

... (),
e-mail:risk@geoenv.ru

Abstract

Man-made plots on water object shores as well as reservoirs are the part of natural-technological systems. These are exposed to waters impact which is the cause of plots destruction. The estimation of such destruction is expedient to fulfill on the base of risk-analysis which allows obtaining the quantitative characteristics of physical and economical losses within considered systems. Based upon these assessments safety measures are carried out to protect man-made plots from negative impacts and from reservoir level variations first of all.

[2].

()

(),

,

.

-

()

()

-

,

,

.

.

,

(/),

,

1.

()

(

),

,

.

,

,

...

,

.

[1]:

$$R_f(A) = V_n \cdot P(V_n) \cdot (L) \cdot L_t ; \tag{1}$$

$$R_{sf}() = R_f(A) / S , \tag{2}$$

V_n -

(/), $P(V_n)$ -

, $P(L) = V_m(A) = L_n / L_t -$
()

$$L_n \quad (\quad , \quad , \quad ^2). \quad -L_t, S -$$

/ . , 2/ 2. ' . .

$$R_e(A) = R_f(A) \cdot d_e, \quad (3)$$

$$\left(\begin{matrix} R_f(A) - \\ \cdot / , / , 2/ \\ / , / , 2 \end{matrix} \cdot \right), d_e - \quad (1)$$

1-3

() .
1 .

2-3 , 10 .

(),

,

,

,

50 %

50 %

(30%)

20 /).

, 4.0, 3.2 2.2 .

30%

20-30%

(k_i)

($P(k_i)$) (. 1 2).

(7 8)

0.07 (. . 2).

7 , - 6 , - 5 ,

- 4.5 .

, - 0.09, 0.15, 0.20, 0.12.

1.

	()		
	, %		
	(k_i)		
	> 50	30-50	<30*
	2.0-4.5	1.6-4.0	1.5-3.2
	2.2-5.0	1.8-4.2	1.6-3.4
	2.3-6.0	1.9-4.9	1.7-4.0
	2.6-7.0	2.0-5.6	1.8-4.6
	2.8-8.0	2.1-6.1	1.9-4.9

* /) (20

	(P(k _i))		
	> 50	30-50	<30*
	0,83	0,80	0,57
	0,82	0,71	0,53
	0,86	0,70	0,53
	0,85	0,69	0,54
	0,85	0,66	0,49
	0,842	0,712	0,532

*

0.39 0.38. 3 - 4

4 - 5 0.29 0.27.

5 - 6 , 0.25.

() :

$$R = (P() + P() \cdot \frac{\sum_{i=1}^3 k_i \cdot P(k_i)}{3}) \cdot V$$

$V = \frac{P() - P()}{k_i - 1}$;

$P() = \frac{P() - P()}{k_i - 1}$;

$P(k_i) = \frac{P() - P()}{k_i - 1}$;

$P(k_i) = \frac{P() - P()}{k_i - 1}$;

$$R_j = (P(\dots) + P(\dots)) \cdot \frac{\sum_{i=1}^3 k_{ij} \cdot P_j(k_{ij})}{3} \cdot V_j$$

$j =$

0,8 /

0,8 (80%),

0,2.

$$R = 0,8 \cdot 0,8 + 0,2 \cdot (5,4 \cdot 0,85 + 4,1 \cdot 0,66 + 3,4 \cdot 0,49) / 3 \cdot 0,8 = 1,12 /$$

1.

./ ∴ - « », 2003. 320 .

2.

// . . . ∴ , 1935. . 82-91.