D) = 51 PCHG (FT) 144.2 -4.4 -4.7 -26.1 -22.5	0960 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEA NUM 1 2 3 4 5 6	LR = 5 ( POS (FT) 13321 12775 11809 10540 9106 7508	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1	(D) = 51 PCHG (FT) 144.2 -4.4 -4.7 -26.1 -22.5 -22.9	0960 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEA NUM 1 2 3 4 5 6 7	R       =       5         I       POS       (FT)         13321       12775       11809         10540       9106       7508         6083       6083       6083	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5	(D) = 51 PCHG (FT) 144.2 -4.4 -4.7 -26.1 -22.5 -22.9 -25.5	0960 ALT 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEA NUM 1 2 3 4 5 6 7 8	LR = 5 ( POS (FT) 13321 12775 11809 10540 9106 7508 6083 4714	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7		0960 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEA NUM 1 2 3 4 5 6 7 8 9	R = 5 ( POS (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2	<pre>(D) = 51 PCHG (FT) 144.2 -4.4 -4.7 -26.1 -22.5 -22.9 -25.5 49.7 -13.8</pre>	0960 ALT 0 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEA NUM 1 2 3 4 5 6 7 8 9 10	R = 5 POS (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4		0960 ALT 0 0 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEA NUM 1 2 3 4 5 6 7 8 9 10 11	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9		0960 ALT 0 0 0 0 0 0 0 2 0 0 3	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -529 -422	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3		0960 ALT 0 0 0 0 0 0 0 2 0 0 3 3 3	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 50.0 0.0
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -529 -422 -409	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ 144.2 \\ -4.4 \\ -4.7 \\ -26.1 \\ -22.5 \\ -22.9 \\ -25.5 \\ 49.7 \\ -13.8 \\ -24.6 \\ -10.1 \\ -5.7 \\ -5.5 \end{array} $	0960 ALT 0 0 0 0 0 0 0 2 0 0 3 3 3 3	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ 144.2 \\ -4.4 \\ -4.7 \\ -26.1 \\ -22.5 \\ -22.9 \\ -25.5 \\ 49.7 \\ -13.8 \\ -24.6 \\ -10.1 \\ -5.7 \\ -5.5 \\ 31.6 \end{array} $	0960 ALT 0 0 0 0 0 0 0 2 0 0 3 3 3 3 3 3 3	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ 144.2 \\ -4.4 \\ -4.7 \\ -26.1 \\ -22.5 \\ -22.9 \\ -25.5 \\ 49.7 \\ -13.8 \\ -24.6 \\ -10.1 \\ -5.7 \\ -5.5 \\ 31.6 \\ -0.4 \end{array} $	0960 ALT 0 0 0 0 0 0 0 0 2 0 0 3 3 3 3 3 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597 2686	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704 18492	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163 -14915	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108 -3965	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6 27.7	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ 144.2 \\ -4.4 \\ -4.7 \\ -26.1 \\ -22.5 \\ -22.9 \\ -25.5 \\ 49.7 \\ -13.8 \\ -24.6 \\ -10.1 \\ -5.7 \\ -5.5 \\ 31.6 \\ -0.4 \\ -22.3 \end{array} $	0960 ALT 0 0 0 0 0 0 0 0 2 0 0 3 3 3 3 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597 2686 2960	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704 18492 17644	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163 -14915 -18800	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108 -3965 -1951	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6 27.7 19.4	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{144.2} \\ \textbf{-4.4} \\ \textbf{-4.7} \\ \textbf{-26.1} \\ \textbf{-22.5} \\ \textbf{-22.9} \\ \textbf{-25.5} \\ \textbf{49.7} \\ \textbf{-13.8} \\ \textbf{-24.6} \\ \textbf{-10.1} \\ \textbf{-5.7} \\ \textbf{-5.5} \\ \textbf{31.6} \\ \textbf{-0.4} \\ \textbf{-22.3} \\ \textbf{-20.6} \end{array} $	0960 ALT 0 0 0 0 0 0 0 2 0 0 2 0 0 3 3 3 3 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.5 0.5
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597 2686 2990 3693	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704 18492 17644 58884	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163 -14915 -18800 -13397	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108 -3965 -1951 -3296	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6 27.7 19.4 57.0	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{144.2} \\ \textbf{-4.4} \\ \textbf{-4.7} \\ \textbf{-26.1} \\ \textbf{-22.5} \\ \textbf{-22.9} \\ \textbf{-25.5} \\ \textbf{49.7} \\ \textbf{-13.8} \\ \textbf{-24.6} \\ \textbf{-10.1} \\ \textbf{-5.7} \\ \textbf{-5.5} \\ \textbf{31.6} \\ \textbf{-0.4} \\ \textbf{-22.3} \\ \textbf{-20.6} \\ \textbf{-13.0} \end{array} $	0960 ALT 0 0 0 0 0 0 0 0 2 0 0 3 3 3 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.5 0.5
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597 2686 2993 4653	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704 18492 17644 58884 62079	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163 -14915 -18800 -13397 -10202	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108 -3965 -1951 -3296 -2024	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6 27.7 19.4 57.0 60.1	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{144.2} \\ \textbf{-4.4} \\ \textbf{-4.7} \\ \textbf{-26.1} \\ \textbf{-22.5} \\ \textbf{-22.9} \\ \textbf{-25.5} \\ \textbf{49.7} \\ \textbf{-13.8} \\ \textbf{-24.6} \\ \textbf{-10.1} \\ \textbf{-5.7} \\ \textbf{-5.5} \\ \textbf{31.6} \\ \textbf{-0.4} \\ \textbf{-22.3} \\ \textbf{-20.6} \\ \textbf{-13.0} \\ \textbf{-9.9} \end{array} $	0960 ALT 0 0 0 0 0 0 0 0 2 0 0 3 3 3 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.5 0.5
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597 2686 2993 4653 5865	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704 18492 17644 58884 62079 33967	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163 -14915 -18800 -13397 -10202 559	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108 -3965 -1951 -3296 -2024 138	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6 27.7 19.4 57.0 60.1 50.8	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ 144.2 \\ -4.4 \\ -4.7 \\ -26.1 \\ -22.5 \\ -22.9 \\ -25.5 \\ 49.7 \\ -13.8 \\ -24.6 \\ -10.1 \\ -5.7 \\ -5.5 \\ 31.6 \\ -0.4 \\ -22.3 \\ -20.6 \\ -13.0 \\ -9.9 \\ 0.8 \end{array} $	0960 ALT 0 0 0 0 0 0 0 2 0 0 3 3 3 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 0.5 0.5
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597 2686 2597 2686 2993 4653 5865 7057	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704 18492 17644 58884 62079 33967 25828	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163 -14915 -18800 -13397 -10202 559 8821	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108 -3965 -1951 -3296 -2024 138 1708	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6 27.7 19.4 57.0 60.1 50.8 60.7	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{144.2} \\ \textbf{-4.4} \\ \textbf{-4.7} \\ \textbf{-26.1} \\ \textbf{-22.5} \\ \textbf{-22.9} \\ \textbf{-25.5} \\ \textbf{49.7} \\ \textbf{-13.8} \\ \textbf{-24.6} \\ \textbf{-10.1} \\ \textbf{-5.7} \\ \textbf{-5.5} \\ \textbf{31.6} \\ \textbf{-0.4} \\ \textbf{-22.3} \\ \textbf{-20.6} \\ \textbf{-13.0} \\ \textbf{-9.9} \\ \textbf{0.8} \\ \textbf{20.7} \end{array} $	0960 ALT 0 0 0 0 0 0 0 2 0 0 3 3 3 3 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.5 0.5 0
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597 2686 2597 2686 2597 2686 2960 3693 4653 5865 7057 8034	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704 18492 17644 58884 62079 33967 25828 18545	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163 -14915 -18800 -13397 -10202 559 8821 7612	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108 -3965 -1951 -3296 -2024 138 1708 1480	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6 27.7 19.4 57.0 60.1 50.8 60.7 50.9	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{144.2} \\ \textbf{-4.4} \\ \textbf{-4.7} \\ \textbf{-26.1} \\ \textbf{-22.5} \\ \textbf{-22.9} \\ \textbf{-25.5} \\ \textbf{49.7} \\ \textbf{-10.1} \\ \textbf{-5.7} \\ \textbf{-5.5} \\ \textbf{31.6} \\ \textbf{-0.4} \\ \textbf{-22.3} \\ \textbf{-20.6} \\ \textbf{-13.0} \\ \textbf{-9.9} \\ \textbf{0.8} \\ \textbf{20.7} \\ \textbf{20.9} \end{array} $	0960 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 0.5 0.5
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597 2686 2597 2686 2960 3693 4653 5865 7057 8034 8733	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704 18492 17644 58884 62079 33967 25828 18545 10982	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163 -14915 -18800 -13397 -10202 559 8821 7612 48	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108 -3965 -1951 -3296 -2024 138 1708 1480 79	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6 27.7 19.4 57.0 60.1 50.8 60.7 50.9 30.1	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{144.2} \\ \textbf{-4.4} \\ \textbf{-4.7} \\ \textbf{-26.1} \\ \textbf{-22.5} \\ \textbf{-22.9} \\ \textbf{-25.5} \\ \textbf{49.7} \\ \textbf{-10.1} \\ \textbf{-5.7} \\ \textbf{-5.5} \\ \textbf{31.6} \\ \textbf{-22.3} \\ \textbf{-20.6} \\ \textbf{-13.0} \\ \textbf{-9.9} \\ \textbf{0.8} \\ \textbf{20.7} \\ \textbf{20.9} \\ \textbf{0.1} \end{array} $	0960 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.5 0.5
YEA NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	R = 5 (FT) 13321 12775 11809 10540 9106 7508 6083 4714 4044 3460 2986 2698 2551 2506 2597 2686 2597 2686 2960 3693 4653 5865 7057 8034 8733 9252	MONTH = VOL (CYD) 52899 7772 9211 7258 4247 4161 3513 21802 3939 3747 9701 19778 27409 47454 21704 18492 17644 58884 62079 33967 25828 18545 10982 19816	= 12 NCHG (CYD) 43788 -1339 -1722 -7927 -5471 -5557 -6206 12084 -3350 -5972 -2448 -2089 -2354 13439 -163 -14915 -18800 -13397 -10202 559 8821 7612 48 8882	SEDIMENT ACHG (CYD) 8300 -95 -501 -2968 -596 -331 -186 -6 -98 -29 -529 -422 -409 2505 -108 -3965 -1951 -3296 -2024 138 1708 1480 79 1749	VOL (CY WIDTH (FT) 174.2 25.6 25.3 23.9 17.5 17.1 14.5 89.7 16.2 15.4 39.9 54.3 64.5 111.6 59.6 27.7 19.4 57.0 60.1 50.8 60.7 50.9 30.1 54.4	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{144.2} \\ \textbf{-4.4} \\ \textbf{-4.7} \\ \textbf{-26.1} \\ \textbf{-22.5} \\ \textbf{-22.9} \\ \textbf{-25.5} \\ \textbf{49.7} \\ \textbf{-10.1} \\ \textbf{-5.7} \\ \textbf{-5.5} \\ \textbf{31.6} \\ \textbf{-10.1} \\ \textbf{-22.3} \\ \textbf{-20.6} \\ \textbf{-13.0} \\ \textbf{-9.9} \\ \textbf{0.8} \\ \textbf{20.7} \\ \textbf{20.9} \\ \textbf{0.1} \\ \textbf{24.4} \end{array} $	0960 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.5 0.5

Table	B-7.	Breakwater	_	Alternative	4
*	<i></i>				-

IN	ITIAL BE	ACH CONI	DITIONS					
SEG	SEG	SEG	SEG	SEG	SEG	ALT	PAR	PRN
NUM	I POS	ANGLI	E WIDTH	HEIGHT	VOLUME			
	(FT)	(DEG)	) (FT)	(FT)	(CYD)			
1	13465	4.7	30	5	9111	0	0.0	0
2	12771	22.9	30	5	9111	0	0.0	0
3	11804	30.5	30	-	10933	Ō	0.0	Ō
ر ۸	10514	38 2	50	5	15185	ō	0.0	ō
5	0083	41 1	40	Ă	9719	Ō	0 0	ŏ
5	7485	44.3	40	4	9719	Ő	0.0	ŏ
7	6057	41 1	40	4	9719	Ő	0.0	ō
<b>'</b>	4764	30 3	40	4	9719	2	50.0	ŏ
0	4030	24 1	30	4	7289	ō		õ
10	2425	10 0	40		0710	ň	0.0	õ
11	3433	15.5	40 50	-	12149	ů ů	0.0	ň
10	2970	12.0	50	<b>4</b> 6	21967		0.0	ň
12	2092	9.0	70	07	21007	Ň	0.0	Ň
13	2545	5.1	70	, ,	29/03		0.0	Ň
14	2538	0.2	80		34013		0.0	ŏ
15	2597	-2.1	6U	11	2100/		0.0	ŏ
16	2664	-2.3	50	11	33407		0.0	ŏ
17	2939	-9.5	40	15	30444	4	0.4	Ň
18	3680	-24.3	70	17	72281	. 4	0.4	0
19	4643	-30.4	70	17	/2281	. 4	0.4	0
20	5866	-36.7	50	11	33407	0	0.0	0
21	7078	-36.5	40	1	17007	0	0.0	0
22	8055	-30.8	30	6	10933		0.0	0
23	8733	-22.5	30	6	10933		0.0	0
24	9276	i -18.3	30	6	10933		0.0	U
TC	OTAL BEAC	H SEDIM	ent volu	IME (CYD)	= 51751	.1.2		
						_ 51	7610	
YEAR	= 1 N	IONTH =	12 SI	SDIMENT V	OL (CID)	= 31	131U 172	סגם
NUM	POS	VOL	NCHG	ACHG	WIDIA (TR)	/Dal	ALL	FAN
	(FT)	(CYD)	(CYD)	(CID)	(FT)	(21)	•	0 0
1	13434	18636	9525	9525	01.4	31.4	0	0.0
2	12773	8575	-536	-536	28.2	-1.8	U	0.0
3	11806	10189	-745	-745	28.0	-2.0	U	0.0
4	10516	14605	-580	-580	48.1	-1.9	0	0.0
5	9086	9012	-706	-706	37.1	-2.9	0	0.0
6	7488	8964	-755	-755	36.9	-3.1	0	0.0
7	6083	3508	-6211	-6211	14.4	-25.6	0	0.0
8	4723	19586	9868	9868	80.6	40.6	2	50.0
9	4030	7305	16	16	30.1	0.1	0	0.0
10	3436	9507	-211	-211	39.1	-0.9	0	0.0
11	2979	11498	-650	-650	47.3	-2.7	0	0.0
12	2694	21039	-828	-828	57.7	-2.3	0	0.0
13	2548	28658	-1105	-1105	67.4	-2.6	0	0.0
14	2539	33409	-605	-605	78.6	-1.4	0	0.0
15	2597	21741	-126	-126	59.7	-0.3	0	0.0
16	2673	27549	-5859	-5859	41.2	-8.8	0	0.0
17	2940	35839	-605	-605	39.3	-0.7	4	0.4
18	3680	72032	-250	-250	69.8	-0.2	4	0.4
19	4643	72043	-239	-239	69.8	-0.2	4	0.4
20	5866	33416	9	9	50.0	0.0	0	0.0
21	7077	17219	212	212	40.5	0.5	0	0.0
22	8054	11117	184	184	30.5	0.5	0	0.0
22	8733	10917	-16	-16	30.0	-0.0	0	0.0
23	9275	11146	212	212	30.6	0.6	0	0.0
	~				-			

