

MEMORANDUM

DATE: November 7, 1996

TO: Division of Shellfish Sanitation Staff

FROM: R.E. Croonenberghs, Ph.D., Director
Division of Shellfish Sanitation

THROUGH: Eric H. Bartsch, P.E., Director
Office of Water Programs

SUBJECT: Shoreline Survey - Procedure - Shoreline Survey Preparation and Procedure

Replaces Working Memo #257

PURPOSE: The intent of this document is to describe the procedures for carrying out a shoreline sanitary survey. Complete preparation prior to beginning the field work will result in good public relations in the survey area, efficient use of time and an accurate final product.

I. Preparation for Field Work

- A. Call the shoreline supervisor for topographic maps, previous survey field sheets, printed marina forms, previous sanitary shoreline survey report and map.
- B. Some surveyors prefer to order the final Mylar reproduction at this time and add symbols during the course of the field work. Final numbers can be added after the surveying has been completed. Enlargements of congested areas may be ordered as they are encountered.
- C. Some survey areas may have their boundaries revised by the shoreline supervisor and/or Field Director. Properties located beyond impounded waters will **generally** not be surveyed. The distance surveyed from tidal and/or free flowing streams will be a **minimum** of 500'.
- D. Review the previous survey report and map boundary. Note properties with uncorrected sanitary deficiencies and those properties **outside** revised survey boundary that directly impact shellfish waters (STF's, large industrial wastes, etc.). These properties will be added to the survey report and final map with a letter designation instead of a final number.
- E. Circle on the previous survey final map all deficient and significant properties listed in survey report within current survey boundary.
- F. Make a field map. Tape together topo maps and outline survey boundary, referencing previous field maps and final map from last survey to assure accuracy. On survey areas with revised boundaries, compare with map that the shoreline supervisor provides. Surveyors may have preferences in the type of field map used that may vary somewhat from this suggestion. The only requirement is clarity and ease of use.
- G. Add Reference Points to field map.

- H. Reference previous survey final map and establish flow of survey on field map. Try to keep water on your left or right depending on which end of survey you start. You can lightly pencil in the flow to help you work your way around each individual watershed.

There is not one right way to do the survey flow. However, it is important to be consistent when surveying and not miss any properties. The following are some examples of survey flows.

1. Basic Survey Flow - start at the upper or lower reference point. Survey properties in each individual watershed. Maintain water on your left or right. Work your way up one side of the road and down the other within each watershed. When you come to a stream, creek, etc., turn around and survey the other side of the road. Finish surveying that individual watershed and then cross the creek and continue surveying on the other side. See Example 1 - Basic Survey Flow.
 2. Subdivision or congested area survey flow - when surveying in congested areas, try to establish a pattern and maintain it throughout. There are a number of ways to survey subdivisions. It is important to be consistent. See Example 2 - Survey Flow for Subdivisions.
 3. On-site sewage disposal systems and significant properties in sewer areas -some sewer areas still have residences and businesses that are not served by public sewer. These properties, along with significant properties are worked into the final survey flow as if the area was not sewer at all. Pump stations are shown on final map, but are not included in the survey flow. See Example 3 - Survey Flow in Sewered Areas with Active Septic Tanks.
 4. Flow Schematic for Island Surveys - surveys on islands are done in the same manner as basic surveys except that the start and end points of the survey are the same, just on opposite sides of the road. Work your way around each individual watershed, maintaining the water on your left or right. See Example 4 - Survey Flow for Islands.
- I. Gather enough field forms (Attachment 1), daily log sheets (Attachment 2), blank marina forms (Attachment 3), envelopes, sanitary notices (Attachment 4), tape, business cards, pens and pencils for survey.
- J. Make an appointment with the local health department environmental health specialist in survey area before starting survey.
- K. Reference Working Memo #264 for property classification definitions.
- L. Reference Working Memo #191 for protocol on surveying campgrounds and trailer parks.

II. Field Work at On-Site Facilities

- A. Before starting property inspections, officials in the locality must be informed of your presence and your activities.
1. Visit the local law enforcement agency in the survey area.
 - a. Identify yourself, present your state ID and leave a business card.
 - b. Use field map to describe the area in which you will be working.
 - c. Describe your car and provide the license number.

