



# Rotary Screw Traps

**KEEP THE COMPLETED CHECKLIST ON FILE WITH PROJECT LEADER WITH COPY IN VEHICLE OF CREW THROUGHOUT SEASON.**

The following checklist identifies items to be checked during the installation and/or routine annual inspection of Rotary Screw Traps. Since the information on a checklist is limited, further research is advised to ensure that any additional requirements are identified and corrected. Questions not pertaining to your operation should be answered N/A as Not Applicable. If your Station is not fully compliant with a question or requirement, answer NO. Since your decisions directly affect employee and public safety, carefully consider each item to ensure an accurate assessment. **All “No” answers need to be corrected prior to the installation/use of the Screw Trap. If this cannot be accomplished, then other means of data collection will be needed.**

Rotary Screw Traps		Y	N	N/A
<b>Public Safety</b>				
1	A rotating screw 5 to 8 feet in diameter and the associated pontoons can be an obstacle or hazard to navigation. Has the Station determined how the public uses the stream in question?			
2	Has the frequency and type of public waterway use been determined?			
3	Has any necessary permission, permit(s), or clearance(s) been obtained?			
4	Will the trap be placed in an area with limited public access, and if so are no trespassing/warning signs present?			
5	Have the potential hazards to the public of any anchor or mooring system been effectively mitigated, i.e., located in safe area, anchor points engineered/installed, cables marked, etc.?			
6	Will the trap be placed in an area where it will not be considered an attractive nuisance for the public?			
7	After use, are portable walkways secured against public entry?			
8	Is the mooring system (cables, blocks, etc.) protected from simple vandalism? <i>Part of the anchor system can only be released using tools or a key.</i>			
9	As needed, have lights and/or reflectors been added to the trap to mark a hazard to navigation?			
10	Are there adequate informational or warning signs to inform the public of potential hazards? <i>Note: A warning sign of itself may not be considered adequate protection for the public from a serious hazard.</i>			
11	Are there warning signs, buoys, etc., in place to warn all boaters of the upcoming hazard?			
12	Has the staff made necessary modifications (such as adding a surface prow in front of the screw) to prevent people or logs from entering the screw?			
13	If modifications have been made, has the manufacturer been advised to avoid compromising the Screw Trap integrity?			
14	Has management taken reasonable precautions to mitigate recognized public hazards associated with the placement of this trap? <b>Note: Given the potential degree of public hazard, the placement of a screw trap in a particular location may not be feasible from a safety and liability standpoint.</b>			
<b>Transportation of the Traps</b>				
15	Are trailers properly sized and equipped for highway operations?			
16	Can the towing vehicle safely pull the trailer?			
17	Are drivers towing trailers trained in trailer operations?			
18	Are operators trained in how to safely load and unload the trailer?			
19	Are operators trained how to properly secure the load on the trailer?			
20	Is there room at the drop off point to maneuver the trailer?			
21	Are trips preplanned so that drivers know the best approach and departure points?			
22	Has the driver been instructed to ensure that all lights and brakes are working properly prior to departure?			

23	If the vehicle is to be used in the placement of the trap, are there adequate hitches or anchor points on the vehicle, and are they rated for this kind of use?			
<b>Rotary Screw Traps</b>		<b>Y</b>	<b>N</b>	<b>N/A</b>
<b>Placement of the Trap in a Stream</b>				
24	Have the potential fluctuations in stream flow been accounted for in positioning and anchoring?			
25	<b>If heavy or bulky pieces will be moved manually, are there enough people to accomplish this safely?</b>			
26	Are there handles or other methods provided for secure grips on large pieces of the trap?			
27	If winches or jacks are needed to position the trap, do employees know how to safely operate these machines?			
28	Under the expected flows and debris loading, has the weight (or force exerted) by the fully assembled trap been evaluated?			
29	Has the steepness of banks, uneven footing, and possible slippery conditions been considered in the placement of the trap?			
30	If the trap is to be placed by boat, is the boat and motor adequate to safely move the trap?			
31	Will there be enough people on board to handle any mooring operations, leaving the boat operator free to handle the craft?			
<b>Placement of Traps in Remote Locations</b>				
32	Can the crew effectively communicate to summon assistance in an emergency? Has an emergency plan been developed for this specific site?			
33	Are communication devices routinely tested to ensure they work at each trap location? This should be part of the Job hazard Analysis for that location.			
34	Is there a program in place for workers to check in with their offices or supervisors to advise them of when they are going out on a trap and when they expect to be off?			
35	Does at least one crewmember have first aid and CPR training?			
36	Is there an adequate first aid kit available on site?			
<b>Safety Checklist</b>				
S1	Formal Training with the unit with instructor sign-off?			
S2	Site-specific JHA developed and reviewed with employee?			
S3	Site specific Emergency Plan developed and reviewed with employees?			
S4	Are trap's guard rails in place?			
S5	Is the shaft cover above the live well in place?			
S6	Is the shaft cover in live well in place and encapsulate the shaft end?			
S7	Are guard chains in place (top and middle) where openings in the guard rails occur?			
S8	Are panels or other guards in place where cone pinch points exist at the front of the traps?			
S9	Do crews routinely wear personal floatation devices when in boats, working the trap, or in the water?			
S10	Is there a rescue throw rope with the crew working the trap?			
S11	Is there a life ring present for water over 5 feet deep?			
S12	Have warning signs been placed on either side of the trap?			
S13	If two or more traps are in tandem, do any walkways in front of traps measure 22" wide and have guard rail on both sides?			
S14	Does the crew have an effective means of communication from site?			
S15	Have environmental hazards identified and communicated to staff?			