### PROGRAM SEM. BAS - BELLE FONTAINE PROJECT

YEAR	= 2	MONTH =	: 12	SEDIMENT	VOL (CY	(D) = 51	5861	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13404	27599	18488	8964	<u>`90´9</u>	60 9	0	0 0
2	12774	8171	-940	-404	26 9	-3 1	ň	0.0
2	11807	0976	-1057	_212	20.3	-3.1	Ň	0.0
J A	10510	14020	-1157	-513	27.1	-2.9	ů.	0.0
- 14 E	10310	14020	-1137	-5/8	40.2	-3.8	U	0.0
5	9090	/958	-1/60	-1054	32.8	-7.2	0	0.0
0	/500	0018	-3700	-2945	24.8	-15.2	0	0.0
	6080	4145	-5573	638	17.1	-22.9	0	0.0
8	4/08	23315	13597	3729	96.0	56.0	2	50.0
9	4030	7297	8	-8	30.0	0.0	0	0.0
10	3437	9292	-426	-215	38.2	-1.8	0	0.0
11	2981	10854	-1294	-644	44.7	-5.3	0	0.0
12	2697	20207	-1660	-832	55.4	-4.6	0	0.0
13	2550	27566	-2197	-1092	64.8	-5.2	0	0.0
14	2541	32803	-1212	-606	77.2	-2.8	0	0.0
15	2598	21526	-340	-215	59.1	-0.9	ō	0.0
16	2681	21780	-11627	-5769	32.6	-17.4	õ	0.0
17	2940	35224	-1221	-615	38 7	-1 3	Ă	0.0
18	3680	71782	-500	-250	69 5	-0.5	-	0.4
19	4643	71804	-478	-230	69.5	_0.5	4	0.4
20	5866	33426	18	235	50 0	-0.5	7	0.4
21	7077	17/30	123	211	41 0	1 0	0	0.0
22	8054	11200	367	102	41.0	1.0	0	0.0
22	0034	10002	307	103	31.0	1.0	0	0.0
23	0/33	10903	-30	-15	29.9	-0.1	0	0.0
24	92/5	11321	424	211	31.2	1.2	0	0.0
VESD	_ 2		10					
YEAR	= 3	MONTH =	12	SEDIMENT	VOL (CY	D) = 51	3490	
YEAR NUM	= 3 POS	Monte = Vol	12 NCHG	SEDIMENT ACHG	VOL (CY WIDTH	D) = 51 PCHG	3490 Alt	PAR
YEAR NUM	= 3 POS (FT)	MONTH = Vol (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CY WIDTH (FT)	D) = 51 PCHG (FT)	3490 ALT	PAR
YEAR NUM 1	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36196	12 NCHG (CYD) 27085	SEDIMENT ACHG (CYD) 8597	VOL (CY WIDTH (FT) 119.2	D) = 51 PCHG (FT) 89.2	3490 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775	MONTH = VOL (CYD) 36196 7955	12 NCHG (CYD) 27085 -1156	SEDIMENT ACHG (CYD) 8597 -216	VOL (CY WIDTH (FT) 119.2 26.2	D) = 51 PCHG (FT) 89.2 -3.8	3490 ALT 0 0	<b>PAR</b> 0.0 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807	MONTH = VOL (CYD) 36196 7955 9749	12 NCHG (CYD) 27085 -1156 -1185	SEDIMENT ACHG (CYD) 8597 -216 -127	VOL (CY WIDTH (FT) 119.2 26.2 26.7	D) = 51 PCHG (FT) 89.2 -3.8 -3.3	3490 ALT 0 0 0	<b>PAR</b> 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 3 POS (FT) 13376 12775 11807 10521	MONTH = VOL (CYD) 36196 7955 9749 13002	12 NCHG (CYD) 27085 -1156 -1185 -2183	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2	3490 ALT 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 3 POS (FT) 13376 12775 11807 10521 9098	MONTH = VOL (CYD) 36196 7955 9749 13002 6136	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2 -14.7	3490 ALT 0 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10521 9098 7503	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2 -14.7 -17.6	3490 ALT 0 0 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2 -14.7 -17.6 -20.0	3490 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2 -14.7 -17.6 -20.0 64.2	3490 ALT 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0		3490 ALT 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37 3		3490 ALT 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 420		3490 ALT 0 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2		3490 ALT 0 0 0 0 0 0 0 2 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62 2		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1925	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -612	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 757		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2680	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -1153	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2689	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714 16637	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -1153 -1153 -16770	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813 -5143	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8 24.9		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 2	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2689 2941	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714 16637 34579	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -1153 -16770 -1866	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813 -5143 -645	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8 24.9 38.0		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2689 2941 3681	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714 16637 34579 71531	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -1153 -16770 -1866 -751	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813 -5143 -645 -251	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8 24.9 38.0 69.3		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2689 2941 3681 4644	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714 16637 34579 71531 71565	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -1153 -16770 -1866 -751 -716	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813 -5143 -5143 -645 -251 -239	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8 24.9 38.0 69.3 69.3		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2689 2941 3681 4644 5866	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714 16637 34579 71531 71565 33435	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -1153 -16770 -1866 -751 -716 28	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813 -5143 -5143 -645 -251 -239 9	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8 24.9 38.0 69.3 69.3 50.0		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2689 2941 3681 4644 5866 7076	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714 16637 34579 71531 71565 33435 17641	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -1153 -16770 -1866 -751 -716 28 634	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813 -5143 -5143 -645 -251 -239 9 211	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8 24.9 38.0 69.3 50.0 41.5		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2689 2941 3681 4644 5866 7076 8053	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714 16637 34579 71531 71565 33435 17641 11483	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -3277 -1825 -1153 -16770 -1866 -751 -716 28 634 549	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813 -5143 -5143 -645 -251 -239 9 211 182	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8 24.9 38.0 69.3 50.0 41.5 31.5		3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2689 2941 3681 4644 5866 7076 8053 8733	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714 16637 34579 71531 71565 33435 17641 11483 10890	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -3277 -1825 -1153 -16770 -1866 -751 -716 28 634 549 -44	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813 -5143 -5143 -645 -251 -239 9 211 182 -13	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8 24.9 38.0 69.3 50.0 41.5 31.5 29.9	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{89.2} \\ \textbf{-3.8} \\ \textbf{-3.3} \\ \textbf{-7.2} \\ \textbf{-14.7} \\ \textbf{-17.6} \\ \textbf{-20.0} \\ \textbf{64.2} \\ \textbf{-0.0} \\ \textbf{-2.7} \\ \textbf{-8.0} \\ \textbf{-7.7} \\ \textbf{-4.3} \\ \textbf{-3.2} \\ \textbf{-25.1} \\ \textbf{-2.0} \\ \textbf{-0.7} \\ \textbf{0.0} \\ \textbf{1.5} \\ \textbf{1.5} \\ \textbf{-0.1} \end{array} $	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2600 2689 2941 3681 4644 5866 7076 8053 8733 9274	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32190 20714 16637 34579 71531 71565 33435 17641 11483 10890 11568	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1825 -1153 -16770 -1866 -751 -716 28 634 549 -44 634	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -613 -813 -5143 -5143 -5143 -5143 -5143 -251 -239 9 211 182 -13 211	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 56.8 24.9 38.0 69.3 50.0 41.5 31.5 29.9 31.7	$ \begin{array}{l} \textbf{(D)} = 51 \\ \textbf{PCHG} \\ \textbf{(FT)} \\ \textbf{89.2} \\ \textbf{-3.8} \\ \textbf{-3.3} \\ \textbf{-7.2} \\ \textbf{-14.7} \\ \textbf{-17.6} \\ \textbf{-20.0} \\ \textbf{64.2} \\ \textbf{-0.0} \\ \textbf{-2.7} \\ \textbf{-8.0} \\ \textbf{-7.7} \\ \textbf{-4.3} \\ \textbf{-3.2} \\ \textbf{-25.1} \\ \textbf{-2.0} \\ \textbf{-0.7} \\ \textbf{-0.7} \\ \textbf{0.0} \\ \textbf{1.5} \\ \textbf{1.5} \\ \textbf{-0.1} \\ \textbf{1.7} \end{array} $	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0

NIM		MONTH =	12	SEDIMENT	VOL (CY	D) = 51	1127	
11014	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13348	44598	35487	8402	146.8	116.8	0	0.0
2	12775	7867	-1244	-88	25.9	-4.1	Õ	0.0
3	11807	9710	-1224	-39	26.6	-3.4	ō	0 0
4	10529	10707	-4479	-2296	35.3	-14.7	ŏ	0.0
5	9101	5377	-4342	-759	22 1	-17 9	ň	0.0
6	7502	5482	-4236	51	22 6	-17 4	ň	0.0
7	6076	5094	-4625	230	21 0	_10 0	ŏ	0.0
8	4692	27321	17603	2016	112 4	-19.0	0	0.0
ğ	4030	7979	_17	2018	112.4	12.4	2	50.0
10	3430	9951	- 1 1	-12	29.9	-0.1	0	0.0
11	2007	0601	2564	-223	30.4	-3.6	0	0.0
12	2307	10533	-2304	-032	39.4	-10.6	0	0.0
12	2701	10333	-3334	-839	50.9	-9.1	0	0.0
14	2555	25416	-434/	-1070	59.8	-10.2	0	0.0
16	2544	31538	-2477	-652	74.2	-5.8	0	0.0
12	2607	18264	-3602	-2449	50.1	-9.9	0	0.0
16	2694	13225 -	20183	-3412	19.8	-30.2	0	0.0
17	2942	33870	-2574	-708	37.2	-2.8	4	0.4
18	3681	71279	-1002	-251	69.0	-1.0	4	0.4
19	4644	71327	-955	-238	69.1	-0.9	4	0.4
20	5866	33445	37	10	50.1	0.1	0	0.0
21	7076	17852	845	211	42.0	2.0	0	0.0
22	8053	11665	731	182	32.0	2.0	Õ	0.0
23	8733	10878	-55	-12	29.8	-0.2	ŏ	0.0
24	9274	11778	845	210	32.3	2.3	ō	0.0
							•	•••
YEAR	= 5	MONTH =	12	SEDIMENT	VOL (CY	D) = 50	8774	
						-/		
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
NUM	POS (FT)	VOL (CYD)	NCHG (CYD)	ACHG (CYD)	WIDTH (FT)	PCHG (FT)	ALT	PAR
NUM	POS (FT) 13321	VOL (CYD) 52911	NCHG (CYD) 43800	ACHG (CYD) 8313	WIDTH (FT) 174.2	PCHG (FT) 144.2	ALT 0	<b>PAR</b> 0.0
NUM 1 2	POS (FT) 13321 12775	VOL (CYD) 52911 7834	NCHG (CYD) 43800 -1277	ACHG (CYD) 8313 -32	WIDTH (FT) 174.2 25.8	PCHG (FT) 144.2 -4.2	ALT 0	PAR 0.0
NUM 1 2 3	POS (FT) 13321 12775 11808	VOL (CYD) 52911 7834 9530	NCHG (CYD) 43800 -1277 -1404	ACHG (CYD) 8313 -32 -180	WIDTH (FT) 174.2 25.8 26.1	PCHG (FT) 144.2 -4.2 -3.9	ALT 0 0 0	PAR 0.0 0.0 0.0
NUM 1 2 3 4	POS (FT) 13321 12775 11808 10537	VOL (CYD) 52911 7834 9530 8108	NCHG (CYD) 43800 -1277 -1404 -7078	ACHG (CYD) 8313 -32 -180 -2599	WIDTH (FT) 174.2 25.8 26.1 26.7	PCHG (FT) 144.2 -4.2 -3.9 -23.3	ALT 0 0 0	PAR 0.0 0.0 0.0
NUM 1 2 3 4 5	POS (FT) 13321 12775 11808 10537 9102	VOL (CYD) 52911 7834 9530 8108 5184	NCHG (CYD) 43800 -1277 -1404 -7078 -4535	ACHG (CYD) 8313 -32 -180 -2599 -193	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18 7	ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
NUM 1 2 3 4 5 6	POS (FT) 13321 12775 11808 10537 9102 7502	VOL (CYD) 52911 7834 9530 8108 5184 5592	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127	ACHG (CYD) 8313 -32 -180 -2599 -193 109	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0	ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
NUM 1 2 3 4 5 6 7	POS (FT) 13321 12775 11808 10537 9102 7502 6076	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7	ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
NUM 1 2 3 4 5 6 7 8	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120 9	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7	ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
NUM 1 2 3 4 5 6 7 8 9	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9	ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
NUM 1 2 3 4 5 6 7 8 9	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 2440	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1006	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1	ALT 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
NUM 1 2 3 4 5 6 7 8 9 10 11	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2000	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 626	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5	ALT 0 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
NUM 1 2 3 4 5 6 7 8 9 10 11 12	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1	ALT 0 0 0 0 0 0 0 0 2 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
NUM 1 2 3 4 5 6 7 8 9 10 11 12 12	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5 -12.7	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2558	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5 -12.7 -7.5	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2546 2617	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814 14758	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201 -7109	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724 -3506	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5 40.5	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5 -12.7 -7.5 -19.5	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2546 2617 2698	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814 14758 10976 -	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201 -7109 22431	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724 -3506 -2248	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5 40.5 16.4	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5 -12.7 -7.5 -19.5 -33.6	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2546 2617 2698 2943	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814 14758 10976 - 33120	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201 -7109 22431 -3325	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724 -3506 -2248 -751	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5 40.5 16.4 36.4	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5 -12.7 -7.5 -19.5 -33.6 -3.6	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2546 2617 2698 2943 3681	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814 14758 10976 - 33120 71027	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201 -7109 22431 -3325 -1254	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724 -3506 -2248 -751 -252	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5 40.5 16.4 36.4 68.8	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5 -12.7 -7.5 -19.5 -33.6 -3.6 -1.2	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2546 2617 2698 2943 3681 4644	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814 14758 10976 - 33120 71027 71089	NCHG (CYD) 43800 -1277 -1277 -1277 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201 -7109 22431 -3325 -1254 -1193	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724 -3506 -2248 -751 -252 -238	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5 40.5 16.4 36.4 68.8 68.8	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5 -12.7 -7.5 -19.5 -33.6 -3.6 -1.2 -1.2	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2546 2617 2698 2943 3681 4644 5866	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814 14758 10976 - 33120 71027 71089 33455	NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201 -7109 22431 -3325 -1254 -1193 47	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724 -3506 -2248 -751 -252 -238 10	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5 40.5 16.4 36.4 68.8 68.8 50.1	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5 -12.7 -7.5 -19.5 -33.6 -3.6 -1.2 -1.2 0.1	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2546 2617 2698 2943 3681 4644 5866 7075	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814 14758 10976 - 33120 71027 71089 33455 18062	NCHG (CYD) 43800 -1277 -1277 -1277 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201 -7109 22431 -3325 -1254 -1193 47 1055	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724 -3506 -2248 -751 -252 -238 10 210	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5 40.5 16.4 36.4 68.8 68.8 50.1 42.5	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -4.5 -13.1 -11.5 -12.7 -7.5 -19.5 -33.6 -3.6 -1.2 -1.2 0.1 2.5	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2546 2617 2698 2943 3681 4644 5866 7075 8052	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814 14758 10976 33120 71027 71089 33455 18062 11846	NCHG (CYD) 43800 -1277 -1277 -1277 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201 -7109 22431 -3325 -1254 -1193 47 1055 913	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724 -3506 -2248 -751 -252 -238 10 210 181	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5 40.5 16.4 36.4 68.8 68.8 50.1 42.5 32.5	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -13.1 -11.5 -12.7 -7.5 -19.5 -33.6 -3.6 -1.2 -1.2 0.1 2.5 2.5	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2546 2617 2698 2943 3681 4644 5866 7075 8052 8733	VOL (CYD) 52911 7834 9530 8108 5184 5592 5163 29362 7267 8623 8958 17691 24356 30814 14758 10976 - 33120 71027 71089 33455 18062 11846 10867	NCHG (CYD) 43800 -1277 -1277 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5407 -3201 -7109 22431 -3325 -1254 -1193 47 1055 913 -66	ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1060 -724 -3506 -2248 -751 -252 -238 10 210 181 -11	WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.5 40.5 16.4 36.4 68.8 68.8 50.1 42.5 32.5 29.8	PCHG (FT) 144.2 -4.2 -3.9 -23.3 -18.7 -17.0 -18.7 80.9 -0.1 -18.7 80.9 -0.1 -13.1 -11.5 -12.7 -7.5 -19.5 -33.6 -1.2 -1.2 0.1 2.5 2.5 -0.2	ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.

Table	B-8.	Bulkhead	-	Alternative	5
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E I TN	TTTAT	REACH	רחארט	аппе е Таппе е	: UN IAINE	ENQUE				
SEC	3 <u>9</u> 1	SEACH .	SEG	SEG	SEG	SP.	G	ልፐ.ሞ	DAD	PPN
NIT	9 DC		NGLE	020 WTDTF	I HETCH	IT VOL	g Ime	лшт	FAN	FRU
NOP	1 EC /T	ा (गर	DEC)	(FT)	1 በይደርይ (ፑጥ\	11 VO1 (CV	וח			
1	13/	165		30	(51)	(01	111	0	0 0	0
2	107	103	<b>1</b> ./	30	5	3	111	ŏ	0.0	0
2	110		2.9	30	5	10	777 777	Š.	0.0	0
3	100		0.5	30	0	10	933 10E	0	0.0	0
4	105		18.Z	50	5	12	703	0	0.0	Ŭ
5	90	183 4		40	4	9	719	0	0.0	0
6	14	185 4	4.3	40	4	9	719	0	0.0	0
7	60	057 4	1.1	40	4	9	719	0	0.0	0
8	47	764 3	8.3	40	4	9	719	2	50.0	0
9	4(	)30 2	24.1	30	4	7	289	0	0.0	0
10	34	135 ]	.9.9	40	4	9	719	0	0.0	0
11	29	976 1	.5.6	50	4	12	148	5	50.0	0
12	26	592	9.8	60	6	21	867	5	60.0	0
13	25	545	5.1	70	7	29	763	5	70.0	0
14	25	538	0.2	80	7	34	015	5	80.0	0
15	25	597 -	·2.1	60	6	21	867	0	0.0	0
16	26	564 -	·2.3	50	11	33	407	0	0.0	Ō
17	29	- 39	9.5	40	15	36	444	0	0.0	Ō
18	36	580 -2	24.3	70	17	72	281	0	0.0	Ō
19	46	543 -3	0.4	70	17	72	281	Ō	0.0	ō
20	58	366 -3	6.7	50	11	33	407	ō	0.0	ŏ
21	70	)78 -3	6.5	40	7	17	007	ŏ	0.0	ō
22	80	)55 -3	0.8	30	6	10	933	ŏ	0.0	ŏ
23	87	733 -2	2.5	30	6	10	933	ŏ	0.0	ŏ
24	92	276 -1	83	30	6	10	033	ŏ	0.0	ŏ
	JTAT. RE	EACH SE	IO I D INTMEN	JT VOLI		1) = 51	7511	້	0.0	v
1						// — JI	/ ] ] ]	. 2		
YEAR	= 1	MONTE	I = 12	2 51	TMENT	VOL (C	YDI	= 51	7510	
NIM	POS	VOI	. NO	TRG	ACHG	WIDTH	- <b>-</b> ,	CHG	אד.ש מד.ש	DAD
	(ፑጥ)	(CYI		וחעי		(FT)	·	500 577)		
1	13434	1863		3525	9525	61 4	3	1 1	0	0 0
2	19773	857	75.	-536	-536	20 2		1 0	0	
2	11006	1010		-745	-745	20.2		2.0	0	0.0
3	10516	1460	) <del>-</del>	- / 4 J - E O A	- 743	40.0	_	2.0	0	0.0
4 E	10310	1400	10 .	-300	-380	40.1		1.9	0	0.0
5	7400	901	LZ ·	-/00	-706	37.1	_	2.9	0	0.0
7	/400	250		-/33	-/55	30.9		3.1	0	0.0
	6083	350			-6211	14.4	-2	5.6	0	0.0
8	4723	1920	56 3	9868	9868	80.6	) 4	0.6	2	50.0
9	4030	/3(	15	10	16	30.1	•	0.1	0	0.0
10	3436	950	)7 ·	-211	-211	39.1		0.9	0	0.0
11	2979	1149	- 8	-650	-650	47.3		2.7	5	50.0
12	2694	2103	39 ·	-828	-828	57.7		2.3	5	60.0
13	2548	286!	58 -:	1105	-1105	67.4	. –	2.6	5	70.0
14	2539	3341	LO ·	-605	-605	78.6	; –	1.4	5	80.0
15	2597	217	70	-97	-97	59.7	' -	0.3	0	0.0
16	2667	3123	33 –:	2174	-2174	46.7	' -	3.3	0	0.0
17	2945	312(	55 -	5179	-5179	34.3	. –	5.7	0	0.0
18	3682	701(	)3 –:	2179	-2179	67.9	) –	2.1	0	0.0
19	4645	702:	L9 –:	2063	-2063	68.0	) —	2.0	0	0.0
20	5866	334	92	84	84	50.1		0.1	Ō	0.0
21	7074	1882	29	1821	1821	44.3	1	4.3	Ō	0.0
22	8051	125	LÓ	1577	1577	34.3		4.3	ō	0.0
23	8733	108	42	-92	-92	29.7	_	0.3	ō	0 0
24	9271	127	57	1824	1824	35 0		5 0	õ	0.0
						33.0	,	5.0	v	<b>U</b> .U