2. Visit the local health department Environmental Health Specialist. Topics the specialist needs to cover are:
 - a. New housing developments, population increases since last survey.
 - b. Health Department phone number and name of specialist to put on Sanitary Notices issued. If you write this information on the back of the Sanitary Notice pad, it makes it easier to find.
 - c. Properties in Section A (pre-1994 surveys) and Sections B. 1. and C. 1. and 2. (post 1994 surveys). Are they still in operation?, etc.
 - d. Get directions to office of the Commissioner of Revenue.
 - e. Extension of sewer sections (if any) in survey area. If sewer line(s) have been extended, the specialist needs to contact the town manager or engineer to get information to update map.
 - f. If there are sewer sections in the survey area, verify that all properties are on public sewer. Some localities have ordinances for hook-up to public sewer when the on-site system fails. The specialist can sometimes get addresses of property owners who have not connected to public sewer from the town manager or Dept. of Public Works.
 - g. Find out what the local health department specialist needs are regarding your obtaining the owner and/or occupant's name and address when no one is home at a property with an on-site deficiency.

B. Conducting the survey.

1. Beginning at the upper or lower reference point, start at the dwelling closest to the reference point.
2. Attempt to establish contact with the owner of every property visited.
3. If someone is home, identify yourself as a State Health Department employee doing a survey on sewage disposal and inform them that you need to check their septic system or privy.
4. If the owner refuses to let you inspect property:
 - a. Explain why we do the inspections (protection of public health, classification of shellfish growing waters, etc.).
 - b. If they still refuse and you do not suspect any problems at the property, write down house description on daily log and add the property to field map. Note in remarks column that the owner refused inspection.
 - c. If they still refuse and you have a strong suspicion that there is an on-site deficiency, politely let the owner know you are going to speak to the sheriff. Do not tell them you are going to the sheriff unless you intend to do so. Sometimes just mentioning the sheriff is enough to convince the owner to let you do the inspection. If not, follow up and see the sheriff. Bring the owner's name and address and an accurate location of the property with you. If the sheriff's office assists you, then notify your supervisor.
5. If owner knows where the septic tank and drainfield are, inspect there first. Investigate the property thoroughly. Look for pipes to ditch near edge of yard, washing machines draining waste on ground, signs of grease trap or septic tank malfunction (generally near house).
6. When two or more specialists are working on a survey, it is important to keep each other advised of progress. This eliminates overlapping survey areas and/or missing properties.

7. Specialists working on surveys with **revised** boundaries may add or delete properties, when appropriate, to reflect the actual impact on survey area. Specialists should consult with their Field Director or the Shoreline Supervisor before finalizing their revisions.
8. At properties with **NO TRESPASSING** signs:
 - a. If gate is open, drive to the house and get permission from the owner.
 - b. If no one is home, leave and make a few more attempts to inspect or try to get the owner's phone number and make an appointment to inspect property.
 - c. If gate is closed and locked, try to get the owner's phone number and make an appointment to inspect the property.
 - d. If unable to make contact and there does not appear to be a deficiency, describe house on your daily log and add property to the field map. Note in remarks column that you were unable to make contact.