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<b>Securing and Rigging Traps</b>				
37	Has a project leader or assistant project leader determined that the rigging system is designed to effectively secure the trap in position in the stream under expected flows and debris loading?			
38	Is the rigging system designed to effectively and safely reposition the trap as desired?			
39	Has a project leader or assistant project leader determined that the cables (wire ropes) will support the load under expected flows and debris loading conditions?			
40	Do employees understand how clamps, bends, and load angles affect the stress on rigging and anchors?			
41	Has a project leader or assistant project leader determined that the rigging equipment, i.e., shackles, blocks, clamps, swivels, master rings, and thimbles, is properly designed and rated and			
42	Has a project leader or assistant project leader determined that thimbles are used to reduce abrasion on			
43	Are the anchor points or attachments adequate? <i>Note: Guardrails cannot be used as anchor points on traps.</i>			
44	Where used, are wire rope clamps spaced properly, assembled correctly, and torqued to manufacturer specifications?			
45	Has the staff received training regarding the consequences of a trap that breaks loose or is released from its mooring? <i>The potential for serious consequences may require additional safety features.</i>			
46	Is there a belay or failsafe feature designed to prevent a trap from breaking free during positioning?			
47	If the trap needs to be moved during a high water event, is there a process or procedure to accomplish this safely?			
48	Can the trap be repositioned without exposing employees to pinch points, moving gears, and ropes moving across the ground where employees must stand?			
49	Are employees trained in how to handle and move each individual trap they work with?			
50	Were directions for positioning and anchoring traps described in the written site plan?			
51	Has the staff taken steps to ensure that the trap cannot be released accidentally or through minor vandalism?			
<b>Trap Access</b>				
52	Traps can be approached by foot, walkway, or by boat. If by foot, do employees have adequate footwear? <b>Rocks ARE NOT to be used as access to traps.</b>			
53	Can employees approach the trap from a safe angle (downstream of the trap opening) and is the water shallow enough to provide safe footing?			
54	Are walkways (ramps leading to the trap from shore) at least 18" wide and provided a guardrail when necessary?			
55	Are walkways secured in place for access and strong enough to support the intended load?			
56	Is there a water level indicator in place so that employees can identify the depth of the stream?			
57	If travel is by boat, are all boat operators experienced and qualified?			
58	Does the trap have cleats or other points to which a boat can be secured safely?			
59	Are guardrails designed to permit the safe egress to and from a boat?			
60	If the traps are to be arranged in tandem (linked together) can the traps be adequately secured to each other?			
61	For traps set up in tandem (group), can employees safely move from one trap to another? (By boat, adequate catwalk with guardrails, etc.) <b>Note: Catwalks in front of the traps must have guardrails on both sides of the catwalk.</b>			

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<b>Working on the Trap</b>				
62	Do all employees wear the proper Personal Floatation Devices?			
63	Are walking surfaces protected with some type of non-slip surfacing or traction?			
64	Do guardrails protect the employee from falling into the screw, and from hazardous pinch points or moving parts?			
65	Can the screw (cone) be secured locked to prevent screw (cone from rotating while removing (example – inserting cable through ...)?			
66	Do employees know what the safe loading of a trap is (i.e., no more than 2 people) and not exceed this weight?			
67	Can the floatation devices (pontoons) safely support the intended work force?			
68	Do employees know how to safely operate the features of the trap, including raising and lowering the screw?			
69	Have steps been taken to effectively mitigate the hazards of employees working on the traps in the snow, with ice, and at night?			
70	Have specific JHAs and provisions been made to ensure safety during high water conditions? (i.e. cleaning traps, recovering swamped traps)			
71	Have conditions been established during which it is deemed unsafe or impractical to work on a trap? Contained in the site plan? JHA? Emergency Plan?			
72	Have these conditions been communicated to each employee?			
73	Do supervisors actively support and enforce not working on the trap when conditions are considered unsafe?			
74	Do supervisors understand that the rotary screw traps can be manufactured with a variety of options, including cleats, handles, guardrails, anchor points, etc.? <i>Supervisors should solicit ideas for improvements from employees or other Stations and discuss modifications with the manufacturer.</i>			
<b>Water Safety</b>				
75	Swift, cold water, high water, etc., represents a number of hazards. Has a Job Hazard Analysis been performed on the particular trap operation to determine what hazards exist and what steps the Station is taking to mitigate those hazards?			
76	Is the Job Hazard Analysis discussed with each new crewmember?			
77	Is appropriate rescue equipment readily available? <b>(With the people on the trap or in the boat, not in the truck)</b>			
78	Are the employees trained on how to use rescue equipment? <i>Throw ropes and life rings.</i>			
79	Are employees provided with Swift Water Rescue Training? <i>Only needed in some locations.</i>			
80	Are employees provided with information on what to do upon falling into the water?			
81	Have downstream hazards been identified and discussed with the crewmembers?			
82	Are employees physically able and adequately trained to swim to shore if required?			