### PROGRAM SEM. BAS - BELLE FONTAINE PROJECT
YEAR	= 2	монтн =	12	SEDIMENT	VOL (CY	D) - 51	5861	
NUM	POS	VOL	NCHG	ACHG		$D_{L} = 2T$	7001	סגם
	(FT)		(CYD)	(CVD)		/Em/	ALLI	PAR
1	13404	27599	18488	8964		60 0	0	0 0
2	12774	8171	-940	-404	26 9	-3 1	ň	0.0
3	11807	9876	-1057	-313	20.5	-2 9	ŏ	0.0
4	10518	14028	-1157	-578	46 2	_3 8	õ	0.0
5	90910	7958	-1760	-1054	32 0	-3.0	0	0.0
6	7500	6018	-3700	-2045	24 9	-15 2	0	0.0
7	6080	4145	-5573	-2945	24.0	-13.2	0	0.0
ģ	4709	22215	12507	2720	17.1	-22.9	0	0.0
٥ ۵	4030	23315	12231	5729	30.0	30.0	2	50.0
10	2427	0202	- 126	-0	30.0	0.0	0	0.0
11	2427	9292 10054	1204	-213	30.2	-1.0	5	0.0
10	2981	10034	-1294	-644	44./	-5.3	5	50.0
12	2097	20207	-1000	-832	55.4	-4.6	5	60.0
13	2550	2/566	-2197	-1092	64.8	-5.2	5	70.0
14	2541	32805	-1210	-605	77.2	-2.8	5	80.0
15	2598	21635	-232	-135	59.4	-0.6	0	0.0
16	2671	29032	-4375	-2201	43.5	-6.5	0	0.0
17	2950	26199	-10245	-5066	28.8	-11.2	0	0.0
18	3684	67866	-4415	-2237	65.7	-4.3	0	0.0
19	4647	68170	-4112	-2049	66.0	-4.0	0	0.0
20	5866	33590	183	99	50.3	0.3	0	0.0
21	7069	20621	3613	1792	48.5	8.5	0	0.0
22	8046	14052	3118	1542	38.6	8.6	Ō	0.0
23	8733	10822	-111	-20	29.7	-0.3	ŏ	0.0
24	9266	14543	3610	1786	39.9	9.9	ō	0.0
YEAR	= 3	MONTH =	12	SEDIMENT	VOL (CY	D) = 51	3490	
YEAR NUM	= 3 Pos	MONTH = VOL	12 NCHG	SEDIMENT ACHG	VOL (CY) WIDTH	D) = 51 PCHG	3490 ALT	PAR
YEAR NUM	= 3 POS (FT)	MONTH = VOL (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CY) WIDTH (FT)	D) = 51 PCHG (FT)	3490 Alt	PAR
YEAR NUM 1	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36196	12 NCHG (CYD) 27085	SEDIMENT ACHG (CYD) 8597	VOL (CY) WIDTH (FT) 119.2	D) = 51 PCHG (FT) 89.2	3490 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775	MONTH = VOL (CYD) 36196 7955	12 NCHG (CYD) 27085 -1156	SEDIMENT ACHG (CYD) 8597 -216	VOL (CY WIDTH (FT) 119.2 26.2	D) = 51 PCHG (FT) 89.2 -3.8	3490 ALT 0 0	<b>PAR</b> 0.0 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807	MONTH = VOL (CYD) 36196 7955 9749	12 NCHG (CYD) 27085 -1156 -1185	SEDIMENT ACHG (CYD) 8597 -216 -127	VOL (CY WIDTH (FT) 119.2 26.2 26.7	D) = 51 PCHG (FT) 89.2 -3.8 -3.3	3490 ALT 0 0 0	<b>PAR</b> 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 3 POS (FT) 13376 12775 11807 10521	MONTH = VOL (CYD) 36196 7955 9749 13002	12 NCHG (CYD) 27085 -1156 -1185 -2183	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2	3490 ALT 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 3 POS (FT) 13376 12775 11807 10521 9098	MONTH = VOL (CYD) 36196 7955 9749 13002 6136	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2 -14.7	3490 ALT 0 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10521 9098 7503	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2 -14.7 -17.6	3490 ALT 0 0 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2 -14.7 -17.6 -20.0	3490 ALT 0 0 0 0 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2	D) = 51 PCHG (FT) 89.2 -3.8 -3.3 -7.2 -14.7 -17.6 -20.0 64.2	3490 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$	3490 ALT 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37 3	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$	3490 ALT 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 420	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$	3490 ALT 0 0 0 0 0 0 0 2 0 0 5	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2600	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 10216	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53 2	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$	3490 ALT 0 0 0 0 0 0 0 2 0 0 5 5	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -2277	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62 3	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$	3490 ALT 0 0 0 0 0 0 0 2 0 0 5 5	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 24200	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -4 -645 -1932 -2495 -3277 -1915	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75 7	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$	3490 ALT 0 0 0 0 0 0 0 2 0 0 5 5 5 5	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2542	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1815	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$	3490 ALT 0 0 0 0 0 0 0 0 2 0 0 5 5 5 5	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26120	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -4863 15587 -4932 -2495 -3277 -1815 -3277 -1815 -2499 -3277	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $100$	3490 ALT 0 0 0 0 0 0 0 0 2 0 0 5 5 5 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1815 -409 -7298	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$	3490 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -4863 15587 -4932 -2495 -3277 -1815 -409 -7298 -14143	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$ $-15.5$	3490 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -495 -2495 -3277 -1815 -409 -7298 -14143 -7062	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$ $-15.5$ $-6.8$	3490 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -495 -3277 -1815 -3277 -1815 -409 -7298 -14143 -7062 -6149	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 64.0	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$ $-15.5$ $-6.8$ $-6.0$	3490 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649 5866	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132 33703	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4863 15587 -495 -3277 -1815 -2495 -3277 -1815 -409 -7298 -14143 -7062 -6149 _295	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037 112	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 64.0 50.4	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$	3490 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649 5866 7065	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132 33703 22384	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1815 -409 -7298 -14143 -7062 -6149 295 5377	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037 112 1764	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 64.0 50.4 52.6	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$ $12.6$	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 5 16 7 18 9 20 21 22	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649 5866 7065 8042	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132 33703 22384 15568	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1815 -409 -7298 -14143 -7062 -6149 295 5377 4635	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037 112 1764 1516	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 64.0 50.4 52.6 42.7	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$ $12.6$ $12.7$	3490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 23 14 5 16 7 18 9 20 21 22 23	= 3 POS (FT) 13376 12775 11807 10521 9098 7503 6077 4700 4030 3438 2984 2699 2553 2542 2598 2675 2955 3687 4649 5866 7065 8042 8733	MONTH = VOL (CYD) 36196 7955 9749 13002 6136 5431 4855 25305 7285 9074 10216 19371 26486 32200 21457 26109 22302 65219 66132 33703 22384 15568 10848	12 NCHG (CYD) 27085 -1156 -1185 -2183 -3582 -4287 -4863 15587 -4 -645 -1932 -2495 -3277 -1815 -409 -7298 -14143 -7062 -6149 295 5377 4635 -85	SEDIMENT ACHG (CYD) 8597 -216 -127 -1026 -1822 -587 710 1990 -13 -219 -638 -836 -1080 -605 -177 -2923 -3897 -2647 -2037 112 1764 1516 26	VOL (CY WIDTH (FT) 119.2 26.2 26.7 42.8 25.3 22.4 20.0 104.2 30.0 37.3 42.0 53.2 62.3 75.7 58.9 39.1 24.5 63.2 64.0 50.4 52.6 42.7 29.8	D) = 51 $PCHG$ $(FT)$ $89.2$ $-3.8$ $-3.3$ $-7.2$ $-14.7$ $-17.6$ $-20.0$ $64.2$ $-0.0$ $-2.7$ $-8.0$ $-6.8$ $-7.7$ $-4.3$ $-1.1$ $-10.9$ $-15.5$ $-6.8$ $-6.0$ $0.4$ $12.6$ $12.7$ $-0.2$	3490 ALT 0000000000000000000000000000000000	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.

# MISSISSIPPI OFFICE OF GEOLOGY

YEAR	= 4	MONTH = 1	.2	SEDIMENT	VOL (CYI	)) = 51	1127	
NUM	POS	VOL N	ICHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13348	44598 3	35487	8402	146.8	116.8	0	0.0
2	12775	7867 -	·1244	-88	25. <del>9</del>	-4.1	0	0.0
3	11807	9710 -	-1224	-39	26.6	-3.4	0	0.0
4	10529	10707 -	-4479	-2296	35.3	-14.7	0	0.0
5	9101	5377 -	-4342	-759	22.1	-17.9	0	0.0
6	7502	5482 -	-4236	51	22.6	-17.4	0	0.0
7	6076	5094 -	-4625	239	21.0	-19.0	0	0.0
8	4692	27321 1	L7603	2016	112.4	72.4	2	50.0
9	4030	7272	-17	-12	29.9	-0.1	0	0.0
10	3439	8851	-868	-223	36.4	-3.6	0	0.0
11	2987	9584 -	-2564	-632	39.4	-10.6	5	50.0
12	2701	18533 -	-3334	-839	50.9	-9.1	5	60.0
13	2555	25417 -	-4346	-1069	59.8	-10.2	5	70.0
14	2544	31594 -	-2421	-606	74.3	-5.7	5	80.0
15	2599	21229	-638	-229	58.2	-1.8	0	0.0
16	2680	22437 -1	L0971	-3672	33.6	-16.4	0	0.0
17	2957	19595 -1	L6850	-2707	21.5	-18.5	Ō	0.0
18	3690	62181 -1	L0101	-3039	60.2	-9.8	Ō	0.0
19	4651	64103 -	-8178	-2029	62.1	-7.9	Ō	0.0
20	5865	33828	421	126	50.6	0.6	Ō	0.0
21	7061	24120	7112	1736	56.7	16.7	Ō	0.0
22	8038	17065	6131	1497	46.8	16.8	ō	0.0
23	8733	10903	-30	55	29.9	-0.1	Ō	0.0
24	9256	18066	7133	1757	49.6	19.6	ŏ	0.0
	_				<b>.</b>			
YEAR	= 5	MONTH = 1	L2	SEDIMENT	VOL (CYI	D) = 50	8774	
YEAR NUM	= 5 POS	MONTH = 1 VOL h	L2 NCHG	SEDIMENT ACHG	VOL (CYI WIDTH	D) = 50 PCHG	8774 ALT	PAR
YEAR NUM	= 5 POS (FT)	MONTH = 1 VOL P (CYD)	L2 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CYI WIDTH (FT)	D) = 50 PCHG (FT)	8774 ALT	PAR
YEAR NUM 1	= 5 POS (FT) 13321	MONTH = 1 VOL P (CYD) 52911	L2 NCHG (CYD) 43800	SEDIMENT ACHG (CYD) 8313	VOL (CYI WIDTH (FT) 174.2	D) = 50 PCHG (FT) 144.2	8774 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 5 POS (FT) 13321 12775	MONTH = 1 VOL P (CYD) 52911 4 7834 -	L2 NCHG (CYD) 43800 -1277	SEDIMENT ACHG (CYD) 8313 -32	VOL (CYI WIDTH (FT) 174.2 25.8	D) = 50 PCHG (FT) 144.2 -4.2	8774 ALT 0	<b>PAR</b> 0.0 0.0
YEAR NUM 1 2 3	= 5 POS (FT) 13321 12775 11808	MONTH = 1 VOL P (CYD) 52911 4 7834 - 9530 -	L2 NCHG (CYD) 43800 -1277 -1404	SEDIMENT ACHG (CYD) 8313 -32 -180	VOL (CYI WIDTH (FT) 174.2 25.8 26.1	$\begin{array}{l} \mathbf{D} = 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ 0 \end{array}$	8774 ALT 0 0	<b>PAR</b> 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 5 POS (FT) 13321 12775 11808 10537	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7	$\begin{array}{l} \mathbf{D} = 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ -23.3 \end{array}$	8774 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 5 POS (FT) 13321 12775 11808 10537 9102	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3	$\begin{array}{l} \mathbf{D} &= 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ -23.3 \\ -18.7 \end{array}$	8774 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 5 POS (FT) 13321 12775 11808 10537 9102 7502	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0	$\begin{array}{l} \mathbf{D} &= 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ -23.3 \\ -18.7 \\ -17.0 \end{array}$	8774 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5184 - 5592 - 5163 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3	$\begin{array}{l} \mathbf{D} = 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ -23.3 \\ -18.7 \\ -17.0 \\ -18.7 \end{array}$	8774 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9	$\begin{array}{l} \mathbf{D} = 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ -23.3 \\ -18.7 \\ -17.0 \\ -18.7 \\ 80.9 \end{array}$	8774 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9 9	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 1 7267	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9	$\begin{array}{l} \mathbf{D} = 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ -23.3 \\ -18.7 \\ -17.0 \\ -18.7 \\ 80.9 \\ -0.1 \end{array}$	8774 ALT 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	<pre>= 5     POS     (FT)     13321     12775     11808     10537     9102     7502     6076     4683     4030     3440</pre>	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 1 7267 8623 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5	$\begin{array}{l} \mathbf{D} = 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ -23.3 \\ -18.7 \\ -17.0 \\ -18.7 \\ 80.9 \\ -0.1 \\ -4.5 \end{array}$	8774 ALT 0 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	<pre>= 5     POS     (FT)     13321     12775     11808     10537     9102     7502     6076     4683     4030     3440     2989</pre>	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 1 7267 8623 - 8958 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9	$\begin{array}{l} \mathbf{D} = 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ -23.3 \\ -18.7 \\ -17.0 \\ -18.7 \\ 80.9 \\ -0.1 \\ -4.5 \\ -13.1 \end{array}$	8774 ALT 0 0 0 0 0 0 0 0 2 0 0 5	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 1 7267 - 8623 - 8958 - 17691 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5	$\begin{array}{l} \mathbf{D} = 50 \\ \mathbf{PCHG} \\ (\mathbf{FT}) \\ 144.2 \\ -4.2 \\ -3.9 \\ -23.3 \\ -18.7 \\ -17.0 \\ -18.7 \\ 80.9 \\ -0.1 \\ -4.5 \\ -13.1 \\ -11.5 \end{array}$	8774 ALT 0 0 0 0 0 0 0 2 0 0 5 5	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 1 7267 - 8623 - 8958 - 17691 - 24358 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$	8774 ALT 0 0 0 0 0 0 0 0 0 5 5 5 5	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 1 7267 - 8623 - 8958 - 17691 - 24358 - 30984 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$	8774 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 5 5	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 2 9362 2 7267 8 8623 - 8958 - 17691 - 24358 3 30984 - 20812 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$	8774 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686	MONTH = 1 VOL 1 (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 2 7267 - 8623 - 8958 - 17691 - 24358 - 30984 - 20812 - 18459 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4127 -4555 19644 -22 -1096 -3191 -4176 -5405 -3031 -1054 14948	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$	8774 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960	MONTH = 1 VOL 1 (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 2 7267 - 8623 - 8958 - 17691 - 24358 - 30984 - 20812 - 18459 - 17642 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -3031 -1054 14948 18802	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693	MONTH = 1 VOL 1 (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 - 7267 - 8623 - 8958 - 17691 - 24358 - 30984 - 20812 - 17642 - 58884 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -3031 -1054 14948 18802 13397	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$	8774 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653	MONTH = 1 VOL 1 (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 - 7267 - 8623 - 8958 - 17691 - 24358 - 30984 - 20812 - 17642 - 58884 - 62079 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -1096 -3191 -4176 -3191 -4176 -3031 -1054 14948 18802 13397 10202	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$	8774 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653 5865	MONTH = 1 VOL 1 (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 - 7267 - 8623 - 8958 - 17691 - 24358 - 30984 - 20812 - 17642 - 58884 - 62079 - 33967 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -3191 -4176 -3031 -1054 14948 18802 13397 10202 559	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$	8774 ALT 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653 5865 7057	MONTH = 1 VOL 1 (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 2 7267 - 8623 - 8958 - 17691 - 24358 - 30984 - 20812 - 17642 - 58884 - 62079 - 33967 - 25828 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -3191 -4176 -3031 -1054 14948 18802 13397 10202 559 8821	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138 1708	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8 60.7	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 5 5 5 5 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653 5865 7057 8034	MONTH = 1 VOL 1 (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 - 7267 - 8623 - 8958 - 17691 - 24358 - 30984 - 20812 - 18459 - 17642 - 58884 - 62079 - 33967 - 25828 - 18545 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -3191 -4176 -3191 -3191 -1054 14948 18802 13397 10202 559 8821 7612	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138 1708 1480	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8 60.7 50.9	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 5 5 5 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 6 7 8 9 10 11 23 20 22 23	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653 5865 7057 8034 8733	MONTH = 1 VOL 1 (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 - 7267 - 8623 - 8958 - 17691 - 24358 - 30984 - 20812 - 17642 - 58884 - 62079 - 33967 - 25828 - 18545 - 10982 -	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -3191 -4176 -3191 -3031 -1054 14948 18802 13397 10202 559 8821 7612 48	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138 1708 1480 79	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8 60.7 50.9 30.1	$\begin{array}{l} \mathbf{D} &= 50\\ \mathbf{PCHG}\\ (\mathbf{FT})\\ 144.2\\ -4.2\\ -3.9\\ -23.3\\ -18.7\\ -17.0\\ -18.7\\ 80.9\\ -0.1\\ -4.5\\ -13.1\\ -11.5\\ -12.7\\ -7.1\\ -2.9\\ -22.4\\ -20.6\\ -13.0\\ -9.9\\ 0.8\\ 20.7\\ 20.9\\ 0.1 \end{array}$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 7 18 9 20 22 23 24	= 5 POS (FT) 13321 12775 11808 10537 9102 7502 6076 4683 4030 3440 2989 2703 2558 2545 2600 2686 2960 3693 4653 5865 7057 8034 8733 9252	MONTH = 1 VOL N (CYD) 52911 4 7834 - 9530 - 8108 - 5184 - 5592 - 5163 - 29362 - 7267 8623 - 8958 - 17691 - 24358 - 30984 - 20812 - 18459 - 17642 - 58884 - 62079 - 33967 - 25828 18545 10982 19816	L2 NCHG (CYD) 43800 -1277 -1404 -7078 -4535 -4127 -4555 19644 -22 -3191 -4176 -3191 -3031 -1054 14948 18802 13397 10202 559 8821 7612 48 8882	SEDIMENT ACHG (CYD) 8313 -32 -180 -2599 -193 109 70 2041 -5 -228 -626 -842 -1058 -609 -416 -3977 -1953 -3296 -2024 138 1708 1480 79 1749	VOL (CYI WIDTH (FT) 174.2 25.8 26.1 26.7 21.3 23.0 21.3 120.9 29.9 35.5 36.9 48.5 57.3 72.9 57.1 27.6 19.4 57.0 60.1 50.8 60.7 50.9 30.1 54.4	p) = 50 $pCHG$ $(FT)$ $144.2$ $-4.2$ $-3.9$ $-23.3$ $-18.7$ $-17.0$ $-18.7$ $80.9$ $-0.1$ $-4.5$ $-13.1$ $-11.5$ $-12.7$ $-7.1$ $-2.9$ $-22.4$ $-20.6$ $-13.0$ $-9.9$ $0.8$ $20.7$ $20.9$ $0.1$ $24.4$	8774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 50.