C. Documenting your Results

1. Write down the field number, house description or street address (not box number) on daily log sheet and whether or not you had contact with owner. Field numbers must have a letter prefix to distinguish them from final numbers. A field number needs to be used on all surveys, even those done by one specialist. This eliminates confusion when correction letters are sent to Richmond while the survey is still in progress. If you deviate from the established flow, make notations in left margin of daily log to make it easier to correct the flow when you fill out the survey flow chart.
2. Mark properties on the field map, adding new dwellings and roads when necessary. Mark significant and deficient properties with a red pen or pencil on field map to make it easier to find these properties when compiling survey flow chart and adding properties and symbols to final map. "X" out buildings and roads that are no longer present. Try to number every ten properties on field map. If you are surveying a new subdivision that is not on the topographic map, you can sometimes get a map of the development from the county clerk's office and add it to the map later.
3. If you find an on-site deficiency or significant activity that would impact shellfish waters, fill out a field form. Write the field number, property classification, circling either D (direct) or I (indirect), and what was found. Fill out the form as completely as you can at the time of inspection, including a diagram on the back. The property description needs to be accurate, especially at properties that do not have 911 addresses. The diagram should describe in detail what was found on-site, not just where property is located. Include all outbuildings, landmarks, etc. Give distances and elevations, relative to watercourse, whenever possible. This will make it easier to determine if findings at property have a direct or indirect impact on shellfish growing waters. If the owner is not present, get name and address from mailbox, neighbor or from Commissioner of Revenue, Tax Office, or real estate office.
4. If the property is classified CONTRIBUTES POLLUTION, CONTRIBUTES POLLUTION (Kitchen or Laundry Wastes) or NO FACILITIES, a Sanitary Notice must be issued at time of inspection.
 - a. If owner is not home, issue the notice to Owner Undetermined and use procedure in item 5.
 - b. Place original copy of Sanitary Notice in a DSS letterhead envelope and tape to door. (*Note* Do not use masking tape on plexiglass. The adhesive cannot readily be removed. Use transparent tape.)

- c. Draw the same diagram on back of pink copy of Sanitary Notice for local

environmental health specialist that you have on back of field form.

d. If the owner refuses to take Sanitary Notice from you, send it to them by certified mail. The local Health Department will do this for you. Let the local health department specialist know that the owner refused to accept Sanitary Notice.

5. Obtaining owner's name and address.

- a. Names and addresses may be obtained from the mailbox in front of dwelling or from a neighbor.
- b. In areas with 911 addresses, the street address may be sufficient. If owner is home, ask for the name.
- c. If the address is not evident at the property, go to the office of the Commissioner of Revenue (Tax Office or Real Estate Office) and proceed as follows:
 - (1) Referencing your field map and field sheets, locate property on tax map.
 - (2) Write tax map number at top of field sheet.
 - (3) Look up tax map number in vertical file or tax book.
 - (4) Write owner's name and address on field form and on local health department specialist's Sanitary Notice copy.
 - (5) If you need help finding a name or address, ask one of the people in the office.

D. Preparing and Submitting Sanitary Notices.

1. Fill in front of the pink Sanitary Notice copy completely before turning it in to the local health department specialist.
2. A schematic diagram of what was found must be drawn on back of pink Sanitary Notice copy along with any useful information that may help local health department specialist when visiting a property (Ex: mean dog in yard, gate locked at end of long drive, etc.).
3. If you have the owner's phone number, write it in next to owner's name on pink copy of Sanitary Notice.
4. Make a photocopy of the field map which identifies the location of the on-site deficiencies. Circle those properties with on-site deficiencies on photocopy map with red pencil or pen and add field number next to the circled properties. On the back of the photocopy, write date, growing area and appropriate field map (corresponds to field number). Turn in copy with the Sanitary Notice(s).
5. Sanitary Notices must be turned into local health department weekly.
 - a. Central Office specialists need to turn in notices Wednesday mornings and before they leave area at end of week.
 - b. Field Office specialists need to turn in notices by the end of the week.
 - c. Field office staff can, with the agreement of the local health department, fax copies of the Sanitary Notices to the local health department, and then mail the pink copies. This arrangement is preferred when the health department is not located near the area being surveyed and it is not time efficient to drive to the local health department.
6. If the local health department environmental health specialist is in the office, discuss what you found.

E. Completing the Field Work

WORKING MEMO #S 265
PAGE 6 OF 15

1. Specialists are advised to put the survey information on the computer weekly. This eliminates trying to remember what you saw months earlier.

2. Call the shoreline supervisor at least a week before surveying is complete and order Mylar reproduction map of survey area, if you have not done so already. Determine if the entire map needs to be enlarged or if only certain areas need enlargement.

3. On the last day of surveying, surveyors must
 - a. Notify the local law enforcement official that survey field work is finished.
 - b. Notify the local health department that the survey is complete and turn in all remaining Sanitary Notices with a photocopy of field map of area where Sanitary Notices were issued.

