Overview of Metal Detecting Saltwater Beaches

by Lee Wiese
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MDHTALK.org
Metal Detecting Beaches

Beach Profile

Old Beach Portion

New Beach Portion
this is Sand that is
Re-deposited in the
Spring

At Low Tide this
Portion of the
Beach is Exposed

Dry Sand

This Portion of the Beach
is Usually Removed in
Winter Storms

Swell Period

Beach Slope is Mix of Dry & Wet Sand

To Become a Serious Beach Hunter and have Consisted
Results You **Must Learn to READ the Beach**
Metal Detecting Beaches
Profile

beach during and after a storm

borrow
bring

old beach profile

store
spread
wind transport

storm beach profile

Fine grains, settle more slowly

Coarse grains, settle faster

UP

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Metal Detecting Beaches

Saltwater Beaches are Ever Changing

The Beach Shore Profile can be Different from Day-to-Day and can Change Dramatically from Season-to-Season.

The Causes for Beach Change or Erosion are:

- High and / or Low Tides
- High Surf / Swell Conditions (5-20 ft)
- Short or Long Swell Periods (7 to 15 sec between Swells)
- High Surf at High Tide can Effect Huge Change
- Swell Direction Southwest vs. West, Etc.
- On Shore vs. Off Shore Winds & Wind Direction
- Storms and Hurricanes Tide Surges

Max Beach Erosion

- Storm Situation
- High Tide (+5 to 6 Ft+)
- Southwest Swells
- Swells (15 to 20 Ft)
- Swell Period (7-9 Secs)
- On Shore Winds
- Tide Surges
Metal Detecting Beaches

Beach Detecting Locations

- **Dry Sand**
  - Old Beach Dry Sand
  - New Beach Dry Sand
- **Blanket Line (25-65 Ft Back from Crest)**
- **Beach Crest**
- **Wet Sand**
  - Wet Sand Water Line
  - Low Spots, Valleys, Surf Pocket
- **Sand Scallops**
  - Scallop Left or Right Side
  - Scallop Valley
- **Bed Rock or Clay Bottom (Winter Only)**
- **Beach Cuts**
- **Beach Slope**
  - Upper Slope (Near Crest)
  - Lower Slop (Near Water)
- **Flatten Beaches (Usually Winter Only)**
- **Water**
  - Low Tide Trough

**NEVER Metal Detect the Beach Grass or Grass Dune Areas**

**Other Beach Locations**

- Beach Events
- Play Ground Areas
- Volley Ball Courts
- Along Wall Areas
- Beaches in Front of Hotels
- Beach Chair & Lounge Areas
- Beach Walk Ways (Entrances)
- Concessions Areas
- Picnic Table Areas (Check First)
Metal Detecting Beaches

Blanket Lines

Line #1

Line #2
Metal Detecting Beaches

Beach Scenes

Lounge Area

Blanket Lines
Metal Detecting Beaches
Cut with Some Fill, Crest, Blanket Line

Fill this is an 18 Hour Old Cut
Metal Detecting Beaches
Cut into the Beach Slope

Great Cut that goes into the Sand Dune Area

Cut into the Slope
Metal Detecting Beaches
Cut into the Beach

Great Cut that goes into the Beach Area
Metal Detecting Beaches
Cut into the Beach

Great Cut that goes into the Beach Area
Metal Detecting Beaches
Cut into the Beach Slope & Dune

Great Cut that goes into the Old Beach Slope

Great Cut into Sand Dune
Metal Detecting Beaches

Rock on the Beach

Detect Rock Concentrations
Metal Detecting Beaches
Ripple Surf Action

Small Rock Exposure
Slope
Metal Detecting Beaches
Wet Sand High to Low Tide Region

Low Tide Mark
High Tide Mark
Wet Sand
Metal Detecting Beaches
Wet Sand Water Line (High Tide Surf)

Low Spot

Wet Sand Water Line
Metal Detecting Beaches
Beach Trough & Flat Spots

Trough or Ripple Cut

Flat Spot or Pockets
May be a Very Small Washout
Metal Detecting Beaches
Beach Trough, Ripple Cut, Flat Spot
Metal Detecting Beaches
Scallops
Metal Detecting Beaches
Scallops

More Scallops

Old Beach Dry Sand Area

Air View of Scallops & Slope

New Beach Dry Sand Area

Dotted Line is Winter Shore Line

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Metal Detecting Beaches

Slope

Upper Slope

Lower Slope is under Water
Metal Detecting Beaches
Other Places at the Beach to Metal Detect