Tab]	.e B-!	9. Combi	ination	Nourishment	t-Brea	kwater –	- A]	lternative	. 6	j
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IN	NITIAL B	EACH CON	DITIONS					
SEG	S SEG	SEG	; SEG	SEG	SEG	ALT	PAI	R PRN
NUN	1 Pos	ANGI	E WIDT	H HEIGHT	VOLUM	E		
	(FT)	) (DEG	5) (FT)	(FT)	(CYD)			
1	1346	5 4.7	/ 30	5	911	10	0.	.00
2	1277:	1 22.9	30	5	911	10	0.	.00
3	11804	4 30.5	5 30	6	1093	30	0.	.00
4	10514	4 38.3	50	5	1718	51	2000	.00
5	908:	3 41.1	. 40	4	1171	91	2000	.00
6	748	5 44.2	2 40	4	1071	91	1000	.00
7	605	7 41.0	) 40	4	971	90	0.	.00
8	476	4 38.3	<b>3 4</b> 0	4	971	92	50	.00
9	403	0 24.1	. 30	4	728	90	0.	.00
10	343	5 19.9	40	4	971	90	0.	.00
11	297	6 15.9	50	4	1414	81	2000	.00
· 12	2693	29.7	60	6	2386	71	2000	.00
13	254	5 5.2	2 70	7	3276	31	3000	.00
14	253	B 0.2	2 80	7	3601	51	2000	.00
15	259	7 -1.7	7 60	6	2686	71	5000	.00
16	266	4 -2.8	3 50	11	3340	74	0	.30
17	293	9 -9.5	5 40	15	3644	4 4	0	.30
18	368	0 -24.3	3 70	17	7228	14	0	.30
19	464	3 -30.4	1 70	17	7228	14	0	.30
20	586	6 -36.7	7 50	11	3340	74	0	.30
21	707	8 -36.5	5 40	7	1700	7 1	0	.00
22	805	5 -30.8	3 30	6	1093	30	0	.00
23	873	3 -22.5	5 30	6	1093	3 0	0	.00
24	027	ሬ _18 ፡	R 30	6	1093	3 1	0	.00
	9Z I					5 0	v	
T	OTAL BEA	CH SEDIN	MENT VOL	UME (CYD)	= 5365	11.1	Ŭ	
T	OTAL BEA	CH SEDIN	MENT VOL	UME (CYD)	= 5365	11.1	CE10	
TO	= 1	CH SEDIN	12 S	UME (CYD) EDIMENT V	= 5365 OL (CYD	11.1	6510	
T( YEAR NUM	= 1 POS	CH SEDIN MONTH = VOL	TENT VOL 12 S NCHG	UME (CYD) EDIMENT V ACHG	= 5365 OL (CYD WIDTH	$\begin{array}{l} 11.1 \\ 0 = 53 \\ \text{PCHG} \\ (\text{FT}) \end{array}$	6510 ALT	PAR
T( YEAR NUM	= 1 ) POS (FT)	CH SEDIN MONTH = VOL (CYD)	TENT VOL 12 S NCHG (CYD)	UME (CYD) EDIMENT V ACHG (CYD) 2522	= 5365 OL (CYD WIDTH (FT) 61 4	) = 53 PCHG (FT)	6510 ALT	PAR
T( YEAR NUM 1	= 1 ) POS (FT) 13434	CH SEDIN MONTH = VOL (CYD) 18633	TENT VOL 12 S NCHG (CYD) 9522	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543	= 5365 OL (CYD WIDTH (FT) 61.4 28 2	$\begin{array}{l} 11.1 \\ ) = 53 \\ PCHG \\ (FT) \\ 31.4 \\ -1 8 \end{array}$	6510 ALT 0	PAR 0.0
TO YEAR NUM 1 2	= 1 ) POS (FT) 13434 12773	CH SEDIN MONTH = VOL (CYD) 18633 8569	12 S NCHG (CYD) 9522 -543	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27 9	$\begin{array}{l} 11.1 \\ 0 = 53 \\ \text{PCHG} \\ (\text{FT}) \\ 31.4 \\ -1.8 \\ -2 \end{array}$	6510 ALT 0 0	PAR 0.0 0.0
TO YEAR NUM 1 2 3	= 1 POS (FT) 13434 12773 11806 10500	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625	12 S NCHG (CYD) 9522 -543 -762	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54 7	) = 53 PCHG (FT) 31.4 -1.8 -2.1 4 7	6510 ALT 0 0 0	PAR 0.0 0.0 0.0 2000 0
TO YEAR NUM 1 2 3 4	= 1 POS (FT) 13434 12773 11806 10509 0079	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036	12 S NCHG (CYD) 9522 -543 -762 -560 -682	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45 4	) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5 A	6510 ALT 0 0 0 1	PAR 0.0 0.0 0.0 2000.0
TC YEAR NUM 1 2 3 4 5 6	= 1 POS (FT) 13434 12773 11806 10509 9078 7484	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 0055	12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41 0	) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1 0	6510 ALT 0 0 1 1	PAR 0.0 0.0 2000.0 2000.0
T( YEAR NUM 1 2 3 4 5 6 7	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083	$\begin{array}{l} \text{MONTH} = \\ \text{VOL} \\ (CYD) \\ 18633 \\ 8569 \\ 10171 \\ 16625 \\ 11036 \\ 9955 \\ 3499 \end{array}$	12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14 4	$\begin{array}{l} 3 & 0 \\ 11.1 \\ ) &= 53 \\ \text{PCHG} \\ (\text{FT}) \\ 31.4 \\ -1.8 \\ -2.1 \\ 4.7 \\ 5.4 \\ 1.0 \\ -25 \\ 6 \end{array}$	6510 ALT 0 0 1 1 1	PAR 0.0 0.0 2000.0 2000.0 1000.0
T( YEAR NUM 1 2 3 4 5 6 7	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723	$\begin{array}{l} \text{MONTH} = \\ \text{VOL} \\ (CYD) \\ 18633 \\ 8569 \\ 10171 \\ 16625 \\ 11036 \\ 9955 \\ 3499 \\ 19586 \end{array}$	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80 6	3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40 6	6510 ALT 0 0 1 1 1 0 2	PAR 0.0 0.0 2000.0 2000.0 1000.0 0.0 50 0
T( YEAR NUM 1 2 3 4 5 6 7 8 9	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1	) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0 1	6510 ALT 0 0 1 1 1 0 2 0	PAR 0.0 0.0 2000.0 2000.0 1000.0 0.0 50.0
T( YEAR NUM 1 2 3 4 5 6 7 8 9	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 2436	$\begin{array}{l} \text{MONTH} = \\ \text{VOL} \\ (CYD) \\ 18633 \\ 8569 \\ 10171 \\ 16625 \\ 11036 \\ 9955 \\ 3499 \\ 19586 \\ 7305 \\ 9527 \end{array}$	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2	$\begin{array}{l} 3 & 0 \\ 11.1 \\ ) &= 53 \\ PCHG \\ (FT) \\ 31.4 \\ -1.8 \\ -2.1 \\ 4.7 \\ 5.4 \\ 1.0 \\ -25.6 \\ 40.6 \\ 0.1 \\ -0.8 \end{array}$	6510 ALT 0 0 1 1 1 0 2 0 0	PAR 0.0 0.0 2000.0 2000.0 1000.0 0.0 50.0 0.0
T( YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971	$\begin{array}{l} \text{MONTH} = \\ \text{VOL} \\ (CYD) \\ 18633 \\ 8569 \\ 10171 \\ 16625 \\ 11036 \\ 9955 \\ 3499 \\ 19586 \\ 7305 \\ 9527 \\ 13465 \end{array}$	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4	3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4	6510 ALT 0 0 1 1 1 0 2 0 0	PAR 0.0 0.0 2000.0 2000.0 1000.0 0.0 50.0 0.0 0.0 0.0
T( YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689	$\begin{array}{l} \text{MONTH} = \\ \text{VOL} \\ (CYD) \\ 18633 \\ 8569 \\ 10171 \\ 16625 \\ 11036 \\ 9955 \\ 3499 \\ 19586 \\ 7305 \\ 9527 \\ 13465 \\ 23063 \end{array}$	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3	<pre>3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3</pre>	6510 ALT 0 0 1 1 1 0 2 0 0 1 1	PAR 0.0 0.0 2000.0 2000.0 1000.0 50.0 0.0 50.0 0.0 2000.0
T( YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628	12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4	<pre>3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3 4.4</pre>	6510 ALT 0 0 1 1 1 0 2 0 0 1 1 1	PAR 0.0 0.0 2000.0 2000.0 1000.0 50.0 0.0 2000.0 2000.0 3000.0
TC YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541 2535	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628 35430	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4 83.3	<pre>3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3 4.4 3.3</pre>	6510 ALT 0 0 1 1 1 0 2 0 0 1 1 1 1 1	PAR 0.0 0.0 2000.0 2000.0 1000.0 50.0 0.0 2000.0 2000.0 3000.0 2000.0
T YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541 2535 2600	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628 35430 20759	<b>MENT VOL</b> <b>12 S</b> <b>NCHG</b> (CYD) <b>9522</b> -543 -762 -560 -682 -764 -6219 <b>9868</b> <b>16</b> -191 -683 -804 -1135 -585 -6107	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -585 -6107	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4 83.3 57.0	3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3 4.4 3.3 -3.0	6510 ALT 0 0 1 1 1 0 2 0 0 1 1 1 1 1 1	PAR 0.0 0.0 2000.0 2000.0 1000.0 50.0 0.0 2000.0 2000.0 3000.0 2000.0 5000.0
To YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541 2535 2600 2664	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628 35430 20759 33284	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4 83.3 57.0 49.8	3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3 4.4 3.3 -3.0 -0.2	6510 ALT 0 0 1 1 1 0 2 0 0 1 1 1 1 1 4	PAR 0.0 0.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 3000.0 2000.0 2000.0 3000.0 2000.0
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To YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541 2535 2600 2664 2939 3680	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628 35430 20759 33284 36140 72155	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4 83.3 57.0 49.8 39.7 69.9	3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3 4.4 3.3 -3.0 -0.2 -0.3 -0.1	6510 ALT 0 0 0 1 1 1 0 2 0 0 1 1 1 1 1 4 4 4	PAR 0.0 0.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 2000.0
To YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541 2535 2600 2664 2939 3680 4643	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628 35430 20759 33284 36140 72155 72160	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127 -121	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127 -121	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4 83.3 57.0 49.8 39.7 69.9 69.9	3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3 4.4 3.3 -3.0 -0.2 -0.3 -0.1 -0.1	6510 ALT 0 0 0 1 1 1 0 2 0 0 1 1 1 1 1 4 4 4 4 4	PAR 0.0 0.0 2000.0 2000.0 2000.0 1000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 200000.0 2000.0 2000.00
TC YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541 2535 2600 2664 2939 3680 4643 5866	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628 35430 20759 33284 36140 72155 72160 33412	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127 -121 5	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127 -121 5	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4 83.3 57.0 49.8 39.7 69.9 69.9 50.0	3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3 4.4 3.3 -3.0 -0.2 -0.3 -0.1 -0.1 0.0	6510 ALT 0 0 0 1 1 1 0 2 0 0 1 1 1 1 1 4 4 4 4 4 4 4	PAR 0.0 0.0 2000.0 2000.0 2000.0 1000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 200000.0 2000.0 2000.00
TC YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541 2535 2600 2664 2939 3680 4643 5866 7078	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628 35430 20759 33284 36140 72155 72160 33412 17115	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127 -121 5 107	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127 -121 5 107	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4 83.3 57.0 49.8 39.7 69.9 69.9 50.0 40.3	3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3 4.4 3.3 -3.0 -0.2 -0.3 -0.1 -0.1 0.0 0.3	6510 ALT 0 0 0 1 1 1 0 2 0 0 1 1 1 1 1 4 4 4 4 4 4 4 1	PAR 0.0 0.0 2000.0 2000.0 2000.0 50.0 0.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 2000.0 0 0.3 0 0.3 0 0.3 0 0.3 0 0.3 0 0.3
TC YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541 2535 2600 2664 2939 3680 4643 5866 7078 8055	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628 35430 20759 33284 36140 72155 72160 33412 17115 11027	MENT VOL 12 S NCHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127 -121 5 107 93	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127 -121 5 107 93	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4 83.3 57.0 49.8 39.7 69.9 69.9 50.0 40.3 30.3	3 0 11.1 ) = 53 PCHG (FT) 31.4 -1.8 -2.1 4.7 5.4 1.0 -25.6 40.6 0.1 -0.8 5.4 3.3 4.4 3.3 -3.0 -0.2 -0.3 -0.1 0.0 0.3 0.3	6510 ALT 0 0 0 1 1 1 0 2 0 0 1 1 1 1 1 4 4 4 4 4 4 1 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 5000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 2000.0 0 0.0 2000.0 0 0.0 2000.0 0 0.0 0 0.0 0 0.0 0 0.0 0 0.0 0.
TC YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 13 14 5 16 7 18 9 20 21 22 23	= 1 POS (FT) 13434 12773 11806 10509 9078 7484 6083 4723 4030 3436 2971 2689 2541 2535 2600 2664 2939 3680 4643 5866 7078 8055 8733	CH SEDIN MONTH = VOL (CYD) 18633 8569 10171 16625 11036 9955 3499 19586 7305 9527 13465 23063 31628 35430 20759 33284 36140 72155 72160 33412 17115 11027 10925	12       S         12       S         NCHG       (CYD)         9522       -543         -762       -560         -682       -764         -6219       9868         16       -191         -683       -804         -1135       -585         -6107       -124         -304       -127         -121       5         107       93         -8       -8	UME (CYD) EDIMENT V ACHG (CYD) 9522 -543 -762 -560 -682 -764 -6219 9868 16 -191 -683 -804 -1135 -585 -6107 -124 -304 -127 -121 5 107 93 -8	= 5365 OL (CYD WIDTH (FT) 61.4 28.2 27.9 54.7 45.4 41.0 14.4 80.6 30.1 39.2 55.4 63.3 74.4 83.3 57.0 49.8 39.7 69.9 69.9 50.0 40.3 30.3 30.0	$\begin{array}{l} 3 & 0 \\ 11.1 \\ ) &= 53 \\ \text{PCHG} \\ (\text{FT}) \\ 31.4 \\ -1.8 \\ -2.1 \\ 4.7 \\ 5.4 \\ 1.0 \\ -25.6 \\ 40.6 \\ 0.1 \\ -0.8 \\ 5.4 \\ 3.3 \\ 4.4 \\ 3.3 \\ -3.0 \\ -0.2 \\ -0.3 \\ -0.1 \\ -0.1 \\ 0.0 \\ 0.3 \\ -0.0 \end{array}$	6510 ALT 0 0 0 1 1 1 0 2 0 0 1 1 1 1 4 4 4 4 4 4 4 0 0 0	PAR 0.0 0.0 2000.0 2000.0 2000.0 1000.0 50.0 0.0 2000.0 2000.0 2000.0 2000.0 2000.0 3000.0 2000.0 3000.0 2000.0 3000.0 2000.0 30.3 0.3 0.3 0.3 0.3 0.3 0.0 0.0