III. Sewage Treatment Facilities

- A. Specialists do not visit STFs, but will assign a property number when establishing the final survey flow.
- B. Staff members from OWP Engineering Field Offices will conduct the inspection of the STF.
- C. In the case of facilities that EFOs do not have information on (primarily industrial facilities or those under the jurisdiction of the local health department), shellfish field offices will attempt to obtain inspection reports or other information from DEQ regional offices.
- D. Engineering staff will provide a current preface and inspection report using the standardized joint VDH/SWCB report form.

Attachments

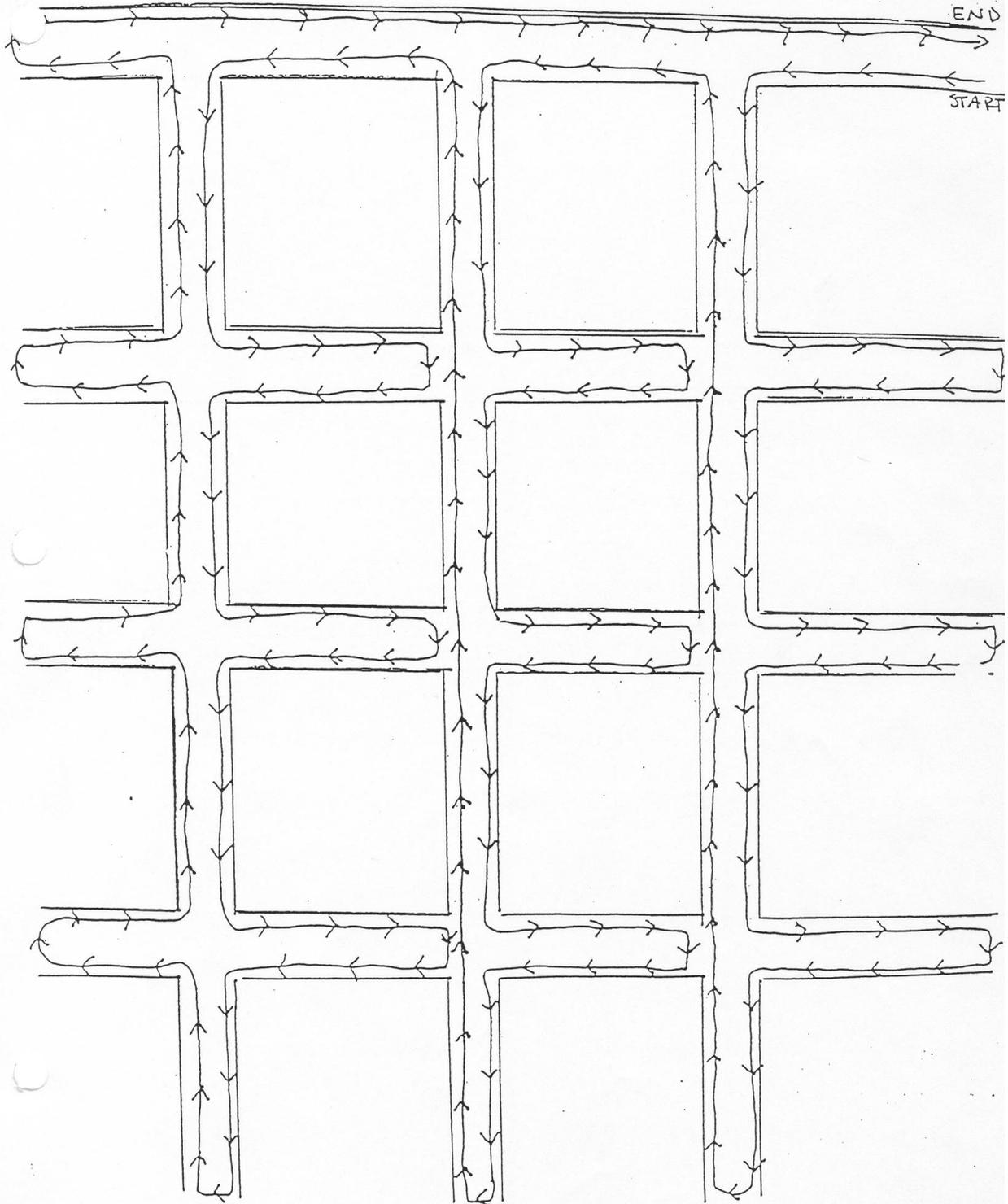
EXAMPLE 1 -
BASIC SURVEY FLOW

WORKING MEMO #S265
PAGE 7 OF 15

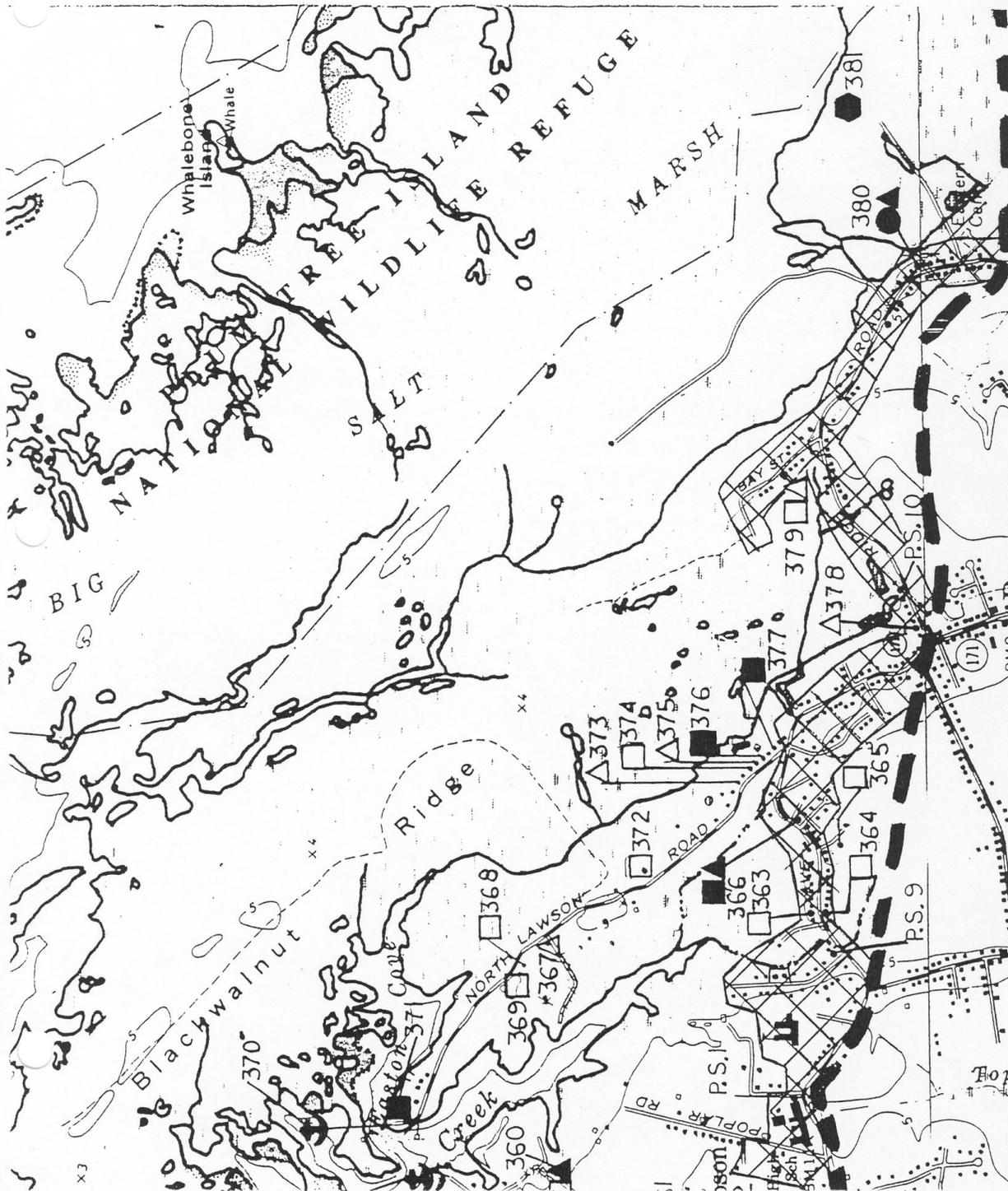


EXAMPLE 2 - SURVEY FLOW
FOR SUBDIVISIONS

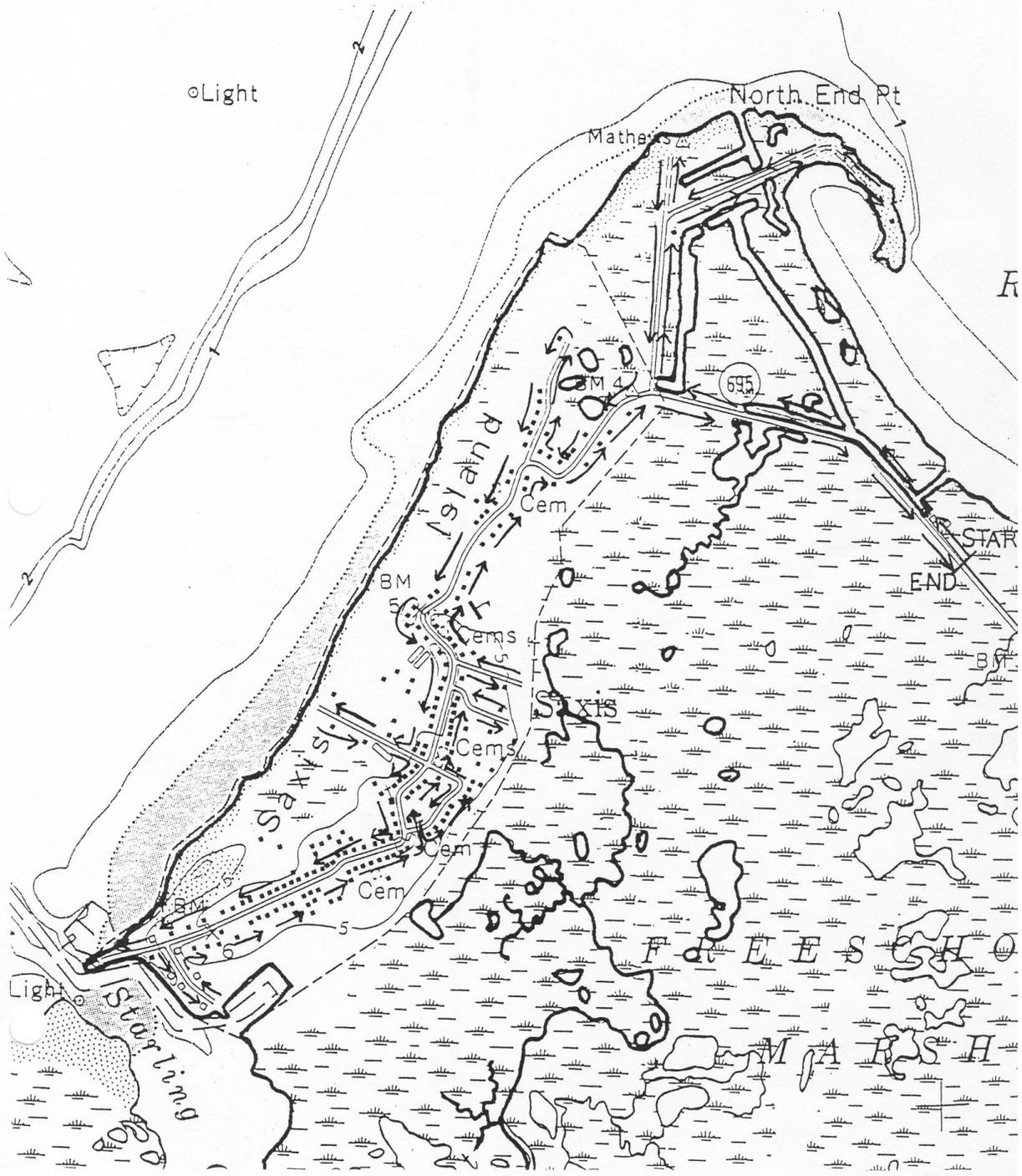
WORKING MEMO #S265
