BEACH RESTORATION WORKS.
CANCÚN, MÉXICO.
First Stage: FEDERAL BUDGET / MINISTRY OF TOURISM

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OBJECTIVES:

1. TO RECALCULATE THE SAND VOLUME FOR EVERY 100 M SECTION ALONG A 12 KM FRONT BEACH.

2. TO SUPERVISE THE BEACH RESTORATION WORKS FROM PUNTA CANCÚN TO PUNTA NIZUC, PUMPING 2.7 MILLION m³ FROM THE BORROW SAND BANK “LA OLLITA”.

3. TO WARN THE AUTHORITIES ABOUT FUTURE ACTIVITIES NEEDED TO PROTECT AND MAINTAIN THE BEACH RESTORATION.
1. THE SIGNIFICANT WAVE HEIGHT DURING WILMA HURRICANE WENT UP TO 11 METERS.

2. A LARGE QUANTITY OF CUBIC METERS OF SAND WERE WIPPED OFF, STRIPPING PARTIALLY MANY KILOMETERS OF FRONT BEACH.

3. THE DAMAGE CAUSED TO THE BEACHES LED TO AN ECONOMIC BREAK DOWN OF THE TOURISTIC ACTIVITIES.
Damage and expected beach widths, Punta Cancún area.

**NORTH ZONE**

- **MAXIMUM EXPECTED WIDTH**
- **MINIMUM EXPECTED WIDTH**
- **CONSTRUCTION WIDTH**

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Before Wilma

After Wilma
Damage and expected beach widths, central area.

--- Before Wilma
--- After Wilma
Damage and expected beach widths, Punta Nizuc area.

--- Before Wilma

--- After Wilma
BEACH RESTORATION PROGRAM. 1st. STAGE

It starts from Hilton hotel towards Punta Nizuc (South Point).

The works continue from Hilton hotel towards Punta Cancún (North Point).

Programmed Advance: 1 km per week

Restoration Length: 12 km.
RECALCULATION OF THE SAND DISTRIBUTION:

- TO DISTRIBUTE THE VOLUME OF SAND TO ACHIEVE THE EVERY 100 m DESIGN PROFILES THROUGH THE 12 km FRONT BEACH WITH 2.7 MILLION m³ OF SAND, TO BUILD AN AVERAGE WIDTH OF 25 m.

![Diagram showing sand distribution](image)
Beach Profiles after hurricane Wilma. See the sand bar formed between depth 7 to 11m.
AFTER THE PROJECT:

ONCE FINISHED THE FIRST STAGE OF BEACH RESTORATION WORKS, IT IS WIDELY RECOMMENDED:

- TO MONITOR THE BEACH FILL THROUGH BATHIMETRIC SURVEYS EVERY 2 MONTHS,
- TO PERFORM WAVE AND CURRENT MEASUREMENTS,
- TO VALUE FUTURE SAND FILLS AND THEIR COSTS,
- TO EXPLORE NEW BORROW SAND AREAS.
SUMMARY.

- This is the first stage of beach restoration works for Cancun.
- The volume of sand was restricted by the budget given by the Federal Government of Mexico.
- The expected average beach width along the 12 km front beach, is 25 meters, with 2.2 meters above mean sea level.
- However there will be some coastal areas with beach width smaller than before hurricane Wilma. So it is necessary to continue a second beach fill.
- This beach restoration work is scheduled to be finished within 12 weeks, starting on February 1st, 2006.