# PROGRAM SEM. BAS - BELLE FONTAINE PROJECT

YEAR	= 2	MONTH =	12	SEDIMENT	VOL (CYD)	) = 53	4861	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13404	27585	18474	8952	90.8	60.8	0	0.0
2	12774	8157	-955	-412	26.9	-3.1	0	0.0
3	11807	9851	-1083	-320	27.0	-3.0	0	0.0
4	10511	16067	-1118	-558	52.9	2.9	0	0.0
5	9081	10312	-1406	-724	42.4	2.4	0	0.0
6	7497	6686	-4032	-3268	27.5	-12.5	0	0.0
7	6080	4138	-5580	639	17.0	-23.0	0	0.0
8	4708	23315	13597	3729	96.0	56.0	2	50.0
9	4030	7297	9	-8	30.0	0.0	0	0.0
10	3437	9331	-387	-196	38.4	-1.6	0	0.0
11	2973	12789	-1359	-676	52.6	2.6	Ō	0.0
12	2691	22253	-1614	-810	61.1	1.1	0	0.0
13	2543	30506	-2257	-1122	71.7	1.7	0	0.0
14	2536	34692	-1322	-738	81.6	1.6	0	0.0
15	2616	14805 -	12062	-5954	40.6	-19.4	0	0.0
16	2664	33151	-257	-133	49.6	-0.4	4	0.3
17	2940	35836	-608	-304	39.3	-0.7	4	0.3
18	3680	72028	-253	-127	69.8	-0.2	4	0.3
19	4643	72039	-242	-121	69.8	-0.2	4	0.3
20	5866	33417		5	50.0	0.0	4	0.3
21	7077	17222	215	107	40.5	0.5	ō	0.0
22	8054	11120	186	93	30.5	0.5	ŏ	0.0
23	8733	10917	-16	-8	30.0	-0.0	ŏ	0.0
24	9275	11148	215	107	30.6	0.6	ŏ	0.0
							-	•••
YEAR	= 3	MONTH =	12	SEDIMENT	VOL (CYD	) = 53	2490	
YEAR NUM	= 3 Pos	MONTH = Vol	12 NCHG	SEDIMENT ACHG	VOL (CYD WIDTH	) = 53 PCHG	2490 ALT	PAR
YEAR NUM	= 3 POS (FT)	MONTH = VOL (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CYD WIDTH (FT)	) = 53 PCHG (FT)	2490 ALT	PAR
YEAR NUM 1	= 3 POS (FT) 13376	MONTE = VOL (CYD) 36162	12 NCHG (CYD) 27051	SEDIMENT ACHG (CYD) 8577	VOL (CYD WIDTH (FT) 119.1	) = 53 PCHG (FT) 89.1	2490 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775	MONTH = VOL (CYD) 36162 7936	12 NCHG (CYD) 27051 -1175	SEDIMENT ACHG (CYD) 8577 -221	VOL (CYD WIDTH (FT) 119.1 26.1	) = 53 PCHG (FT) 89.1 -3.9	2490 ALT 0 0	PAR 0.0 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807	MONTE = VOL (CYD) 36162 7936 9719	12 NCHG (CYD) 27051 -1175 -1214	SEDIMENT ACHG (CYD) 8577 -221 -132	VOL (CYD WIDTH (FT) 119.1 26.1 26.7	) = 53 PCHG (FT) 89.1 -3.9 -3.3	2490 ALT 0 0	<b>PAR</b> 0.0 0.0
YEAR NUM 1 2 3 4	= 3 POS (FT) 13376 12775 11807 10513	MONTE = VOL (CYD) 36162 7936 9719 15516	12 NCHG (CYD) 27051 -1175 -1214 -1669	SEDIMENT ACHG (CYD) 8577 -221 -132 -551	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1	) = 53 PCHG (FT) 89.1 -3.9 -3.3 1.1	2490 ALT 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 3 POS (FT) 13376 12775 11807 10513 9088	MONTH = VOL (CYD) 36162 7936 9719 15516 8475	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9	) = 53 PCHG (FT) 89.1 -3.9 -3.3 1.1 -5.1	2490 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10513 9088 7502	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3	) = 53 PCHG (FT) 89.1 -3.9 -3.3 1.1 -5.1 -16 7	2490 ALT 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0	) = 53 PCHG (FT) 89.1 -3.9 -3.3 1.1 -5.1 -16.7 -20 0	2490 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104 2	$\begin{array}{l} = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64 \end{array}$	2490 ALT 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0	$\begin{array}{l} = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0 \end{array}$	2490 ALT 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6	$\begin{array}{l} = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2 \end{array}$	2490 ALT 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587 -2027	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 40 9	$\begin{array}{l} = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \end{array}$	2490 ALT 0 0 0 0 0 0 0 2 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587 -2027 -2027 -2430	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8	$ = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 $	2490 ALT 0 0 0 0 0 0 0 2 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587 -2027 -2430 -3371	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69 1	$\begin{array}{l} = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \end{array}$	2490 ALT 0 0 0 0 0 0 0 2 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587 -2027 -2430 -3371 -2439	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0	$\begin{array}{l} = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -1.2 \\ -0.9 \\ -1.0 \end{array}$	2490 ALT 0 0 0 0 0 0 0 2 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587 -2027 -2430 -3371 -2439	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3	$\begin{array}{l} = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -3.4 \end{array}$	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632 2665	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236 33005	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587 -2027 -2430 -3371 -2439 -17631 -402	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569 -146	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3 49 4	$\begin{array}{l} = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -34.7 \\ -0.6 \end{array}$	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632 2665 2940	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236 33005	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587 -2027 -2430 -3371 -2439 -17631 -402 -402	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569 -146 -304	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3 49.4 30.0	$ = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -34.7 \\ -0.6 \\ -1.0 \\ -1.0 \\ -1.0 \\ -34.7 \\ -0.6 \\ -1.0 \\ -1.$	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632 2665 2940 3680	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236 33005 35533 71901	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587 -2027 -2430 -3371 -2439 -17631 -402 -912 -380	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569 -146 -304 -127	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3 49.4 39.0 69.6	$ = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -34.7 \\ -0.6 \\ -1.0$	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632 2665 2940 3680 4643	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236 33005 35533 71901 71918	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -4 -587 -2027 -2430 -3371 -2439 -17631 -402 -912 -380 -364	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569 -146 -304 -127 -121	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3 49.4 39.0 69.6 69.6	$ = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -34.7 \\ -0.6 \\ -1.0 \\ -0.4 \\ -0.4 \\ -0.4 $	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632 2665 2940 3680 4643 5866	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236 33005 35533 71901 71918 33421	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -2027 -2430 -3371 -2439 -17631 -402 -912 -380 -380 -364	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569 -146 -304 -127 -121	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3 49.4 39.0 69.6 69.6 50.0	$ = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -34.7 \\ -0.6 \\ -1.0 \\ -0.4$	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632 2665 2940 3680 4643 5866 7077	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236 33005 35533 71901 71918 33421 17329	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -2027 -2430 -3371 -2439 -17631 -402 -380 -364 14 222	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569 -146 -304 -127 -121 5	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3 49.4 39.0 69.6 69.6 50.0 40	$ = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ 64.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -0.4 \\ -0.4 \\ -0.4 \\ 0.0 \\ 0 \end{bmatrix} $	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632 2665 2940 3680 4643 5866 7077 8054	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236 9236 33005 35533 71901 71918 33421 17329 11212	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -587 -2027 -2430 -3371 -2439 -7631 -402 -380 -364 14 322	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569 -146 -304 -127 -121 5 107	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3 49.4 39.0 69.6 69.6 50.0 40.8 30.8	$ = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -1.0 \\ -0.4 \\ -0.4 \\ 0.0 \\ 0.8 \\ 0.$	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632 2665 2940 3680 4643 5866 7077 8732	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236 9236 33005 35533 71901 71918 33421 17329 11212 10909	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -2027 -2430 -3371 -2439 -17631 -402 -380 -364 14 322 279	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569 -146 -304 -127 -121 5 107 93	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3 49.4 39.0 69.6 69.6 50.0 40.8 30.8 20.0	$ = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -16.7 \\ -20.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -1.0 \\ -0.4 \\ -0.4 \\ 0.0 \\ 0.8 \\ 0.1 \\ 0.8 \\ 0.1 \\ 0.8 \\ 0.1 \\ 0.8 \\ 0.$	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24	= 3 POS (FT) 13376 12775 11807 10513 9088 7502 6077 4700 4030 3437 2976 2693 2546 2539 2632 2665 2940 3680 4643 5866 7077 8054 8733 9275	MONTH = VOL (CYD) 36162 7936 9719 15516 8475 5666 4850 25305 7285 9131 12121 21437 29392 33576 9236 9236 33005 35533 71901 71918 33421 17329 11212 10909 11256	12 NCHG (CYD) 27051 -1175 -1214 -1669 -3244 -5052 -4868 15587 -2027 -2430 -3371 -2439 -7631 -402 -380 -364 14 322 279 -24	SEDIMENT ACHG (CYD) 8577 -221 -132 -551 -1838 -1020 712 1990 -13 -200 -668 -816 -1114 -1116 -5569 -146 -304 -127 -121 5 107 93 -8	VOL (CYD WIDTH (FT) 119.1 26.1 26.7 51.1 34.9 23.3 20.0 104.2 30.0 37.6 49.9 58.8 69.1 79.0 25.3 49.4 39.0 69.6 69.6 50.0 40.8 30.8 29.9 30.0	$ = 53 \\ PCHG \\ (FT) \\ 89.1 \\ -3.9 \\ -3.3 \\ 1.1 \\ -5.1 \\ -20.0 \\ -2.4 \\ -0.1 \\ -0.2 \\ -0.0 \\ -2.4 \\ -0.1 \\ -1.2 \\ -0.9 \\ -1.0 \\ -0.4 \\ -0.4 \\ 0.0 \\ 0.8 \\ 0.8 \\ -0.1 \\ 0 \end{bmatrix} $	2490 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0

YEAR	= 4	MONTH =	12	SEDIMENT	VOL (CY	D) = 53	0127	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13348	44539	35428	8377	146.7	116.7	0	0.0
2	12775	7841	-1270	-95	25.8	-4.2	0	0.0
3	11807	9668	-1266	-51	26.5	-3.5	0	0.0
4	10515	14735	-2450	-782	48.5	-1.5	0	0.0
5	9097	6401	-5317	-2074	26.3	-13.7	0	0.0
6	7502	5559	-5160	-108	22.9	-17.1	0	0.0
7	6076	5091	-4627	241	21.0	-19.0	Ó	0.0
8	4692	27321	17603	2016	112.5	72.5	2	50.0
9	4030	7273	-16	-12	29.9	-0.1	0	0.0
10	3438	8927	-792	-205	36.7	-3.3	0	0.0
11	2979	11459	-2689	-661	47.2	-2.8	0	0.0
12	2695	20616	-3250	-821	56.6	-3.4	0	0.0
13	2549	28257	-4506	-1135	66.5	-3.5	Ō	0.0
14	2547	30035	-5980	-3542	70.6	-9.4	Ō	0.0
15	2640	6156 -	20711	-3080	16.9	-43.1	Ō	0.0
16	2665	32820	-587	-185	49.1	-0.9	4	0.3
17	2940	35229	-1215	-304	38.7	-1.3	4	0.3
18	3681	71774	-507	-127	69.5	-0.5	4	0.3
19	4643	71797	-485	-121	69.5	-0.5	4	0.3
20	5866	33426	19	5	50.0	0.0	4	0.3
21	7077	17436	429	107	41.0	1.0	ō	0.0
22	8054	11305	372	93	31.0	1.0	Ō	0.0
23	8733	10902	-31	-7	29.9	-0.1	Ō	0.0
24	9275	11363	429	107	31.2	1.2	ŏ	0.0
YEAR	= 5	MONTH =	12	SEDIMENT	VOL (CY	D) = 52	7774	
YEAR NUM	= 5 POS	MONTH = VOL	12 NCHG	SEDIMENT ACHG	VOL (CY) WIDTH	D) = 52 PCHG	7774 ALT	PAR
YEAR NUM	= 5 POS (FT)	MONTH = VOL (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CY) WIDTH (FT)	D) = 52 PCHG (FT)	7774 ALT	PAR
YEAR NUM	= 5 POS (FT) 13321	MONTH = VOL (CYD) 52820	12 NCHG (CYD) 43709	SEDIMENT ACHG (CYD) 8281	VOL (CY) WIDTH (FT) 173.9	D) = 52 PCHG (FT) 143.9	7774 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 5 POS (FT) 13321 12775	MONTH = VOL (CYD) 52820 7819	12 NCHG (CYD) 43709 -1292	SEDIMENT ACHG (CYD) 8281 -22	VOL (CY WIDTH (FT) 173.9 25.7	D) = 52 PCHG (FT) 143.9 -4.3	7774 ALT 0 0	<b>PAR</b> 0.0 0.0
YEAR NUM 1 2 3	= 5 POS (FT) 13321 12775 11807	MONTH = VOL (CYD) 52820 7819 9659	12 NCHG (CYD) 43709 -1292 -1275	SEDIMENT ACHG (CYD) 8281 -22 -9	VOL (CY WIDTH (FT) 173.9 25.7 26.5	D) = 52 PCHG (FT) 143.9 -4.3 -3.5	7774 ALT 0 0	<b>PAR</b> 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 5 POS (FT) 13321 12775 11807 10522	MONTH = VOL (CYD) 52820 7819 9659 12701	12 NCHG (CYD) 43709 -1292 -1275 -4484	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8	D) = 52 PCHG (FT) 143.9 -4.3 -3.5 -8.2	7774 ALT 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 5 POS (FT) 13321 12775 11807 10522 9100	MONTH = VOL (CYD) 52820 7819 9659 12701 5545	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8	D) = 52 PCHG (FT) 143.9 -4.3 -3.5 -8.2 -17.2	7774 ALT 0 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 5 POS (FT) 13321 12775 11807 10522 9100 7502	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1	D) = 52 PCHG (FT) 143.9 -4.3 -3.5 -8.2 -17.2 -16.9	7774 ALT 0 0 0 0 0 0 0	<b>PAR</b> 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$	7774 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$	7774 ALT 0 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9 9	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$	7774 ALT 0 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$	7774 ALT 0 0 0 0 0 0 0 0 2 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 -	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 -11056	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 - 4702 -	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 -11056 -22164	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644 2665	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 - 4702 - 32611	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 -11056 -22164 -796	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454 -209	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9 48.8	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$ $-1.2$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644 2665 2941	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 - 4702 - 32611 34926	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 -1056 -22164 -796 -1518	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454 -209 -303	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9 48.8 38.3	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$ $-1.2$ $-1.7$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644 2665 2941 3681	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 - 4702 - 32611 34926 71647	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 11056 -22164 -796 -1518 -634	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454 -209 -303 -127	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9 48.8 38.3 69.4	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$ $-1.2$ $-1.7$ $-0.6$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644 2665 2941 3681 4644	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 - 4702 - 32611 34926 71647 71676	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 11056 22164 -796 -1518 -634 -606	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454 -209 -303 -127 -121	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9 48.8 38.3 69.4 69.4	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$ $-1.2$ $-1.7$ $-0.6$ $-0.6$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644 2665 2941 3681 4644 5866	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 - 4702 - 32611 34926 71647 71676 33431	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 1056 22164 -796 -1518 -634 -606 23	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454 -209 -303 -127 -121 5	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9 48.8 38.3 69.4 69.4 50.0	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$ $-1.2$ $-1.7$ $-0.6$ $-0.0$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 0.0 0.
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644 2665 2941 3681 4644 5866 7077	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 4702 32611 34926 71647 71676 33431 17543	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 11056 22164 -796 -1518 -634 -634 -606 23 536	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454 -209 -303 -127 -121 5 107	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9 48.8 38.3 69.4 69.4 50.0 41.3	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$ $-1.2$ $-1.7$ $-0.6$ $-0.0$ $1.3$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644 2665 2941 3681 4644 5866 7077 8054	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 - 4702 - 32611 34926 71647 71676 33431 17543 11398	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 11056 22164 -796 -1518 -634 -634 -606 23 536 464	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454 -209 -303 -127 -121 5 107 93	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9 48.8 38.3 69.4 69.4 50.0 41.3 31.3	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$ $-1.2$ $-1.7$ $-0.6$ $-0.6$ $0.0$ $1.3$ $1.3$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644 2665 2941 3681 4644 5866 7077 8054 8733	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 - 4702 - 32611 34926 71647 71676 33431 17543 11398 10895	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 -11056 -22164 -796 -1518 -634 -606 23 536 464 -38	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454 -209 -303 -127 -121 5 107 93 -7	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9 48.8 38.3 69.4 69.4 50.0 41.3 31.3 29.9	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$ $-1.2$ $-1.7$ $-0.6$ $0.0$ $1.3$ $1.3$ $-0.1$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 50.0 0.0 0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22 23 24	= 5 POS (FT) 13321 12775 11807 10522 9100 7502 6076 4683 4030 3439 2982 2698 2551 2559 2644 2665 2941 3681 4644 5866 7077 8054 8733 9275	MONTH = VOL (CYD) 52820 7819 9659 12701 5545 5615 5162 29363 7267 8718 10805 19790 27057 24959 - 4702 - 32611 34926 71647 71676 33431 17543 11398 10895 11470	12 NCHG (CYD) 43709 -1292 -1275 -4484 -6174 -5103 -4556 19644 -22 -1001 -3343 -4077 -5706 -11056 -22164 -796 -1518 -634 -606 23 536 464 -38 536	SEDIMENT ACHG (CYD) 8281 -22 -9 -2033 -856 57 71 2042 -5 -209 -654 -826 -1200 -5076 -1454 -209 -303 -127 -121 5 107 93 -7 107	VOL (CY WIDTH (FT) 173.9 25.7 26.5 41.8 22.8 23.1 21.2 120.9 29.9 35.9 44.5 54.3 63.6 58.7 12.9 48.8 38.3 69.4 69.4 50.0 41.3 31.3 29.9 31.5	D) = 52 $PCHG$ $(FT)$ $143.9$ $-4.3$ $-3.5$ $-8.2$ $-17.2$ $-16.9$ $-18.8$ $80.9$ $-0.1$ $-4.1$ $-5.5$ $-5.7$ $-6.4$ $-21.3$ $-47.1$ $-1.2$ $-1.7$ $-0.6$ $0.0$ $1.3$ $1.3$ $-0.1$ $1.5$	7774 ALT 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 0.0 0