PAGE 8 OF 15



EXAMPLE 3 - SURVEY FLOW
IN SEWERED AREAS WITH
ACTIVE SEPTIC TANKS



EXAMPLE 4 -
SURVEY FLOW
FOR ISLANDS



SHELLFISH SANITATION - SHORELINE SURVEY

Case # _____ County _____ Class _____ Field No. _____

- CONTRIBUTES POLLUTION, D or I
- CP (Kitchen or Laundry), D or I
- NO FACILITIES, D or I
- SEWAGE TREATMENT FACILITY, D or I
- POTENTIAL POLLUTION
- CAMPGROUND, MIGRANT LABOR CAMP
- INDUSTRIAL WASTES, D or I
- SOLID WASTE SITES, D or I
- BOATING ACTIVITY
- CONTRIBUTES ANIMAL POLLUTION, D or I
- TRAILER PARK
- SHELLFISH OR CRABMEAT PROCESSING PLANT

Occupant _____ Address _____

Owner _____ Address _____

Dwelling Public Business Marine Agricultural # Persons Served _____ Contact Yes No

Describe _____

HUMAN SEWAGE DISPOSAL DIRECT

- Cesspool: Distance to * _____ Elevation _____' Overflow to _____
- Septic Tank: Effluent to _____ Distance to * _____ Elevation _____'