Events

Play Areas

Wall Areas

Beaches In Front of Large Hotels
Metal Detecting Beaches

Other Places at the Beach to Metal Detect

Beach Chair / Lounge Areas & Walk Ways

Concessions

Table Areas - Check with Ranger First

Volley Ball Areas
## Metal Detecting Beaches

### Detecting Locations & Seasonal Conditions

<table>
<thead>
<tr>
<th></th>
<th>Winter</th>
<th>Spring</th>
<th>Summer / Fall</th>
<th>Storms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dry Sand</strong></td>
<td></td>
<td></td>
<td>XXXXXXX</td>
<td></td>
</tr>
<tr>
<td>- Old Beach Dry sand</td>
<td>Some Erosion</td>
<td>XX</td>
<td>XXXXXXXXX</td>
<td></td>
</tr>
<tr>
<td>- New Beach Sand</td>
<td>Complete Erosion</td>
<td>Beach Re-building</td>
<td>XXXXXXXXX</td>
<td></td>
</tr>
<tr>
<td><strong>Blanket Line (25-65 Ft Back from Crest)</strong></td>
<td></td>
<td></td>
<td>XXXXXXXXX</td>
<td></td>
</tr>
<tr>
<td><strong>Beach Crest</strong></td>
<td></td>
<td></td>
<td>XXXXXXXXX</td>
<td></td>
</tr>
<tr>
<td><strong>Wet Sand</strong></td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXX</td>
</tr>
<tr>
<td>- Wet Sand Water Line</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXX</td>
</tr>
<tr>
<td>- Low Spots, Valleys, Surf Pocket</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
</tr>
<tr>
<td><strong>Sand Scallops</strong></td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
</tr>
<tr>
<td>- Scallop Left or Right Side</td>
<td>XXXX</td>
<td>XXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
</tr>
<tr>
<td>- Scallop Valley</td>
<td>XXXXX</td>
<td>XXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXX</td>
</tr>
<tr>
<td><strong>Bed Rock or Clay Bottom (Winter Only)</strong></td>
<td>Requires Storms</td>
<td></td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
</tr>
<tr>
<td><strong>Beach Cuts</strong></td>
<td>Requires High Surf</td>
<td>If Avialable</td>
<td>If Avialable</td>
<td>XXXXXXXXX</td>
</tr>
<tr>
<td><strong>Beach Slope</strong></td>
<td>XXXXXXXXX</td>
<td>XXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
</tr>
<tr>
<td>- Upper Slope (Near Crest)</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>If Avialable</td>
</tr>
<tr>
<td>- Lower Slope (Near Water)</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>If Avialable</td>
</tr>
<tr>
<td><strong>Flatten Beach (Winter Only)</strong></td>
<td>Not Good Detecting</td>
<td></td>
<td>Can be OK</td>
<td>XXXXXXXXX</td>
</tr>
<tr>
<td><strong>Water</strong></td>
<td>Dangerous</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>Extremely Dangerous</td>
</tr>
<tr>
<td>- Low Tide Trough</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>XXXXXXXXX</td>
<td>Extremely Dangerous</td>
</tr>
<tr>
<td><strong>Low Tide</strong></td>
<td></td>
<td></td>
<td>XXXXXXXXX</td>
<td>Extremely Dangerous</td>
</tr>
<tr>
<td><strong>High Tide</strong></td>
<td></td>
<td></td>
<td>XXXXXXXXX</td>
<td>Dangerous</td>
</tr>
<tr>
<td><strong>Surf / Swell Condition</strong></td>
<td>All Conditions</td>
<td>4-8 Ft</td>
<td>Low Surf &amp; Swells</td>
<td>15 Ft + Short Period</td>
</tr>
</tbody>
</table>

**XXX XXXXXXXXX** = Best Area, XXXXXXX= Good Area, XXXX= Certain Conditions

Metal Detecting Hobby Talk  
http://www.mdhtalk.org
Metal Detecting Beaches
Beach Detecting Ethics

- I will check Federal, State, County and Local Laws before searching. It is my responsibility to “KNOW THE LAW”.

- I will as an ambassador for the hobby, be thoughtful, considerate and courtesies at all times to others & their property. (Stay away from beach goers by 15-20 feet)

- I will not detect near, between or among groups of beach goers.

- I will remove and dispose of any and all trash and litter that I detect on the beach.

- I will take care to refill all holes in the beach sand before moving on.

- I will shake sand scoops low to the beach so that the sand will not be sprayed on beach goers.

- I will return all lost items to beach goers that ask for help in locating their lost item.

- I will approach and educate those who do not follow good metal detecting ethics on the beach.

**Very Important on the Beach**
Metal Detecting Beaches
Detecting Methods

Search Patterns

Overlapping Pattern
This pattern can be used for any type of metal detecting; the benefits are that each pass overlaps on the previous pass. Leaving no undetected beach.

Random Pattern
This search pattern is very common but as you can see there are many areas of the beach left undetected.