Table B-10. Combination Nourishment-Breakwater - Alternative 6

II	NITIAL B	BEACH CO	NDITION	S				
SE	G SEG	; se	G SE	G SEG	SEG	ALT	PAR	PRN
NUI	m pos	s ang	LE WID	TH HEIGH	T VOLUME	2		
	(FI	') (DE	G) (FT	) (FT)	(CYD)			
1	1346	5 4.	7 30	5	9111	. 0	0.	D 0
2	1277	<b>1</b> 22.	9 30	5	9111	. 0	0.	0 0
3	1180	4 30.	5 30	6	10933	0	0.	0 0
4	1051	.4 38.	3 50	5	17185	i 1	2000.	0 0
5	908	3 41.	1 40	4	11719	) 1	2000.	D O
6	748	5 44.	2 40	4	10719	) 1	1000.	ŌŌ
7	605	7 41.	0 40	4	9719	) Ö	0.	ō ō
8	476	4 38	3 40	Ā	971 0	2	50	n n
ă	403	10 24	1 30	4	7280	วัก	JU.	
10	343	15 19	<u>a</u> 40	4	0710	λ n	٥. ١	
11	207	16 15	9 50	4	1 4 1 4 5	2 1	2000	
12	260		3 50 7 60	5	22965	, <u>1</u>	2000.	
12	203	15 5.	7 00 2 70	7	2300	/ <u>1</u>	2000.	
14	251		2 70	7	32703	· ·	2000.	
15	253	-1	2 60	ć	20013	) <u> </u>	2000.	
10	233		7 00 9 50	11	2000		5000.	
17	200	-2.	0 JU		3340		U.	3 0
10	293	-9.	5 4U 2 70	15	36444	4	0.	3 0
10	308	50 - 24.	3 70	17	72281	. 4	<u>0</u> .	3 0
19	464	IJ -30.	4 70	17	72281	4	0.	30
20	586	<b>6</b> -36.	7 50	11	33407	4	0.	30
21	707	8 -36.	5 40	7	17007	0	0.	0 0
22	805	5 -30.	8 30	6	10933	3 0	0.	0 0
23	873	13 -22.	5 30	6	10933	3 0	0.	0 0
24	927	6 -18.	3 30	6	10933	8 0	0.	0 0
T	OTAL BEA	CH SEDI	ment vo	LUME (CYD	) = 53651	1.1		
	-							
YEAR		MONTH =	12	SEDIMENT	VOL (CYD)	= 53	6510	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
-	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13434	18633	9522	9522	61.4	31.4	0	0.0
2	12773	8569	-543	-543	28.2	-1.8	0	0.0
3	11806	10171	-762	-762	27.9	-2.1	0	0.0
4	10509	16625	-560	-560	54.7	4.7	12	000.0
5	9078	11036	-682	-682	45.4	5.4	12	000.0
6	7484	9955	-764	-764	41.0	1.0	1 1	000.0
7	6083	3499	-6219	-6219	14.4 -	-25.6	0	0.0
8	4723	19586	9868	9868	80.6	40.6	2	50.0
9	4030	7305	16	16	30.1	0.1	0	0.0
10	3436	9527	-191	-191	39.2	-0.8	0	0.0
11	2971	13465	-683	-683	55.4	5.4	1 2	000.0
12	2689	23063	-804	-804	63.3	3.3	1 2	000.0
13	2541	31628	-1135	-1135	74.4	4.4	1 3	000.0
14	2535	35430	-585	-585	83.3	3.3	1 2	
15	2600	20759	-6107	-6107	57.0	-3.0	1 5	000.0
16					40.0	-0.2		
	2664	33284	-124	-124	49.8			- U •
17	2664 2939	33284 36140	-124 -304	-124 -304	49.8 39.7	-0 3	4	0.3
17 18	2664 2939 3680	33284 36140 72155	-124 -304 -127	-124 -304 -127	49.8 39.7 69 9	-0.3	4	0.3
17 18 19	2664 2939 3680 4643	33284 36140 72155 72160	-124 -304 -127 -121	-124 -304 -127 -121	49.8 39.7 69.9	-0.3 -0.1	4 4 4	0.3
17 18 19 20	2664 2939 3680 4643 5866	33284 36140 72155 72160 33412	-124 -304 -127 -121	-124 -304 -127 -121	49.8 39.7 69.9 69.9	-0.3 -0.1 -0.1	4 4 4	0.3 0.3 0.3
17 18 19 20 21	2664 2939 3680 4643 5866 7078	33284 36140 72155 72160 33412 17115	-124 -304 -127 -121 5	-124 -304 -127 -121 5 107	49.8 39.7 69.9 69.9 50.0	-0.3 -0.1 -0.1 0.0	444	0.3 0.3 0.3 0.3
17 18 19 20 21 22	2664 2939 3680 4643 5866 7078 8055	33284 36140 72155 72160 33412 17115 11027	-124 -304 -127 -121 5 107	-124 -304 -127 -121 5 107	49.8 39.7 69.9 50.0 40.3	-0.3 -0.1 -0.1 0.0 0.3	4 4 4 0	0.3 0.3 0.3 0.3 0.3
17 18 19 20 21 22 23	2664 2939 3680 4643 5866 7078 8055 8733	33284 36140 72155 72160 33412 17115 11027 10925	-124 -304 -127 -121 5 107 93 -8	-124 -304 -127 -121 5 107 93 -8	49.8 39.7 69.9 50.0 40.3 30.3	-0.3 -0.1 -0.1 0.0 0.3 0.3	4 4 4 0 0	0.3 0.3 0.3 0.3 0.0
17 18 19 20 21 22 23 24	2664 2939 3680 4643 5866 7078 8055 8733 9276	33284 36140 72155 72160 33412 17115 11027 10925 11041	-124 -304 -127 -121 5 107 93 -8	-124 -304 -127 -121 5 107 93 -8	49.8 39.7 69.9 50.0 40.3 30.3 30.3	-0.3 -0.1 -0.1 0.0 0.3 0.3 -0.0	4 4 4 0 0	0.3 0.3 0.3 0.3 0.3 0.0 0.0

#### PROGRAM SEM. BAS - BELLE FONTAINE PROJECT INITIAL BEACH CONDITIONS

YEAR	= 2	MONTH =	12	SEDIMENT	VOL (CYD)	= 54	7861	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13404	27585	18474	8952	90.8	60.8	0	0.0
2	12774	8157	-955	-412	26.9	-3.1	ŏ	0.0
2	11807	9851	-1083	-320	27 0	-3.0	ň	0.0
3	10511	16060	_1117	520	52 0	2.0	Ň	0.0
4	10311	10000	-111/	-330	52.9	2.9	Ň	0.0
5	9081	10311	-1408	-/26	42.4	2.4	U	0.0
6	7481	10707	-11	753	44.1	4.1	1	4000.0
7	6080	4118	-5600	619	16.9 -	·23.1	0	0.0
8	4708	23316	13597	3729	96.0	56.0	2	50.0
9	4030	7298	9	-8	30.0	0.0	0	0.0
10	3437	9350	-368	-177	38.5	-1.5	0	0.0
11	2965	14729	581	1264	60.6	10.6	1	2000.0
12	2691	22325	-1542	-738	61.3	1.3	0	0.0
12	2530	32435	-328	807	76 3	63	1	2000 0
14	2535	34950	_1155	-571	92 0	2 0	ā	2000.0
16	2530	10070	-1155	-371	52.0	2.0	1	5000 O
12	2603	19010	-/19/	-1090	54.0	-0.0	Ť	5000.0
16	2664	33158	-249	-125	49.6	-0.4	4	0.3
17	2940	35836	-608	-304	39.3	-0.7	4	0.3
18	3680	72028	-253	-127	69.8	-0.2	4	0.3
19	4643	72039	-242	-121	69.8	-0.2	4	0.3
20	5866	33417	9	5	50.0	0.0	4	0.3
21	7077	17222	215	107	40.5	0.5	0	0.0
22	8054	11120	186	93	30.5	0.5	0	0.0
23	8733	10917	-16	-8	30.0	-0.0	0	0.0
24	9275	11148	215	107	30.6	0.6	Ō	0.0
27	2210		220	20.		•••	•	
YEAR	= 3	MONTH =	12	SEDIMENT	VOL (CYD)	= 55	2490	
YEAR	= 3 POS	MONTH =	12 NCHG	SEDIMENT	VOL (CYD) WIDTH	= 55 PCHG	2490 ALT	PAR
YEAR NUM	= 3 POS (FT)	MONTH = VOL (CYD)	12 NCHG	SEDIMENT ACHG (CYD)	VOL (CYD) WIDTH (FT)	= 55 PCHG (FT)	2490 ALT	PAR
YEAR NUM	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36162	12 NCHG (CYD) 27051	SEDIMENT ACHG (CYD) 8577	VOL (CYD) WIDTH (FT) 119 1	= 55 PCHG (FT) 89 1	2490 ALT 0	PAR
YEAR NUM 1	= 3 POS (FT) 13376	MONTH = VOL (CYD) 36162 7036	12 NCHG (CYD) 27051 -1175	SEDIMENT ACHG (CYD) 8577 -221	VOL (CYD) WIDTH (FT) 119.1 26.1	= 55 PCHG (FT) 89.1	2490 ALT 0	<b>PAR</b> 0.0
YEAR NUM 1 2	= 3 POS (FT) 13376 12775	MONTH = VOL (CYD) 36162 7936	12 NCHG (CYD) 27051 -1175	SEDIMENT ACHG (CYD) 8577 -221 122	VOL (CYD) WIDTH (FT) 119.1 26.1	= 55 PCHG (FT) 89.1 -3.9	2490 ALT 0 0	<b>PAR</b> 0.0 0.0
YEAR NUM 1 2 3	= 3 POS (FT) 13376 12775 11807	MONTH = VOL (CYD) 36162 7936 9719	12 NCHG (CYD) 27051 -1175 -1214	SEDIMENT ACHG (CYD) 8577 -221 -132	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7	= 55 PCHG (FT) 89.1 -3.9 -3.3	2490 ALT 0 0	<b>PAR</b> 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 3 POS (FT) 13376 12775 11807 10513	MONTH = VOL (CYD) 36162 7936 9719 15475	12 NCHG (CYD) 27051 -1175 -1214 -1710	SEDIMENT ACHG (CYD) 8577 -221 -132 -593	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0	2490 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 3 POS (FT) 13376 12775 11807 10513 9075	MONTH = VOL (CYD) 36162 7936 9719 15475 11597	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7	2490 ALT 0 0 0 0 1	PAR 0.0 0.0 0.0 0.0 2000.0
YEAR NUM 1 2 3 4 5 6	= 3 POS (FT) 13376 12775 11807 10513 9075 7469	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2	2490 ALT 0 0 0 0 1 1	PAR 0.0 0.0 0.0 2000.0 5000.0
YEAR NUM 1 2 3 4 5 6 7	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3	2490 ALT 0 0 0 0 1 1 0	PAR 0.0 0.0 0.0 2000.0 5000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 - 104.2	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2	2490 ALT 0 0 0 0 1 1 0 2	PAR 0.0 0.0 0.0 2000.0 5000.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 - 104.2 30.0	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0	2490 ALT 0 0 0 1 1 0 2 0	PAR 0.0 0.0 0.0 2000.0 5000.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 104.2 30.0 37.7	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3	2490 ALT 0 0 0 1 1 0 2 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 - 104.2 30.0 37.7 57.6	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6	2490 ALT 0 0 0 1 1 0 2 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 50.0 50.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 - 104.2 30.0 37.7 57.6 59.2	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6 -0.8	2490 ALT 0 0 0 1 1 0 2 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 50.0 0.0 50.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 12	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 - 104.2 30.0 37.7 57.6 59.2 73 5	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6 -0.8 3 5	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2539	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 24134	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1981	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 - 104.2 30.0 37.7 57.6 59.2 73.5 80.3	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0 3	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1504 -1881	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 5027	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 277	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2619	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -22.3	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2619 2665	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733 33024	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134 -384	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937 -135	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 - 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7 - 49.4	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -0.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -22.3 -0.6	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2619 2665 2940	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733 33024 35533	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134 -384 -912	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937 -135 -304	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7 49.4 39.0	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -0.6 -1.0	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2619 2665 2940 3680	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733 33024 35533 71901	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134 -384 -912 -380	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937 -135 -304 -127	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7 49.4 39.0 69.6	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -0.6 -1.0 -0.4	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2619 2665 2940 3680 4643	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733 33024 35533 71901 71918	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134 -384 -912 -380 -364	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937 -135 -304 -127 -121	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7 49.4 39.0 69.6 69.6	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -0.6 -1.0 -0.4 -0.4	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0 0 0 0 4 4 4 4 4	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2619 2665 2940 3680 4643 5866	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733 33024 35533 71901 71918 33421	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134 -384 -912 -380 -364 14	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937 -135 -304 -127 -121 5	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7 49.4 39.0 69.6 69.6 50.0	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -20.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -0.6 -1.0 -0.4 -0.4 0.0	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0 0 4 4 4 4 4 4 4	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2619 2665 2940 3680 4643 5866 7077	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733 33024 35533 71901 71918 33421 17329	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134 -384 -912 -380 -364 14 322	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937 -135 -304 -127 -121 5 107	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7 49.4 39.0 69.6 69.6 50.0 40.8	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -0.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -0.6 -1.0 -0.4 -0.4 0.0 0.8	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0 0 4 4 4 4 4 4 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2619 2665 2940 3680 4643 5866 7077 8054	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733 33024 35533 71901 71918 33421 17329 11212	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134 -384 -912 -380 -364 14 322 279	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937 -135 -304 -127 -121 5 107 93	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7 49.4 39.0 69.6 69.6 50.0 40.8 30.8	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -0.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -0.6 -1.0 -0.4 -0.4 0.8 0.8 0.8	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0 0 4 4 4 4 4 4 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 9 20 21 22 23	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2693 2541 2538 2619 2665 2940 3680 4643 5866 7077 8054 8733	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733 33024 35533 71901 71918 33421 17329 11212 10909	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134 -384 -912 -380 -364 14 322 279 -24	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937 -135 -304 -127 -121 5 107 93 -8	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7 49.4 39.0 69.6 69.6 50.0 40.8 30.8 29.9	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -0.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -0.6 -1.0 -0.4 -0.4 0.8 0.8 0.8 0.8 0.1	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0 0 4 4 4 4 4 4 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 5000.0 50.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 6 7 8 9 10 11 2 3 4 5 10 1 1 2 3 10 10 11 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	= 3 POS (FT) 13376 12775 11807 10513 9075 7469 6077 4700 4030 3437 2968 2693 2541 2538 2619 2665 2940 3680 4643 5866 7077 8054 8733 9275	MONTH = VOL (CYD) 36162 7936 9719 15475 11597 13647 4788 25306 7285 9168 14004 21577 31259 34134 13733 33024 35533 71901 71918 33421 17329 11212 10909 11256	12 NCHG (CYD) 27051 -1175 -1214 -1710 -122 2929 -4930 15588 -4 -550 -144 -2289 -1504 -1881 -13134 -384 -912 -380 -364 14 322 279 -24 322	SEDIMENT ACHG (CYD) 8577 -221 -132 -593 1286 2940 670 1991 -13 -182 -725 -748 -1176 -726 -5937 -135 -304 -127 -121 5 107 93 -8 107	VOL (CYD) WIDTH (FT) 119.1 26.1 26.7 51.0 47.7 56.2 19.7 104.2 30.0 37.7 57.6 59.2 73.5 80.3 37.7 49.4 39.0 69.6 69.6 50.0 40.8 30.8 29.9 30.9	= 55 PCHG (FT) 89.1 -3.9 -3.3 1.0 7.7 16.2 -0.3 64.2 -0.0 -2.3 64.2 -0.0 -2.3 7.6 -0.8 3.5 0.3 -0.6 -1.0 -0.4 -0.4 0.8 0.8 0.8 0.9	2490 ALT 0 0 0 1 1 0 2 0 0 0 0 0 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 2000.0 5000.0 50.0 0.0 50.0 0.0 0.0 0.0 0