- Privy: Type _____ Distance to * _____ Elevation _____'
- Direct to tidal waters, flowing stream or ditch.
- NO FACILITIES

REMARKS _____

KITCHEN AND LAUNDRY WASTE DISPOSAL DIRECT

- Direct to tidal waters, flowing stream or ditch.
- To ground surface. Will it reach tidal waters or flowing stream? Yes No
- Grease trap: Effluent to _____ Distance to * _____ Elevation _____'
- Septic tank system (see above)

REMARKS _____

SANITARY NOTICE: YES ___ NO ___ DATED _____

CONTRIBUTES ANIMAL POLLUTION DIRECT

No. and type of animal(s) _____

Manure and waste disposal _____

Distance to * _____ From: Barn, Stable, Shelter _____' Pasture, Pen, Lot _____'

REMARKS _____

BOAT ACTIVITY MARINA OPWBM UNDER SURVEILLANCE Marina sheet attached: Yes ___ No ___

- Boating services Sanitary facilities Pump-out Dump station

REMARKS _____

INDUSTRIAL WASTES DIRECT _____

SOLID WASTE SITE DIRECT _____

SEWAGE TREATMENT FACILITY DIRECT _____

Surveyed by _____ Date _____

*NOTE: Fill in ditch, stream, high tide mark, marsh, pond and other watercourse and distance.
(Use back for remarks and diagrams)

ATTACHMENT 3

COMMONWEALTH OF VIRGINIA
DIVISION OF WATER PROGRAMS
MARINAS AND OTHER PLACES WHERE BOATS ARE MOORED INSPECTION

DSS Use Only
Property No. _____
Class _____

(Name) _____ (Date) / / _____

(Address) _____ (County or City) _____

(Body of Water) _____ (Drainage Basin) _____ (Shellfish Growing Area) _____

(Owner) _____ (Address) _____
(Latitude) 0° 0.00000' (Longitude) 0° 0.00000'

I. TYPE OF ESTABLISHMENT: () Marina () OPWBAM () Under Surveillance
Number of Slips Permitted () DRY () WET Currently in Operation () Yes () No

Boat Accomodations:
Number of Slips Available _____ Seasonal () () Transient () ()
Number of Moorings Available _____ () () () ()
Number of Dry Storage Spaces Available () () () () TOTAL () ()