Spiral Pattern
This search pattern is used once a target has been detected and recovery from the sand. Do a Spiral Search around the target for additional targets that may have been lost at the same time.
# Metal Detecting Beaches
## Recommended Detecting Method

<table>
<thead>
<tr>
<th>Dry Sand Detecting</th>
<th>Wet Sand Detecting</th>
<th>Water Detecting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select a spot where there is high Beach Traffic and do a Pattern Search perpendicular to the shore line. Swing the coil slow, low, level and scrub the sand with the coil. Listen for LOW signals this usually indicates small or deep targets. Use a Sand Scoop to retrieve Targets.</td>
<td>Select a section or the beach where swimmers enter the water. Do an Overlap Search Pattern perpendicular to the waters edge up the beach slope to the Beach Crest. Listen for Low signals this usually indicates small or deep targets. Use a sand or water scoop to retrieve targets. After retrieving a few targets look back to see if there is target pattern (<em>Drop Zone</em>), if there is a pattern search this portion of the wet sand going forward.</td>
<td>Select an area of water that appears to get many swimmers during the day. Start an overlap search pattern in the water perpendicular to the shore line moving deeper into the water. Continue this pattern back and forth looking for a potential target zone in the water. Also look for troughs that may run parallel to the shore line. Troughs collect targets and can be very productive. Use a water scoop to retrieve targets.</td>
</tr>
</tbody>
</table>

**Drop Zone:** This can be found on a wet sand slope. This is caused by the surf’s action during high tide and as the tide recedes, a zone of targets may be left behind. This can occur anytime there has been some noticeable beach erosion.
## Metal Detecting Beaches

### Salt Water Beach Detectors

<table>
<thead>
<tr>
<th>Detectors</th>
<th>Dry Sand</th>
<th>Wet Sand</th>
<th>Wading</th>
<th>Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Low Price VLF Detectors</td>
<td>Bounty Hunter, Fisher,</td>
<td>Minelab Explorer 1&amp;2, SE,</td>
<td>Minelab Explorer 1&amp;2, SE, ETRAC,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Garrett, Minelab,</td>
<td>Excalibur Series</td>
<td>Quattro, Safari, Sovereign Series</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teknetics, Tesoro,</td>
<td></td>
<td>White’s 6000 DI Pro, XLT, DFX, TDI,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>White’s. <strong>There are ~ 80</strong></td>
<td></td>
<td>Vision</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Models in this Grouping</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most High End VLF Detectors</td>
<td></td>
<td>Fisher CZ-20 &amp; 21, 1280</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minelab Excalibur Series</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>White’s BHID Series</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salt Water Detectors</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most PI Detectors</td>
<td></td>
<td>Garrett Infinium L.S. Sea</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hunter Mark II</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Tesoro Sand Shark</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>White’s Surf PI, PI Pro,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>PI Dual Field</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

[Link to Metal Detecting Hobby Talk](http://www.mdhtalk.org)
Metal Detecting Beaches
Beach Detecting Tools

- Sand Scoop
- Water Scoop
- Rain Cover
- Loop Support (Optional)
- Larger Coil (Coil Cover Optional)
- Knee Pads (Optional)
- Finds / Trash Pouch
- Web Belt
- Headphones
**Metal Detecting Beaches**

**Beach Detecting Clothes**

<table>
<thead>
<tr>
<th>Water Detecting</th>
<th>Strom Gear</th>
<th>Sand Detecting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wet / Dry Suit</td>
<td>Rain Jacket &amp; Waders</td>
<td>✓ Normal Street or Beach Clothing</td>
</tr>
<tr>
<td></td>
<td>Scuba Boots</td>
<td>✓ A good Hat and Sunblock Lotion</td>
</tr>
<tr>
<td></td>
<td>Safety Concerns</td>
<td>✓ May want to Consider Gloves</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Good Shoes with High Sides Best for the Sand</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Scuba Boots</td>
</tr>
</tbody>
</table>
Santa Cruz, California

19 September 2009 - 20 September 2009

36.9667° N, 122.0167° W

- **2009-09-19 04:54 PDT** 0.46 feet Low Tide
- **2009-09-19 06:53 PDT** Sunrise
- **2009-09-19 07:59 PDT** Moonrise
- **2009-09-19 11:27 PDT** 5.43 feet High Tide
- **2009-09-19 17:30 PDT** 0.07 feet Low Tide
- **2009-09-19 19:09 PDT** Sunset
- **2009-09-19 19:25 PDT** Moonset

- **2009-09-20 00:01 PDT** 4.77 feet High Tide
- **2009-09-20 05:32 PDT** 1.07 feet Low Tide
- **2009-09-20 06:54 PDT** Sunrise
- **2009-09-20 09:08 PDT** Moonrise
- **2009-09-20 11:59 PDT** 5.53 feet High Tide
- **2009-09-20 18:16 PDT** -0.07 feet Low Tide
- **2009-09-20 19:07 PDT** Sunset
- **2009-09-20 19:57 PDT** Moonset
Metal Detecting Beaches
Some Web URLs

Beach Forums
Treasure Depot: http://www.thetreasuredepot.com/cgi-bin/bbs62x/class_config.pl

Tide Tables
Tide Predictor: http://tbone.biol.sc.edu/tide/
Region Predictions: http://www.saltwatertides.com/pickpred.html

Wave Predictor
Northern California:

Santa Cruz
Beach Cam: http://www.surfline.com/surf-report/cowells-central-california_4189/
Tide Table: http://tbone.biol.sc.edu/tide/tideshow.cgi?site=Santa+Cruz%2C+California