YEAR	= 4	MONTH =	12	SEDIMENT	VOL (CYD)	) = 562	2128	
NUM	POS	VOL	NCHG	ACHG	WIDTH	PCHG	ALT	PAR
	(FT)	(CYD)	(CYD)	(CYD)	(FT)	(FT)		
1	13348	44539	35428	8377	146.7	116.7	0	0.0
2	10775	79/1	-1270	-94	25.8	-4 2	ō	0 0
2	11007	1041	-1265	_51	25.5	_3 5	ŏ	0.0
3	11807	9000	-1203	-51	20.5	-1.0	Ň	0.0
4	10515	14879	-2306	-596	49.0	-1.0	0	0.0
5	9078	10845	-873	-751	44.6	4.6	0	0.0
6	7463	15061	4342	1414	62.0	22.0	1	3000.0
7	6076	4998	-4720	210	20.6	-19.4	0	0.0
8	4692	27324	17605	2018	112.5	72.5	2	50.0
9	4030	7273	-16	-12	29.9	-0.1	0	0.0
10	3438	8982	-737	-187	37.0	-3.0	0	0.0
11	2071	13316	-832	-688	54.8	4.8	0	0.0
10	2511	22207	_1090	1210	62 5	2 5	1	2000 0
12	2009	22/0/	-1080	1210	02.J 75 A	E A	1	2000.0
13	2540	32061	-702	802	75.4	3.4	<u> </u>	2000.0
14	2539	33431	-2584	-702	18.6	-1.4	U I	0.0
15	2622	12805 -	-14061	-927	35.1	-24.9	1	5000.0
16	2665	32888	-520	-136	49.2	-0.8	4	0.3
17	2940	35229	-1215	-303	38.7	-1.3	4	0.3
18	3681	71774	-507	-127	69.5	-0.5	4	0.3
19	4643	71797	-485	-121	69.5	-0.5	4	0.3
20	5866	33426	19	5	50.0	0.0	4	0.3
21	7077	17436	429	107	41.0	1.0	0	0.0
22	8054	11305	372	93	31.0	1.0	0	0.0
22	8733	10002	-31	-7	29.9	-0.1	Ō	0.0
23	0755	11363	420	107	31 2	1.2	ō	0.0
<u> </u>	3213	11303	-23	÷ • • •	J <b>1</b> . <b>2</b>		•	•••
VEAD	- 5	MONTH =	12	SEDIMENT	VOL (CYD	) = 56	9775	
YEAR	= 5	MONTH =	12 NCHG	SEDIMENT	VOL (CYD	) = 56 PCHG	9775 AT.T	PAR
YEAR NUM	= 5 POS	MONTH = VOL	12 NCHG	SEDIMENT ACHG	VOL (CYD WIDTH (FT)	) = 56 PCHG (FT)	9775 ALT	PAR
YEAR NUM	= 5 POS (FT)	MONTH = VOL (CYD)	12 NCHG (CYD)	SEDIMENT ACHG (CYD)	VOL (CYD WIDTH (FT)	) = 56 PCHG (FT)	9775 ALT	PAR
YEAR NUM 1	= 5 POS (FT) 13321	MONTH = VOL (CYD) 52820	12 NCHG (CYD) 43709	SEDIMENT ACHG (CYD) 8280	VOL (CYD WIDTH (FT) 173.9	) = 56 PCHG (FT) 143.9	9775 ALT 0	PAR 0.0
YEAR NUM 1 2	= 5 POS (FT) 13321 12775	MONTH = VOL (CYD) 52820 7817	12 NCHG (CYD) 43709 -1294	SEDIMENT ACHG (CYD) 8280 -24	VOL (CYD WIDTH (FT) 173.9 25.7	) = 56 PCHG (FT) 143.9 -4.3	9775 ALT 0	PAR 0.0 0.0
YEAR NUM 1 2 3	= 5 POS (FT) 13321 12775 11807	MONTH = VOL (CYD) 52820 7817 9652	12 NCHG (CYD) 43709 -1294 -1282	SEDIMENT ACHG (CYD) 8280 -24 -16	VOL (CYD WIDTH (FT) 173.9 25.7 26.5	) = 56 PCHG (FT) 143.9 -4.3 -3.5	9775 ALT 0 0	PAR 0.0 0.0 0.0
YEAR NUM 1 2 3 4	= 5 POS (FT) 13321 12775 11807 10517	MONTH = VOL (CYD) 52820 7817 9652 14280	12 NCHG (CYD) 43709 -1294 -1282 -2905	SEDIMENT ACHG (CYD) 8280 -24 -16 -599	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0	) = 56 PCHG (FT) 143.9 -4.3 -3.5 -3.0	9775 ALT 0 0 0 0	PAR 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5	= 5 POS (FT) 13321 12775 11807 10517 9081	MONTH = VOL (CYD) 52820 7817 9652 14280 10103	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6	) = 56 PCHG (FT) 143.9 -4.3 -3.5 -3.0 1.6	9775 ALT 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6	= 5 POS (FT) 13321 12775 11807 10517 9081 7469	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \end{array}$	9775 ALT 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \end{array}$	9775 ALT 0 0 0 0 0 0 0 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \end{array}$	9775 ALT 0 0 0 0 0 0 0 0 2	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \end{array}$	9775 ALT 0 0 0 0 0 0 0 2 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 0.0 50.0
YEAR NUM 1 2 3 4 5 6 7 8 9	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \end{array}$	9775 ALT 0 0 0 0 0 0 0 2 0 1	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2 \end{array}$	9775 ALT 0 0 0 0 0 0 0 2 0 1 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 1000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24803	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2 69 3	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2.2 \\ 9.3 \end{array}$	9775 ALT 0 0 0 0 0 0 0 2 0 1 0	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 1000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974 2684	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24893	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463 1026	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2 68.3	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2.2 \\ 8.3 \end{array}$	9775 ALT 0 0 0 0 0 0 0 2 0 1 0 1	PAR 0.0 0.0 0.0 0.0 0.0 0.0 50.0 0.0 1000.0 3000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974 2684 2542	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24893 30934	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463 1026 -1829	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106 -1127	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2 68.3 72.8	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2.2 \\ 8.3 \\ 2.8 \end{array}$	9775 ALT 0 0 0 0 0 0 0 2 0 1 0 1	PAR 0.0 0.0 0.0 0.0 0.0 50.0 0.0 1000.0 3000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974 2684 2542 2541	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24893 30934 32737	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463 1026 -1829 -3278	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106 -1127 -695	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2 68.3 72.8 77.0	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2.2 \\ 8.3 \\ 2.8 \\ -3.0 \end{array}$	9775 ALT 0 0 0 0 0 0 0 0 1 0 1 0	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 1000.0 3000.0 0.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974 2684 2542 2541 2622	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24893 30934 32737 12860	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463 1026 -1829 -3278 -14006	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106 -1127 -695 55	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2 68.3 72.8 77.0 35.3	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2.2 \\ 8.3 \\ 2.8 \\ -3.0 \\ -24.7 \end{array}$	9775 ALT 0 0 0 0 0 0 0 0 0 1 0 1 0 1	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 1000.0 3000.0 0.0 6000.0
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974 2684 2542 2541 2622 2665	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24893 30934 32737 12860 32752	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463 1026 -1829 -3278 -14006 -655	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106 -1127 -695 55 -136	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2 68.3 72.8 77.0 35.3 49.0	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2.2 \\ 8.3 \\ 2.8 \\ -3.0 \\ -24.7 \\ -1.0 \end{array}$	9775 ALT 0 0 0 0 0 0 0 0 0 1 0 1 0 1 4	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 1000.0 0.0 3000.0 0.0 6000.0 0.3
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974 2684 2542 2541 2622 2665 2941	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24893 30934 32737 12860 32752 34926	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463 1026 -1829 -3278 -14006 -655 -1518	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106 -631 2106 -1127 -695 55 -136 -303	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2 68.3 72.8 77.0 35.3 49.0 38.3	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2.2 \\ 8.3 \\ 2.8 \\ -3.0 \\ -24.7 \\ -1.0 \\ -1.7 \end{array}$	9775 ALT 0 0 0 0 0 0 0 0 0 1 0 1 0 1 4 4 4	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 1000.0 0.0 3000.0 0.0 6000.0 0.3 0.3
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974 2684 2542 2541 2622 2665 2941 3681	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24893 30934 32737 12860 32752 34926 71647	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463 1026 -1829 -3278 -14006 -655 -1518 -634	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106 -631 2106 -1127 -695 55 -136 -303 -127	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 120.9 29.9 40.2 52.2 68.3 72.8 77.0 35.3 49.0 38.3 69.4	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2.2 \\ 8.3 \\ 2.8 \\ -3.0 \\ -24.7 \\ -1.0 \\ -1.7 \\ -0.6 \end{array}$	9775 ALT 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0 1 4 4 4 4	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 1000.0 0.0 3000.0 0.0 6000.0 0.3 0.3 0.3
YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974 2684 2542 2541 2622 2665 2941 3681 4644	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24893 30934 32737 12860 32752 34926 71647 71676	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463 1026 -1829 -3278 -14006 -655 -1518 -634 -606	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106 -1127 -695 55 -136 -303 -127 -121	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2 68.3 72.8 77.0 35.3 49.0 38.3 69.4 69.4	$\begin{array}{l} = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 2.2 \\ 8.3 \\ 2.8 \\ -3.0 \\ -24.7 \\ -1.0 \\ -1.7 \\ -0.6 \\ -0.6 \end{array}$	9775 ALT 0 0 0 0 0 0 0 0 0 1 0 1 0 1 0 1 4 4 4 4	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 50.0 0.0
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YEAR NUM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	= 5 POS (FT) 13321 12775 11807 10517 9081 7469 6076 4683 4030 3435 2974 2684 2542 2541 2622 2665 2941 3681 4644 5866 7077	MONTH = VOL (CYD) 52820 7817 9652 14280 10103 13580 5067 29368 7270 9778 12685 24893 30934 32737 12860 32752 34926 71647 71676 33431 17543	12 NCHG (CYD) 43709 -1294 -1282 -2905 -1616 2861 -4651 19650 -19 59 -1463 1026 -1829 -3278 -14006 -655 -1518 -634 -606 23 536	SEDIMENT ACHG (CYD) 8280 -24 -16 -599 -743 -1481 69 2044 -3 796 -631 2106 -1127 -695 55 -136 -303 -127 -121 5 107	VOL (CYD WIDTH (FT) 173.9 25.7 26.5 47.0 41.6 55.9 20.9 120.9 29.9 40.2 52.2 68.3 72.8 77.0 35.3 49.0 38.3 69.4 69.4 50.0 41.3	$ = 56 \\ PCHG \\ (FT) \\ 143.9 \\ -4.3 \\ -3.5 \\ -3.0 \\ 1.6 \\ 15.9 \\ -19.1 \\ 80.9 \\ -0.1 \\ 0.2 \\ 2.2 \\ 8.3 \\ 2.8 \\ -3.0 \\ -24.7 \\ -1.0 \\ -1.7 \\ -0.6 \\ 0.0 \\ 1.3 $	9775 ALT 0 0 0 0 0 0 0 0 0 0 0 1 0 1 0 1 4 4 4 4	PAR 0.0 0.0 0.0 0.0 0.0 50.0 50.0 0.0 1000.0 0.0 3000.0 0.0 6000.0 0.3 0.3 0.3 0.3 0.3 0.3
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END OF PROGRAM

# Appendix C.

Tide data (upper line) and temperature data (lower line) from Belle Fontaine for the period of February 12 to May 3, 1992. The pressure scale is in pounds per square inch absolute and 1 division is equivalent to an elevation change of 10 centimeters.

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# Appendix D.

Examples of wave meter data collected at Belle Fontaine.

#### **D-1**

Wave-induced pressure record for Belle Fontaine on April 20, 1992, starting at 12:20:53. The record shows wave data for a full 300 second (5 minute) sample at the time of maximum wave action.





Wave spectra for the time period 00:20:53 to 12:20:53 on April 20, 1992, showing the development of storm waves.



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# MISSISSIPPI OFFICE OF GEOLOGY

Cathy Z. Hollomon Mississippi Department of Wildlife, Fisheries and Parks Bureau of Marine Resources

#### **INTRODUCTION**

The coastline bordering the Gulf of Mexico consists of a complex integrated system of beaches, dunes, barrier islands, marshes, bays, tidal flats, and inlets. People's desire to live and work in these coastal environments has always existed but has intensified significantly in the past few decades. Presently, approximately 50 percent of the U.S. population lives within an hour's drive of a coast. It is projected that by the year 2010 this proportion will increase to 75 percent. The expanding population results in increased pressures on the natural environment, resulting in major conflicts between industry, fisheries, recreation, and the preservation of coastal resources. Also, as the coastal population grows, so does the need for additional transportation networks, recreational facilities, potable water, waste disposal systems, and other facilities. Air and water pollution are concerns in and around coastal communities where impacts to the fisheries industry, recreational activities, and wildlife survival are already prevalent.

Coastlines are dynamic environments and are, therefore, inherently unstable. They continually change shape and location in response to complex natural processes and human activities. Breaking waves carry sands along the shoreline, eroding sand from one area and depositing it on an adjacent beach. Storm waves carry sands from the beaches seaward, depositing them on offshore bars. Often these sands are transported back to the beach during periods of calm weather. Rivers also help shape the coastline by supplying additional sediment that builds deltas out into the open water. These changes occur daily and can result in significant long-term morphologic changes. Together these processes create an intricate system that continually attempts to achieve a dynamic balance. In addition, human activities such as dredging, urban or residential development, and recreational uses affect the coastlines by interrupting and altering, both directly and indirectly, the natural processes that shape them.

In the past, we have regarded wetlands to be vast wastelands and encouraged their destruction in an effort to convert them to other land uses. Wetlands and marshes are now widely recognized as important and fragile parts of the coastal environment. They are one of the world's most productive and valuable ecosystems. A few of the important functions that wetlands provide include: food and shelter for aquatic and terrestrial wildlife, storage for floodwater that may otherwise inundate developed areas, filtering nutrients and toxins from surface waters, and recreational opportunities. The preservation of wetlands is imperative if we are to assure the continued health and prosperity of our own existence.

Recognizing the need to maintain a balance between the development pressures of an increasing coastal population and the preservation of our natural resources, Congress has passed numerous acts and legislative mandates designed to preserve and protect our natural resources. With the passage of these various laws, Congress recognized and declared the need for a national interest in land use decisions that were previously viewed as local in nature. Congress acknowledged the necessity for a unified effort between federal, state, and local authorities to properly plan for and manage the projected increase in development along the coastlines. Accordingly, the State of Mississippi enacted the Coastal Wetlands Protection Law governing the management practices within the coastal zone.

#### **EXISTING LEGISLATION**

In the United States, tidal and navigable waters, the lands beneath, as well as the living resources inhabiting these waters are held in trust by the states for the benefit of the public. The states, therefore, are charged with the responsibility of managing our coastlines and assuring that our coastal resources are preserved and protected in the best interests of the general public. To this end, legislation specifically intended to manage our coastlines and associated natural resources has been passed and implemented at all government levels. A brief discussion of existing federal and state legislative mandates designed to effectively manage our coastal resources follows. It is suggested that the reader refer to the references at the end of the chapter for more detailed explanations of the individual laws.

#### **Coastal Zone Management Act**

In 1966, the Commission of Marine Science, Engineering, and Resources, known as the Stratton Commission, released a study on the conflict between the increasing development pressures and the need to preserve our coastal resources. In the final report, the Commission concluded that the states were in the best position to manage coastal resources but that federal funds should be provided to help the states alleviate the financial burden of administering a coastwide management program. Accordingly, Congress enacted the Coastal Zone ManagementAct (CZMA) in 1972. The purpose of the CZMA is to effectively manage the unique values of all coastal resources by encouraging states to develop land and water use plans for coastal protection.

The CZMA encouraged a program of cooperative planning between federal and state authorities. By developing federally approved coastal management programs, states are given the opportunity to participate in a joint federal-state initiative to protect and enhance their coastal lands and waters. A couple of incentives that the CZMA provided the states to encourage the development of their own coastal management plans were 1) federal financial and technical assistance and 2) promises that any federal activity conducted within a state's coastal zone must be consistent with that state's coastal management program. The federal consistency requirement is a strong element of the CZMA that encourages most states to participate in the program. The requirement that federal activities be consistent with a state's coastal management program is an important and powerful management tool for coastal states.