Boats Present at Time of Survey	Under 26 Ft		26-39		40 Ft & Over		Sub-totals	
	DRY	WET	DRY	WET	DRY	WET		
TYPE of BOAT STORAGE								
<u>PLEASURE</u>	()	()	()	()	()	()	()	()
<u>WORK</u>	()	()	()	()	()	()	()	()
	Totals						()	()

SERVICES AVAILABLE TO BOATS: () Boat Fuel () Water () Electricity
() Boat Sales () Ramp () Railway () Hoist () Repair

DSS Use Only:			
Supplies.....	() Marine ()	Groceries	() Other
Laundry.....	() Washers No.	Discharge to	

Containers provided for solid waste collection: () YES () NO

II. ONSHORE SANITARY FACILITIES AVAILABLE: () YES () NO () Variance () Exempt

Separate onshore facilities required: () Yes () No
Fixtures provided: Greatest distance from shore end of pier () Feet

Commodes		Urinals		Lavatories		Showers		Privies	
Male	Female	Male	Male	Female	Male	Female	Male	Female	

Accessible () Yes () No Marked () Yes () No
Good repair () Yes () No Clean () Yes () No

Sewage disposal () Treatment System-Name of system ()
() On-Site

Complete section if on-site sewage disposal:
() Privy-Type () Condition () Satisfactory () Unsatisfactory
() Septic tank/drainfield Condition () Satisfactory () Unsatisfactory
() Elevation above M.H.W. () feet to nearest watercourse

III. FACILITIES FOR HANDLING SEWAGE FROM BOATS

Removal of sewage from boat holding tanks -Restricted Service ()

Pump-out provided () Yes () No () Variance () Exempt
 Pump-out placarded as required () Yes () No Std. Sign Issued () yes ()
 Boats with installed toilets () Yes () No
 If exempt and another establishment furnishes alternate pump-out service
 Specify NAME _____ ()
 If have a pump-out, give operating schedule: months _____ ()
 Days per week() Operating hours()
 Maximum draft of boat that can be pumped out at low tide () FT.
 Fee for pump-out service if any _____ \$()

Equipment in place and operational:	Yes	No	Comments
Pump satisfactory.....	()	()	()
Suction line satisfactory.....	()	()	Size: ()
check valve in place.....	()	()	
gate valve in place.....	()	()	
Is potable water provided for.....			
flushing boat holding tank?.....	()	()	
if yes, is back flow prevention			
in place?.....	()	()	
Transporting tank required?.....	()	()	
condition of tank satisfactory.....	()	()	
size of tank.....			() gal
vent satisfactory.....	()	()	
satisfactory method of emptying.....	()	()	
Storage tank required.....	()	()	
condition of tank satisfactory.....	()	()	
size of tank.....			() gal
vent satisfactory	()	()	
location to nearest watercourse.....			distance () Elevation ()

IV. Dumpstation to empty portable sewage containers - () Yes () No () Exempt

If yes, are facilities provided to flush containers? () Yes () No
 Dumpstation placarded as required () Yes () No Std. Sign Issued () Yes () No

V. Final disposal of sewage from boats-

() Pump and haul contractor () Other

If contractor , give name and address _____

If other, explain _____

Number of boats with overnight occupancy:
 (0) Between 30 Days and 6 months per year
 (0) 6 months or more per year

Operator: Telephone :

Location:
 Municipally Owned: () Yes
 Certificate to Operate () Yes Date Issued / /

_____	_____
Inspection conducted by	Title
_____	_____
Present during survey	Title

General remarks

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF HEALTH
DIVISION OF SHELLFISH SANITATION

SANITARY NOTICE

Growing Area # _____ Field # _____

An inspection made on _____ day of _____ 19____ of

SEWAGE DISPOSAL FACILITIES

On premises owned by _____

Address _____

Occupied by _____

Address _____

Showed the following unsanitary conditions: _____

In accordance with Virginia Health Laws, Regulations, and local ordinances,
you are hereby notified to contact the _____

Health Department by _____ 19_____.

Health Department Contact _____

Phone # _____

Inspected By _____