Prior to developing coastal management plans, the states needed to define the coastal zone boundary within their own state boundary. In brief, the CZMA defines a coastal zone as the coastal waters and the adjacent shorelands strongly influenced by each other and in proximity to the shorelines of the coastal states, including islands, transitional and intertidal areas, salt marshes, wetlands, and beaches. This definition of the coastal zone was purposefully vague, giving states a great deal of discretion in defining their own jurisdictional limits. This discretion is necessary because of the different types of areas that may exist within a single state's coastal zone, both developed and undeveloped. The only clear boundary defined in the CZMA for the coastal zone is the seaward limit of the state's ownership. The coastal zone within Mississippi includes all the land and water resources of Hancock, Harrison, and Jackson counties.

#### **Coastal Zone Reauthorization Amendments of 1990**

The CZMA came before the 101st Congress for reauthorization in 1990. Major changes to the CZMA were made with the passage of the Reauthorization Amendments in 1990. Among other changes, the amendments provide additional federal funding to state coastal management agencies, encourage state ocean resources planning, and institute a program that seeks to implement coastal land use management measures for controlling nonpoint-source pollution. In addition, the new, amended act strengthens the federal consistency requirement by establishing that any federal agency activity that takes place either in or outside the coastal zone is subject to consistency review if it affects (directly or indirectly) any natural resource, land use, or water use in the coastal zone.

#### **Coastal Barrier Resources Act**

The first environmental law that coordinated federal

fiscal policy with environmental preservation was the Coastal Barrier Resources Act (CBRA) enacted in 1982. The purposes of the CBRA are to minimize danger to or loss of human life from poorly located coastal development, to end federal expenditures for such development, and to preserve the natural resources of the coastal barriers. The CBRA accomplishes these purposes by removing federal subsidies for flood insurance and by prohibiting new federal expenditures or financial assistance for construction or purchase of structures, roads, bridges, facilities, and related infrastructure within certain coastal barrier areas. The bottom line is that developers and/or property owners are responsible for the costs of development and the costs of the risks to that development. In this manner, the CBRA departs significantly from the more traditional forms of land use and environmental protection such as regulation, acquisition, and land planning.

The coastal barriers affected by the CBRA are those areas designated in the Coastal Barrier Resources System. Included in this system are undeveloped coastal barriers on the Atlantic and Gulf coasts that are designated on maps entitled "The Coastal Barrier Resources System." This system of barriers consists of 186 units totaling approximately 1080 km (670 mi.) of shoreline and 183334 hectares (452,834 acres) of undeveloped, unprotected coastal barriers from Maine to Texas. Areas located within the coastal zone of Mississippi that are protected by the CBRA include: Deer and Round Islands, Belle Fontaine Point and Graveline Bayou, Marsh Point, Heron Point, and portions of Cat Island.

Through the conservation of federal funds rather than the distribution of them, the Coastal Barrier Resources Act offers another measure for coastal protection should federal funding for the Coastal Zone Management Act diminish.

### OTHER FEDERAL REGULATORY/PRESERVATION PROGRAMS

#### **Clean Water Act**

The Clean Water Act (CWA), which amended the 1972 amendments to the Federal Water Pollution Control Act, was passed by Congress in 1977. The objective of the CWA is to restore and maintain the chemical, biological, and physical integrity of the nation's inland and coastal waters. Although it does not authorize a comprehensive wetlands management program, Section 404 of the act provides the primary legislative authority behind federal efforts to control and manage wetlands use which, in turn, manages coastal erosion efforts. Section 404 of the CWA requires obtaining a permit from the U.S. Army Corps of Engineers (Corps) for all discharges of dredged or fill materials into navigable waters including wetlands. Also included in this permit requirement are activities resulting in the implementation of hard (structural) and soft (vegetative/fill) methods of shoreline erosion protection. The Corps must coordinate review of the permit applications with the Environmental Protection Agency and other federal agencies. Evaluation of the permits is accomplished through informal rule and policy-making that includes a public notice and comment period.

The permitting process is often confusing and time consuming. Before a permit is issued, the applicant must show that 1) there is no practicable alternative, 2) there will be no significant adverse impacts on aquatic resources, 3) all reasonable mitigation is employed, and 4) there will be no statutory violations by the proposed activity. In addition, section 401 of the CWA empowers the state to determine compliance of the proposed activity with state water quality standards. If a project does not meet state water quality standards and the applicant refuses to adapt to such standards, certification may be denied, resulting in full permit denial.

The Corps may also issue another type of permit called General Permits for discharges on a state, regional, or nationwide basis. General permits are issued for activities that cause minimal adverse environmental impact and have only minimal cumulative adverse impact on the environment. Obtaining a general permit for minor activities is a relatively simple and quick process.

#### **The National Estuary Program**

The National Estuary Program was established under amendments to the Clean Water Act and mandates the development of comprehensive conservation and management plans that recommend priority corrective actions to restore and maintain water quality in estuaries of national significance. This includes restoring and maintaining indigenous populations of fish and wildlife, as well as recreational opportunities.

### MISSISSIPPI'S COASTAL MANAGEMENT PROGRAM

The Mississippi Coastal Program was approved by the Commission on Wildlife Conservation on August 22, 1980, and has been updated throughout its implementation. The State of Mississippi, acting as trustee for the public, is responsible for seeing that coastal resources are managed in the general public's best interest. The Mississippi Coastal Program deals primarily with the management of coastal resources such as air, water, marine life, historical and archaeological sites, and public trust wetlands. Unlike other states, Mississippi's Coastal Program does not regulate uses on private property in the entire coastal area, only in those areas directly affected by the ebb and flow of the tide. However, there are provisions in the law that allow regulation of indirect impacts if the impacts are considered detrimental to the coastal resources. While Mississippi has not yet enacted legislation specifically designed to manage coastal erosion, the Mississippi Coastal Program does provide measures that regulate what type of structures can be constructed and how a structure should be constructed along a shoreline and in coastal wetland areas.

The Mississippi Coastal Program is built around ten goals which guide decisions affecting the development of Mississippi's coastal resources. These goals include but are not limited to the following:

o Providing for reasonable industrial expansion in the coastal area and insuring the efficient utilization of waterfront industrial sites so that suitable sites are conserved for water-dependent industry.

o Favoring the preservation of the coastal wetlands and ecosystems, except where a specific alteration of coastal wetlands would serve a higher public interest in compliance with the purposes of the public trust in which the coastal wetlands are held.

o Encouraging the preservation of natural scenic qualities in the coastal area.

o Considering the national interest involved in planning for and in the siting of facilities in the coastal area.

These goals set clear objectives for the state to achieve when making decisions about the use of public resources including management of the shoreline. They promote decisions that balance development with the environment.

The agencies responsible for the implementation of the Coastal Program are the Bureau of Marine Resources (BMR), the Office of Pollution Control (OPC), the Office of Land and Water Resources, and the Department of Archives and History. Together these agencies manage coastal resources through direct regulation, policy coordination, special management area planning, and other management activities aimed at accomplishing the program goals. The BMR is the lead agency responsible for the overall administration of the coastal program and exercises the regulatory authority in the coastal area.

The Mississippi Coastal Program also provides for accurate, long-range assessment of shoreline erosion based on scientific research. The subjects where research will be concentrated include: wave refraction diagrams, long-term changes in the shoreline, wind transport, littoral transport rates, wave spectra, source materials for beach nourishment, and erosion by boat wakes. This research and assessment will aid local communities in planning efforts to mitigate damage. The program also calls for support for erosion control projects from the Corps of Engineers and from local governments. These projects include beach replenishment and dredged material disposal techniques. The BMR has established marine construction standards for shoreline erosion protection and shorefront access. Recommendations from these standards address protection methods which are best for each type of shoreline, definitions of these methods, explanation of the impacts of each type of erosion control option, and recommendation of specific designs for bulkheads, revetments, and vegetation.

#### THE PERMITTING PROCESS

Most construction, restoration, or mitigation activities planned in coastal wetlands or coastal waterbottoms must first obtain a permit from the Bureau of Marine Resources and the U. S. Army Corps of Engineers. This includes structures or activities associated with shoreline erosion control. There are two types of permits that regulate activities in coastal wetlands and waterbottoms. The nature of the activity determines the type of permit that must be obtained. General permits are issued for certain minor activities that result in minimal environmental impact and require application to the Bureau of Marine Resources only. Individual permits are issued for other larger, more complex projects and require securing permits from both the BMR and the Corps.

Whether a proposed activity requires a general or an individual permit is determined by the BMR after receipt of a joint permit application. If the proposed activity is authorized under a general permit, the permit, often with conditions, is issued to the applicant within a 30-day review period (water quality certification as required in Section 401 of the Clean Water Act has been made by the State of Mississippi for all general permits). However, if it is determined that the proposed activity requires an individual permit, the applicant must obtain a permit from both the BMR and the Corps, a process that may take up to six months.

Each individual permit requires public notice and an opportunity for public comment. When objections to a permit application are received by BMR during the public comment period, a public hearing will be held to address the concerns. A detailed description of the steps required to move an individual permit through the BMR can be found in the wetlands law and the Mississippi Coastal Program. Issued permits often include specific conditions relating the mitigation that must be conducted by the applicant as compensation for adverse impacts to the environment.

#### SUMMARY

Legislative mandates have been enacted at both the federal and state levels of government to assure the protection and preservation of our coastal resources. The majority of the legislation is focused on protecting sensitive environments while trying to balance the need for water-dependent development.

The Coastal Zone Management Act, enacted in 1972, encouraged a cooperative effort between federal and state authorities to help develop land and water use plans to more efficiently manage our coastal resources. The Clean Water Act of 1977 targeted efforts to restore and maintain the chemical, biological and physical integrity or our nation's inland and coastal waters. Section 404 of the Clean Water Act requires obtaining permits prior to placing dredge or fill material into wetlands or waters of the United States. The Coastal Barrier Resources Act of 1982 was the first law enacted that coordinated federal fiscal policy with environmental preservation. The Coastal Barrier Resources Act attempts to preserve the natural resources of the coastal barrier islands by prohibiting new federal funding for poorly located development that may pose a threat or loss to human life.

Mississippi's Coastal Management Program was adopted in 1980. The program is based upon ten goals that together attempt to maintain a balance between the protection and preservation of our coastal resources and the need to allow for reasonable industrial expansion in the coastal area. Several agencies are charged with the responsibility of implementing the coastal program. Together these agencies manage the coastal resources through direct regulation, policy coordination, land acquisition, special management area planning, and other management activities aimed at accomplishing the program goals.

Most activities proposed in wetlands or lands and waterbottoms below the mean high tide line require obtaining a permit from the U.S. Army Corps of Engineers and/or the Mississippi Bureau of Marine Resources. Minor activities below the mean high tide line that result in minimal environmental impact qualify for a general permit issued by the Mississippi Bureau of Marine Resources. Larger, more complex projects require obtaining an individual permit from both the U.S. Army Corps of Engineers and the Mississippi Bureau of Marine Resources. Processing time for a general permit is approximately 30 days or less. Individual permits, including the public comment period, can take up to 90 days for the state and six months for the Corps to process. Permits are denied for a small percentage of projects. More often, agreements are reached between the applicant and the regulatory agencies through modifications of the original project plans.

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### MISSISSIPPI OFFICE OF GEOLOGY

## Stephen M. Oivanki Mississippi Office of Geology

The Belle Fontaine area and its sparkling white beaches are the only remaining natural reminder of what the Mississippi coast was like before the intrusion of man. While man has begun to alter this natural landscape, it continues as a relatively untouched vestige of the natural Mississippi shore when compared with the extensively modified shorelines on either side. Here, the forces of nature still sculpt the shoreline much as they have done for the past 10,000 years.

In the first paper in this volume, Klaus Meyer-Arendt documented the known history of the area since the arrival of civilization. Erosion and modification of the shoreline were not much of a problem during the early days of man's occupation, when large estates were common. Hurricane damage to structures onshore was common, but rebuilding was simple, since the structures could be relocated farther away from the shoreline and out of immediate danger. As population density increased, the estates became small lots, each individually owned and cherished, and the retreat of the shoreline relative to the many homes on these lots became immediately apparent. The lack of mobility of the structures, confined to their small lots, created a concern for what had always been a continuing natural process.

As erosion forced the shoreline closer to homes, many homeowners began to fortify their lots against the continuous encroachment of the sea. Bulkheads and riprap were used to fix the position of the shoreline and stop the sacrifice of solid ground to feed the mobile sediment stream along the shore. While this temporarily eased the danger to their homes, it created a shortage of sediment in the longshore drift system, which continued to move the remaining sediment along the beach to the west. Continuation of this practice of armoring the shoreline will eventually cut off all sediment contributions to the beach, and the base of the bulkheads and riprap will be undermined by the surf.

Rather than force the shoreline to conform to a rigid, fixed, and engineered set of parameters, this report has shown that by working with natural forces instead of against them, man can preserve the natural beauty of the landscape and still utilize its resources. If allowed to evolve in the same manner as the Harrison County shoreline, with seawalls and commercial development, this shore would lose all of the qualities which drew human inhabitants to it in the first place.

The geologic foundation of Belle Fontaine has been thoroughly researched in the paper by Oivanki and Otvos, and it provides some clues as to the methods which must be employed to maintain development here in harmony with natural processes. The cliff area in the Central Belle Fontaine portion of this coast is an ancient sand deposit which cannot be replaced by any mechanical means now economically feasible. Therefore, it must be preserved in its present state and location as long as homes are situated there. The beaches in the East Belle Fontaine and West Belle Fontaine areas, however, depend on the destruction of the cliffs in Central Belle Fontaine to provide sand necessary for their continued existence. It is these conflicting needs for diminishing sand resources which this report addresses.

Up to now, the control of erosion at Belle Fontaine has been the responsibility of each individually threatened landowner. The result has been a scattering of bulkheads, riprap, and small groins all along the Belle Fontaine shoreline. The individual responsibility for erosion control on private property still exists; however, a unified approach to erosion control on an area-wide basis with a pooling of individual resources can accomplish the task more effectively. The results of individual landowner erosion control efforts are shown by the Shoreline Evolution Model (SEM) in Joseph Suhayda's paper to have only limited short-term success and a generally negative impact on neighboring shorelines. A combined nourishment and breakwater approach on an area-wide basis, on the other hand, can effectively halt shoreline retreat, but only if all landowners participate collectively. The SEM was developed to gauge the probability of success of such an effort, and to help estimate the individual prorated annual cost of maintaining the system. Considering the cost of "beachfront" property at Belle Fontaine, the calculated annual cost of this approach is quite reasonable.

The SEM developed by Suhayda is founded on sound engineering principles, but there are still some unknown factors which must be resolved before the model can be acclaimed as a success. The model assumes 100% conservation of sand in the longshore drift system, and it then predicts the movement of this sand along the shoreline based on predicted weather conditions. There is no known way to predict how much, if any, of the sand on the beach face is lost offshore and taken out of the system. The muddy bottom sediments offshore of Belle Fontaine do contain sand, occasionally in significant amounts. The wave fields generated by the model are based on a relatively short wavemeter observation period extrapolated over several years. Actual long-term conditions may differ from those predicted by the model.

In order to refine the model and define some of these unknown parameters, the model must be tested under actual conditions. Such a test is underway at this writing (1994). The U. S. Environmental Protection Agency through the Gulf of Mexico Program awarded a grant in 1993 to Jackson County to test the SEM with a sand nourishment project. The grant covers the cost of purchasing sand from an inland sand pit for placement on the beach at Belle Fontaine. Jackson County provides matching funding to transport and distribute the sand on the beach. The Office of Geology Coastal Section monitors the movement of this new sand as it responds to actual weather conditions. Twenty-five thousand cubic yards of sand are being placed on the beach at Segments 15 and 16, and 10,000 cubic yards at Segment 20. The sand is almost identical in grain size to that now present on the beach, so it should respond well to the model predictions. Any variations from predicted results are being noted and incorporated into the model.

Once the model has been proven under actual conditions, it is hoped that the homeowners association at Belle Fontaine can generate the necessary support to begin a unified area-wide implementation of the erosion control measures recommended by this report. The successful model can also be used as supporting evidence for future permit requests to implement the erosion control system.

The history of coastal management in Mississippi has been outlined by Cathy Hollomon in her paper. She also listed steps which must be taken and permits which must be acquired to implement any shoreline modifications at Belle Fontaine. As the test project nourishment of the beach at Belle Fontaine is the first on a private beach in Mississippi since the inception of state and federal coastal management practices, it will set a precedent for future "soft-structure" erosion control efforts on private rather than public property. Since the area being filled by the nourishment is stateowned water bottoms, there can be no private claim to ownership of the artificially created land area.

Since the first occupation of the Belle Fontaine area by the Indian tribes, through the discovery by d'Iberville and Baudreaux, much has been written about the appreciation of the natural beauty of the place. Beauty, however, is fleeting. The shoreline at Belle Fontaine began the process of erosion and recycling of the sediment as soon as it was formed. For man to live in harmony with natural forces at Belle Fontaine he must learn to adapt and augment those forces rather than struggle against them. This report has shown how that might be accomplished in an economically feasible manner with a reasonable chance for success. If the strategy to control erosion here at Belle Fontaine is successful, then the same strategy might be used elsewhere along the Gulf of Mexico shoreline where similar problems exist.



